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UT of Dadra and Nagar Haveli.



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SSR College of Education,
Sayli, Silvassa,
UT of Dadra and Nagar Haveli.



In collaboration with

Department of Education,
SNDT Women's University,
Churchgate, Mumbai

NATIONAL CONFERENCE

On

Integrating Indian Knowledge System for Holistic
Development Through NEP 2020

27th April 2024


Director

Dr. Meena P. Kute
Prof. Pradnya Wakpainjan

Chief Editor

Dr. Meena P. Kute
Dr. Rakesh A. Ramraje
Dr. Vinita Shrouty






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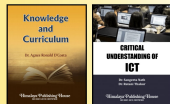



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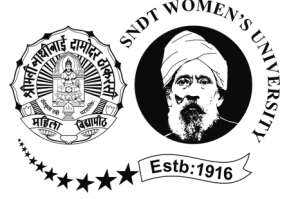
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Prof. Pradnya Wakpainjan

Convener of Conference

Dr. Sarika Patel

Co-Convener of Conference

Dr. Rekha Chavhan

Dr. Bhagirath Pande

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From Chief Patron's desk
(SSR Memorial Trust)



"Dear esteemed delegates, scholars, and guests,

It is my privilege to welcome you to this National Conference on “Integration of Indian Knowledge Systems for Holistic development through NEP 2020”. As a trustee, I am honoured to be part of this initiative that aims to rediscover, preserve, and promote the rich cultural heritage of India.

Indian Knowledge Systems encompass the vast and diverse traditions of learning that have evolved over centuries, shaping our understanding of the world and our place in it. From the Vedas to modern times, Indian scholars have made significant contributions to various fields, including philosophy, science, mathematics, art, and literature.

This conference provides a platform for experts and enthusiasts to come together, share their research, and engage in meaningful discussions. We hope to inspire a new generation of scholars, thinkers, and leaders who will carry forward the legacy of Indian Knowledge Systems and contribute to the nation's growth and development.

I congratulate the Principal and the team of SSR college of Education and wishes the success of the conference.

Thank you for your participation, and let us work together to celebrate and advance the rich cultural heritage of India.

Best regards,

Hon'ble Smt. Kalaben Mohanbhai Delkar
Member of Parliament, U.T. of D & NH

Message from Vice Chancellor



I am highly delighted to know that SSR Memorial Trust's, SSR college of Education, Saily, Silvassa, DNH of UT is organizing second National Conference on "Integrating Indian Knowledge System for Holistic Development through NEP 2020," in collaboration with Dept. of Education, SNDTWU, Mumbai on 27/04/2024.

Dear fellow participants, Higher Education Scenario globally has witnessed a great change and Indian Education System has rapidly adopted the global Demands to meet the global challenges. This National Conference is a great endeavor of update and enrich the thought process of the research scholars and teachers, teacher educators. It provides a grand platform to present and exchange the innovative thoughts on the current issues for the Holistic Development of the students. The NEP 2020 has emphasized the promotion of IKS into curriculum at all levels of Education.

I express with great pride and honour that this college is steadily progressing. It has been accredited by NAAC with B+ grade, 2.72 CGPA in December 2023. Eight States and near about Hundred papers from various Universities show the reflection of their continuous improvement.

I am confident, this National Conference will really contribute new knowledge in IKS. This exchange of thoughts and discussion, at the platform will be helpful for the betterment of Education in India.

I congratulate the organisers and the supportive management for organizing the National Conference on one of the important area "Integration of IKS & NEP 2020 for Holistic Development."

Good Luck!

Vice Chancellor
Prof. Sanjeev Sonawane
Yashwantrao Chavhan Maharashtra Open University.
Nashik, Maharashtra.

Message from Chairman (SSRMT)



Dear friends, I am very happy to know that SSR Memorial Trust's SSR College of Education, Sayli, Silvassa in collaboration with Department of Education, SNDT Women's University, Mumbai organized second National Conference on "Integrating Indian Knowledge system for Holistic development through NEP 2020". This National Conference is an initiative to promote Inclusion through Indian Knowledge System. The Indian Knowledge System has the potential to complement and enrich contemporary Higher Education by providing a more comprehensive understanding of human Knowledge, Civilization and Cultural heritage and bringing benefits to students, academia and society at large. Teacher educators and students will get ample opportunities to widen their knowledge.

At the outset I would like to congratulate the Principal Dr. Meena Kute, and team of SSR College of Education, Sayli, Silvassa and Department of Education, SNDT Women's University, Mumbai for organizing the National Conference on the genuine issue, NEP 2020 & Indian Knowledge system.

We welcome honorable Vice Chancellor Prof. Sanjeev Sonawane of YCMOU, Dr. Vijay Khare, Registrar and the dean of faculty of 'Humanities, SPPU, Pune and all the delegates. My best wishes for the success of the National Conference.

**Hon'ble Abhinav Delkar
Chairman,
SSR Memorial Trust, Silvassa.**

Message from Secretary (SSRMT)



It is a matter of great pride and pleasure that SSR Memorial Trust's SSR College of Education, Sayli, Silvassa in collaboration with Department of Education, SNDT Women's University, Mumbai has organized National Conference on "Integrating Indian Knowledge system for Holistic development through NEP 2020"

I congratulate the organizers for choosing a very crucial theme for the conference. Education does not mean mere bookish knowledge but it must be viewed as a tool for the holistic development of an individual which is focused and emphasized in NEP 2020. The inclusion of Indian Knowledge System in higher education allows students to appreciate that knowledge is interconnected and interdependent, prompting students to view subjects in a broader context. I hope that the conference shall address to universal access to education by providing platform through NEP 2020.

I wish and hope that the combined wisdom of the educationists participating in the conference will lead the way and contribute significantly to the excellence. My best wishes to the National Conference to be a grand success.

Hon'ble Ms. Divita Delkar
Secretary
SSR Memorial Trust, Silvassa

Message from Managing Trustee (SSRMT)



It gives me great pleasure that SSR Memorial Trust's SSR College of Education, Sayli, Silvassa in collaboration with Department of Education, SNDT Women's University, Mumbai has organized National Conference on "Integrating Indian Knowledge system for Holistic development through NEP 2020"

The theme of the conference is most essential focus in today's scenario. There is a dearth of good teachers and good students resulting in overall degradation of quality in education. Hence IKS (Indian Knowledge System) through NEP 2020 will resolve all these problems.

I am glad that the participants have focused on Integration of Indian Knowledge System. The outcome of the conference will be of great worth. I wish the organizers of the conference grand success.

**Hon'ble Ajit Deshpande
SSR Memorial Trust
Silvassa**

Message from Public Relation Officer (PRO) (SSRMT)



It is a matter of great pleasure for us to welcome you all for National Conference on “Integrating Indian Knowledge system for Holistic development through NEP 2020” Organized by SSR Memorial Trust’s SSR College of Education, Sayli, Silvassa in collaboration with Department of Education, SNDT Women’s University, Mumbai.

Education is always a sign of development and learning. This conference provides forum for scholarly discussion on integration of IKS (Indian Knowledge System). The integration of Indian Knowledge System with NEP 2020 will help to understand the underlying contemporary societal issues and to carry out further researches on these issues. It is also relevant for exploring and searching various aspects of education through the appropriate application

The cohesive efforts of a dedicated and committed team becomes necessary for organizing such conferences. We are fortunate enough for having such a hard-working team with us.

I welcome honorable Vice Chancellor Prof. Sanjeev Sonawane of YCMOU, Dr. Vijay Khare, Registrar and the dean of faculty of ‘Humanities, SPPU, Pune and all the delegates. My best wishes for the success of the National Conference. I wish for the grand success of the conference.

Hon’ble Dr. Pankaj Sharma
SSR Memorial Trust
Silvassa, DNH.

Message from Director



It's my immense pleasure to handover the Peer reviewed referred Journal of second National Conference on “Integrating Indian Knowledge system for Holistic development through NEP 2020”, organised by SSR Memorial Trust's SSR College of Education, Sayli, Silvassa in collaboration with Dept of Education, SNDTWU, Mumbai.

I would like to extend my sincere thanks to our Management for giving consent to organise the event and for their kind support for the success of the Conference.

It is my pleasure to welcome you all to this National Conference on Indian Knowledge Systems. As the director of this initiative, I am thrilled to see so many dedicated individuals gathered here today to explore and celebrate the rich cultural heritage of India. Indian Knowledge Systems encompass the vast and diverse traditions of learning that have evolved over centuries, shaping our understanding of the world and our place in it. From the Vedas to modern times, Indian scholars have made significant contributions to various fields, including philosophy, science, mathematics, art, and literature.

"India's ancient wisdom once again beckons us to explore, discover, and celebrate its splendor! As we embark on this magnificent journey, I warmly welcome you all to the National Conference on Indian Knowledge Systems.

This conference provides a platform for experts and enthusiasts to come together, share their researches, and engage in meaningful discussions. We aim to:

- Rediscover and preserve India's rich cultural heritage
- Promote interdisciplinary research and innovation
- Foster collaboration and knowledge sharing
- Inspire a new generation of scholars and leaders

This conference is a confluence of brilliant minds, passionate scholars, and dedicated practitioners, all united by a shared vision to rediscover, preserve, and promote India's knowledge systems. Together, we shall delve into the depths of our ancient wisdom, exploring its significance, relevance, and applications in modern times.

I express my gratitude to Hon'ble Vice Chancellor of YCMOU, Hon'ble Prof. Sanjeev Sonavane, who is a constant source of inspiration for teacher educators and for delivering key note address and enlightening us with IKS and NEP 2020 for Holistic development.

I express my sincere thanks to Hon'ble Registrar Dr. Vijay Khare, who accepted our invitation and addressed the learned audience with his excellent inaugural speech.

I am really happy to share that, from eight states the delegates have contributed their thoughts, through research papers and articles .More than 85 papers we had received from Maharashtra, Uttar Pradesh, Gujarat, Madhya Pradesh, Assam, Karnataka, Goa ,Dadra Nagar Haveli & Daman & Deu.

I am very happy for the co-operation of Prof. Pradnya Wakpainjan, for organizing joint venture, on the current issue in the field of Education .

I would like to welcome all Resource Persons, Directors, Principals of SSRMT, Teacher Educators, Research Scholars, UG PG students and extend my warm regards for contributing their scholarly views in the conference.

I thank all my colleagues, Convener and Co Conveners of the conference and non teaching staff as well as my sincere students for their support and cooperation.

It's possible for us to organise such a grand level National conference only because of the support and cooperation from all SSR family. And special thanks to Dr. Rakesh Ramraje for his sincere efforts to bring this journal in to concrete form.

I extend my heartfelt gratitude to each of you for being an integral part of this momentous occasion. Let us embark on this incredible journey together, and may our collective efforts illuminate the world with the radiant light of Indian knowledge and wisdom!

Dr. Meena Prakash Kute
Principal,
SSR College of Education
Saily, Silvassa, DNH, UT.

Message from Director



India witnessed many invasion, ideas, philosophies and culture and keep expanding its cultural heritage. The ancient Indian civilization also known as ‘Indus valley civilization’ is one of the oldest and advanced civilization. Its achievements in the fields of religion, philosophy, literature, art, mathematics and astronomy are admirable. This achievement is possible for any country if it develops advanced knowledge, skills along with the rooted value system. Therefore it is imperative that the education system shoulder the responsibility of providing the education that leads to various inventions and discoveries for the development of the society at large and use it for the welfare of the human being.

In order to address and cope with the evolving and fast changing world and its demand it is crucial to rejuvenate the education system time to time and NEP 2020 is a step towards it.

The integration of Indian Knowledge System in the higher education is not only help in understanding it and to be proud of our cultural heritage but also to redefine the various processes in the field of education. The interdisciplinary knowledge will help to break the boundaries of the courses (subjects) and provide an opportunity to explore one’s strengths, limitations, interest, attitude and the intersections between the various fields of knowledge. The sustainability has been the integral part of ancient India that help in realizing the interdependency of various components of ecosystem and living together in harmony with dignity.

The National Conference organized by SSR Memorial Trust’s SSR College of Education in Collaboration with the Department of Education, SNDT Women’s University on Integrating Indian knowledge system for holistic development through NEP 2020 is one more baby step to bring all the personnel working in the field of education, connected directly or indirectly with the field on one platform to share an exchange ideas so as to bring our dream into reality. It is high time that we need to understand our Indian knowledge system scientifically and incorporate it meaningfully without being obsessed about it. When we are considering the IKS, it does not merely Vedic education system but also the Jain, Buddhist education system too that has the evidences of various inventions and the systematic functioning of University education system focusing on the research. I am sure we all will discuss, deliberate our ideas, thoughts, concerns and understands the IKS in a wider perspectives without being prejudiced.

I express my sincere gratitude to Vice Chancellor of SNDTWU Prof. Ujwala Chakradeo who is taking lot of initiative to implement NEP-2020 at higher education institutions. My sincere thanks to Pro-Vice Chancellor Prof. Ruby Ojha for her support.

Working in collaboration is definitely a pleasant challenge as it gives a feeling of togetherness. This is made possible by Dr. Meena Kute, Principal of SSR college of Education. We are thankful to Dr. Kute.

I would like to thank SSR Memorial Trust's chairperson and members for providing the opportunity of holding hands together to organize the conference.

I welcome each one in the conference and thankful to everyone.

Prof. Pradnya Wakpainjan
Professor, Department of Education
SNDT Women's University, Churchgate campus,
Mumbai.

Message from Convener



Dear Participants,

It is my privilege and honor to welcome you all to the National Conference on “Integrating Indian Knowledge system for Holistic development through NEP 2020”.

Indian Knowledge System integrates traditional values and culture with contemporary knowledge that fosters comprehensive understanding of the world. It enables higher education institutions to develop a system that directly contributes to the country’s transformation into a global knowledge superpower. To enlighten and explore the sphere of NEP 2020 SSR Memorial Trust’s SSR College of Education in Collaboration with Department of Education, SNDT Women’s University organized a National Conference on 27th April 2024.

The main goal of organizing this conference is to enrich the knowledge of NEP 2020. We tried to give an opportunity and platform for those who have a thirst in knowing the policy perspectives and also share their views and opinions about integrating Indian Knowledge System for holistic development. Additionally, this conference will also facilitate the participants to expose and share various ideas. The conference aims to bridge the researchers working in academia and other professionals through presentations. You will get ample opportunities to widen your knowledge and network. Outside of the conference, I hope that you would find it worth to visit attractions found in and around the beautiful campus of SSR College of Education, Sayli, Silvassa.

I want to thank in advance the conference committee for extending their valuable time in organizing the conference and all the authors, reviewers, and other contributors for their sparkling efforts and their belief in the excellence of NEP 2020.

I cordially invite all the enthusiasts to participate in this celebrated event which can give immense exposure and opportunities to all.

Dr. Sarika Mohanbhai Patel
Assistant Professor,
SSR College of Education,
Saily, Silvassa

Message from Co-conveners



Dear Esteemed Participants,

It is with great pleasure and anticipation we extend a warm welcome to all of you to the National Conference on 'Integrating Indian Knowledge System for Holistic Development through National Education Policy (NEP) 2020'. This conference serves as a pivotal platform for educators, policymakers, researchers, and stakeholders from across the nation to converge, deliberate, and chart the course of action for the transformation of our educational landscape.

The NEP 2020 stands as a landmark initiative to revolutionize and impart education in our country. Envisioned with the aim of fostering a holistic, inclusive, and future-ready education system, the policy embodies a paradigm shift that emphasizes not just academic excellence, but also holistic development, critical thinking, and skill enhancement. Through insightful discussions and collaborative academic endeavors we aim to tap innovative strategies for its effective implementation at all levels of the education spectrum. By harnessing the collective wisdom and expertise of all participants, we aspire to pave the way for a vibrant, inclusive, and progressive education system that empowers every learner to realize their fullest potential.

We extend our heartfelt gratitude to all the distinguished speakers, participants, and organizers whose contributions have been instrumental in shaping this conference. Your commitment to the cause of education is indeed commendable, and we are confident that our collective efforts will yield transformative outcomes.

In conclusion, let us embark on this enriching journey with enthusiasm, open-mindedness, and a shared vision to make the NEP 2020 a reality. Together, let us move ahead towards a brighter and more equitable future for our nation through the power of education.

Dr. Rekha Chavhan

**Associate Professor, Department of Education,
SNDT Women's University, Churchgate, Mumbai 40020.**

Dr. Bhagirath Pande

**Assistant Professor, SSR College of Education, Saily, Silvassa
U.T. of Dadra & Nagar Haveli.**

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Indian Knowledge System for Holistic Development Through NEP 2020

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The NEP 2020 recommends the incorporation of Indian Knowledge System into the curriculum at all levels of education as the main objective is, holistic development of every child in India.

Historical Background: -

The rich heritage of ancient and eternal Indian Knowledge System and thought are the guiding light for NEP 2020. The pursuit of knowledge (Jnana) wisdom (Prajna) and truth (Satya) was always considered in Indian philosophy and the thoughts of educationist as the highest human goal. Our Indian education system produce great scholars such as Charak, Sushruta, Aryabhatta, Varahmihir, Bhaskaracharya, Brahmgupta, Chanakya, Chakrapani Datta, Madhava, Panini, Patanjali, Nagarjuna, Gautama, Pingala, Shankardeva, Gargi, Maitreyi, Lopamudra, Yadnavalkya, Sulabha, Thiruvalluvar and numerous others who made great contributes to world knowledge in diversified fields like mathematics astronomy, metallurgy, Medical science, surgery civil engineering, architecture, ship building, navigation, Yoga, Fine arts and chess and many more. Our Indian philosophy and culture had a strong influence on the world. These rich legacies to a world heritage must be nurtured, preserved, researched, enhanced and to be used maximum to put to new users through our education system (Report of NEP 2020).

The vision of NEP 2020

The NEP envisions on education system rooted in Indian ethos that contributes directly to transforming India that is, Bharat, sustainably into an equitable and vibrant knowledge society, by providing high quality education to all and making India a global knowledge super power. The policy envisages that the curriculum and pedagogy of the institution must develop deep sense of respect toward the fundamental duties and constitutional values bonding with one's country and a conscious awareness of one's responsibilities in a changing world. The vision of the policy is to instill among the learners a deep-rooted pride in being Indian not only in thought but also in spirit, intellect and deeds, as well as to develop knowledge skills, values and dispositions that support responsible commitment to human rights, sustainable development and living, global wellbeing. It means that the vision of NEP 2020 is integrated with Indian knowledge system which is very useful for the holistic development of every child in India.

Dr. Indrajit Bhattacharya, Director of National Accreditation Board for Education and

Training (NABET), QCI and Dr. Manish Kumar had said, “NEP 2020 focuses on key reforms in higher education that prepare the next generation to thrive and compete in the new digital age”.

Indian Knowledge System-

According to former V.C. Prof. Sanjay Deshmukh, the Indian knowledge system is a vast and ancient repository of knowledge encompassing diverse fields such as Science, Mathematics, Arts, Philosophy and Spirituality. It has been nurtured and evolved over millennia, contributing significantly to the world’s intellectual heritage, however, over the centuries, various historical events and colonial influences have led to a decline in the prominence of Indian Knowledge System.

NEP 2020 recognizes the importance of integrating Indian Knowledge System into the modern education system & promoting indigenous knowledge systems. It emphasizes the need for a holistic & multidisciplinary approach to education, allowing students to explore and appreciate India’s rich cultural heritage. This is positive step toward reclaiming the lost ground of Indian Knowledge System in Contemporary Education.

As UGC plays a key role in regulating and shaping Higher education in India. Indian Knowledge System aims to support and facilitate further research to solve contemporary societal issues. As Indian Knowledge System is based on Vedic Literature, the Veda’s and Upanishada. Indian Knowledge System is the systematic transformation of knowledge from one generation to next generation, it’s a system to transform the knowledge. The NEP 2020 recognizes this rich heritage of ancient Indian Knowledge and thought as guiding principles.

The Indian knowledge systems comprises of Gyan, Vigyan and Jeevan Darshan that have evolved out of observation, experience, experimentation and rigorous analysis. The tradition of validating and putting into practice has impacted our Indian education, arts ,administration, law, justice, health, manufacturing and commerce. In Indian context some of the methods to acquire knowledge consist of storytelling; personal reflection; visiting places; ceremonies art; creation music and dance.

Indian Knowledge System cell is an innovative cell under ministry of education at AICTE, New Delhi. Its main aim is to promote interdisciplinary research on all aspects of Indian Knowledge System .

1. The functions of Indian Knowledge System is to preserve and disseminate Indian Knowledge System for further research and societal applications.
2. To facilitate and coordinate Indian Knowledge System based interdisciplinary and transdisciplinary work done by various institution in India and abroad .
3. To establish guide and monitor subjective interdisciplinary research groups.
4. To facilitate funding for various projects and develop mechanism to undertake research.

5. To promote and create popularization schemes.
6. To make policy recommendations whenever required for the promotion of Indian Knowledge System .

So Indian Knowledge System in education must be introduced in scientific way in scholars and Higher education through curriculum. The Indian Knowledge System will include tribal knowledge as well as indigenous & traditional learning methods which need to cover and include all subjects with linguistics, literature, sports, games, governance, politics & conservation, forest management, crop cultivation, natural farming etc. this should promote tourism for students to visit various regions. They can develop awareness and appreciation of India's Diversity.

'Ek Bharat, Shrestha Bharat!' students can study the history, scientific, historical contributions, traditions, indigenous literature, & knowledge. At present thirty-two centres are established to catalyse original research and dissemination of Indian Knowledge System . More than 8000 HEI's have started adopting Indian Knowledge System in their curriculum and worked on digitalization 1.5 lakh books. For establishing Bhartiya Gyan Parampara the Indian Knowledge System division has brought together feeding themselves and practitioners of various knowledge domains to develop vision 2047, documenting a road map. Because inclusion of these courses in mainstream education would provide inspiration while preserving the heritage of our learning system. Through exposure to both traditional and contemporary concepts, students can gain a better understanding of their culture, expand their intellectual development and enhance their confidence.

It is the need of the hour to impart Indian Knowledge System to students by teachers who have sound understanding of our rich ancient Indian texts. The students of Indian Knowledge system will soon be equipped with tools that will enable him or her to be a strong and resourceful human being who can contribute to the society through love and compassion, Indian Knowledge System will give joy and contentment to man as it will reveal to him the greater truth of life. One can't deny the fact that only a happy individual can be a meaningful asset to this world.

However, the challenge lies in the practical implementation of NEP 2020 and the integration of Indian Knowledge System into the mainstream curriculum. The policy lays down the foundation but its success depends on the commitment and efforts of various stakeholders, including policy makers, teacher educators and institutions.

Still many questions arise in mind whether we really have time to delve deeply into the vast treasure trove of Indian Knowledge System . So, it is essential to strike a balance between modern knowledge system and traditional wisdom to create a well-rounded education system. The big challenge of Indian Knowledge System reclamation extends beyond the academic realm. It involves societal attitudes and the mindset of the people. There is need to instil pride and appreciation for Indian Knowledge System among the younger generation and create an environment that values indigenous knowledge & practices.

The NEP 2020 provides a promising platform to integrate Indian Knowledge System into the education system but success will depend on the commitment and collaboration of all stakeholders. We must strike a balance between modern knowledge and traditional rich heritage and create an ecosystem, that fosters the preservation, appreciation and utilization of Indian Knowledge System.

Holistic development is a complete educational strategy that aims to develop physical, intellectual, emotional, cognitive and social abilities in students. Holistic development means developing students mind from all sides. Their social, emotional needs must be developed positively. Teachers need to be trained in how to identify and support students who are struggling with mental and physical health issues.

Conclusion

Holistic development helps students to perform better academically. They are more focused and resilient. This approach promotes critical thinking, problem solving, creativity and preparing students for real world challenges. They develop physical, intellectual, emotional, cognitive and social abilities. That's why it is said that through Indian knowledge system integrating with NEP 2020, seven main areas need to be considered. Those are spiritual liberation, moral development, cultivation of intellect, preparation for real life, individual benefits, social benefits and physical growth. Then the students can be called successful member of global society. In Higher Education to educate young students means helping them to bring forth their creativity, their compassion, their curiosity, their moral and aesthetic sensitivity, their critical and intellectual skills, their ability to participate in a robust democracy. Self-awareness is more important in holistic development. In the words of Rabindranath Tagore, "you can't cross the sea merely by standing and staring at the water. You have to take lead, Start to walk and the target will be achieved."

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Digital Online Media Literacy among Higher Education Students in the Context of National Education Policy 2020

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Abstract

Online environments are now central to life, especially the field of education. This study tried to draw out conclusion about current status of Digital Online Media Literacy among Higher Education Students. Exposure to media literacy education is necessary as the study found that majority of the respondent showed low level of digital media literacy. Digital online media literacy was compared on the basis of gender, religion, marital status, stream, medium of instruction, educational qualification and ICT training. The study revealed that Digital online media literacy is higher in graduate, working, married and ICT trained students. However there is no significant difference found in DOML of higher education students on the basis of gender, medium of instructions, stream and religion.

Introduction

The present generation is exposed to different types of media . Today's students are powerful consumers and producers of media. Yet for all their access and use of media, many students need assistance from educators to develop critical media skills. These skills are necessary for participation in a culture increasingly characterized by the prevalence of the Internet and social web. The existence of Internet and other electronic sources of information makes it difficult to choose the right source for the right purpose at the right time. One can find innumerable number of sources for any particular information. The problem is which source is to be selected and on what basis. The quality of various information sources are questioned on the basis of its authenticity and updated information status. It is also very important that this selection process is addressed right in the beginning of a student's life. So it has become utmost important for students to be digitally literate. Media literacy skills “help... people to use media intelligently, to discriminate and evaluate media content, to critically dissect media forms, to investigate media effects and uses, and to construct alternative media” (Kellner & Share, 2005) and include “the ability to access, analyze, evaluate and produce communication in a variety of media forms” (Aufderheide, 1993). Students needs to know how to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies. While the perception exists that today's university students are digital natives, comfortable with all forms of new media and digital

technology, previous research has suggested that there may be limits to our students' media savvy. This study considers the extent to which students possess competencies related to the message communication dimension of media literacy.

Need of the study

Due to the technological advancement lot of upcoming technologies have changed the way the people communicate, interact and work. There is transition in teaching learning process too which has brought changes in ways of learning.

Students are more active on online resources as internet and media platforms have made them more dependent on using online platforms as after pandemic students are dealing their studies, assignments and also exams by using laptop/computers. Where more than books students were introduced how to get access on e- learning, how to handle media fluently. So, it becomes a responsibility to make students understands how to handle media effectively and responsibly. Students are using various tools and platforms such as learning through computer, laptop and other electronic devices in learning. Media literacy plays a key role in creating a new generation that can retain critical thinking skills in today's generations. Through media literacy students will get to identify different types of media and understands the messages they are sending With the knowledge of digital online media literacy students can develop technological skills, Learn authorship such as copyright, plagiarism, understand how to access online information, understand how and where to draw a line to maintain privacy, learn social responsibility while interacting on social networks. As, online crimes are growing day by day. Media literacy will also help students to become more smart and wiser to consume media as well as responsible producers of their own media. Because media literacy develops critical thinking from their it becomes easy for them to handle, operate and make use of media effectively. This is why the researcher wanted to know the Digital Online Media Literacy among higher education students.

Terms used in the study

Digital Online Media Literacy

It is a set of skills that are essential for the higher education students to make use of digital online media with 5 construct concept such as Media access, Media awareness, Ethical awareness, Media evaluation and Media production.

Media Access:

It include the skills in using available technologies and the ability to understand and interpret media. It is an ability to conduct online class, ability to log in different websites etc.

Media awareness:

Its an ability to understand the different methods for presenting information in newspaper, TV, internet etc. To know the uses and dangers of these platforms. Familiarity with the different

forms of files. Evaluation of information to check credibility.

Ethical awareness:

Ability to understand and focus on the authenticity of the content. Responsibility to gather information to properly use media. Ethical consideration to use other media's in the academic environment.

Media Evaluation:

Ability to take decision on the preference of media while identifying its pros and cons. Ability to determine if online information is biased and make use of different platforms to learn information of one's interest.

Media Production:

Ability to make proper use of videos, motion pictures, internet videos, especially for producing and editing sound and video content. Familiarity with free open source programs to create media projects.

Objectives of the study

- To study the digital online media literacy among higher education students.
- To compare digital online media literacy on the basis of religion.
- To compare digital online media literacy on the basis of gender.
- To compare digital online media literacy on the basis of stream.
- To compare digital online media literacy on the basis of educational qualification.
- To compare digital online media literacy on the basis of work experience.
- To compare digital online media literacy on the basis of marital status.
- To compare digital online media literacy on the basis of medium of instruction.
- To compare digital online media literacy of ICT trained and untrained students.

Hypotheses of the study

In order to study the digital online media literacy among higher education students the researcher has stated following hypotheses

- There is no significant difference in digital online media literacy of Hindu, Muslim and Christian students.
- There is no significant difference in digital online media literacy of male and female students.
- There is no significant difference in digital online media literacy of students of arts, commerce, science, and other faculty. □
- There is no significant difference in digital online media literacy of working and non-working students.
- There is no significant difference in digital online media literacy of graduates and post-graduate students. □

- There is no significant difference in digital online media literacy of married and unmarried students.
- There is no significant difference in digital online media literacy of students of English and Vernacular medium.
- There is no significant difference in digital online media literacy of students who have undergone ICT training and who haven't.

Methodology of the study

In the present study, quantitative approach was used. The method is descriptive as it studied the current status of media literacy among higher education students. The survey method was adopted to gather information about Digital Online Media Literacy among higher education students.

Sample for the study

The data for the study was gathered from higher education students of Mumbai district, using online survey. The tool was sent through whatsapp by creating the link. Total 125 respondents filled the survey. Snowball sampling technique was used for data collection.

Scope and Delimitation of the Study

The study is conducted on only higher education students. All the streams (Arts, Science, Commerce, and other) were included in the study. Both the genders were included. The research focuses only on Digital Online Media Literacy. Students who are pursuing higher education programs from first year of degree program to Ph.D were considered for the present study. Students from English and vernacular medium of instructions were included in the sample. A major limitation of the study is that quantitative survey method was used to assess the Digital Online Media Literacy. The data were collected through online survey method.

Research Instrument

The tool used in the research was Digital Online Media Literacy scale (DOML)

Developed by Tom Hallaq (2016). The personal data sheet was prepared by the researcher in order to get demographic data such as gender, religion, educational qualification, working status, marital status, stream, medium of instruction and ICT training of students.

Data Collection

The tool was administered to the higher education students. Total 125 responses were collected from higher education students. The survey was prepared on Microsoft Forms. The data were collected during September to December 2020.

Data Analysis

Data was analyzed using t test and ANOVA.

Major findings

1. Majority of the students i.e 93 (74%) higher education students have low level of Digital Online Media Literacy. This indicates that the respondents show low level of DOML.
2. There is a significant difference of DOML of higher education students on the basis of education qualification. The DOML is highest in graduate's students.
3. There is a significant difference of DOML of higher education students on the basis of work- experience. The DOML is higher in working students.
4. There is a significant difference of DOML of higher education students on the basis of marital status. The DOML is higher in married students.
5. There is a significant difference of DOML of higher education students on the basis of ICT training. The DOML is higher in ICT trained students.
6. However there is no significant difference in DOML of higher education students on the basis of gender, medium of instructions, stream and religion.

Conclusion

In the conclusion it can be said that the higher education students are not very equipped in knowing and handling Digital Online Media . The overall result indicates that the the maximum students have low level of DOML, which indicate that the students are not much exposed digitally and it also shows that they have poor knowledge in knowing the importance of media, its safety and security, keeping an account confidential, or where and where not to put personal information. Only the students who are working and dealing with media and digital world regularly have high media literacy . Also, students who have gone under ICT training have higher media literacy .

Recommendations

Major importance should be given to ICT training and digital Literacy of higher education students.

Students should be encouraged and motivated to improve their Digital Online Media Literacy Skills.

Media literacy should be a compulsory component of curriculum at higher education level. It will enhance student's exposure to Digital and Media world.

Students should be trained in the skill of handling and utilizing media in appropriate and effective manner.

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Indian Knowledge System: A Comprehensive Approach for Holistic Development

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Abstract :

NEP 2020 has the potential to regain the comprehensive Indian Knowledge system. The Indian Knowledge Systems comprise of knowledge, Science, and philosophy that have achieved out of observation, experimentation, and analysis with wisdom. This tradition is reflected in various aspects of our life such as cultural, social, educational, agricultural, industrial etc...The Indian Knowledge System through New Education Policy strongly emphasises on holistic development of students by incorporating arts, sports, and extracurricular activities into the educational framework. Indian Knowledge System integrates traditional values and culture with contemporary knowledge that fosters comprehensive understanding of the world. This inclusion ensures development of students with a well-rounded skill beyond academic excellence. National Education Policy - 2020 has enlighten a massive transformation in education system.

Key Words: Indian Knowledge System, Holistic Development.

Introduction

National Education Policy - 2020 has enlighten a massive transformation in education system. It is based on the five guiding pillars of Access, Equity, Quality, Affordability and Accountability. It will develop citizens who are competent to meet the diverse national and global challenges. NEP 2020 has the potential to regain the comprehensive Indian Knowledge system. In that view training and upgradation of generations of scholars is needed who will demonstrate the 'Indian way' of doing things to the world. NEP 2020 emphasizes on rich heritage of ancient and eternal Indian knowledge. The Indian Knowledge Systems comprise of knowledge, Science, and philosophy that have achieved out of observation, experimentation, and analysis with wisdom. This tradition is reflected in various aspects of our life such as cultural, social, educational, agricultural, industrial etc... Indian Knowledge System integrates traditional values and culture with contemporary knowledge that fosters comprehensive understanding of the world. In this system, education goes beyond classrooms, emphasizing holistic development through arts, sports, and extracurricular activities.

Cultural integration is a cornerstone, instilling pride and connection to heritage. Regional languages are promoted, ensuring inclusivity and preserving linguistic diversity. Practical application of knowledge is prioritized, preparing students for real-world challenges. Digital

literacy is a focal point, acknowledging the importance of technology in the modern era.



Curriculum for Holistic Development

Models from progressive nations emphasize on integrating arts, humanities, and experiential learning into curriculum. This transformative approach through NEP 2020 converges traditional subjects with interdisciplinary learning to integrate life skills such as creativity, problem-solving and collaboration into the curriculum. Education expert reveals that skills are pivotal for a dynamic future marked by technological advancements and complex global challenges. Environmental values & sustainable development are given weightage by the NEP 2020 for profound understanding of ecological footprint and our role in shaping a sustainable world.

Limitations of the curriculum

- The prevalence of an examination-centric model has adverse impact on holistic development individuals. It promotes rote learning for short-term goals and minimises the scope for cultivating critical thinking and problem-solving abilities which are essential for holistic growth.
- Curriculum's inherent deficiency lies in its inadequate focus on life skills and practical knowledge. There is a gap between theoretical knowledge and real-world application.
- Curriculum often neglects to equip students with the skills for required employability and global challenges.

NEP 2020 provides scope to develop practical skills, critical thinking, and adaptability required in the contemporary world. Moreover, it facilitates students with vocational skills and subjects.

Cultural Enrichment

Indian Knowledge System on cultural enrichment, that influences students profoundly by exposing them to India's rich heritage of culture. This exposure inculcates value and cultivates wisdom of identity and pride, instilling in students a connection to their cultural roots. Ancient texts and philosophies within the education also offers a vision through which students can explore profound values and ethical principles. By involving with the nation's cultural tapestry, students

develop academic insights and a broader understanding of the historical base that shape our society. This cultural enrichment becomes a foundation for personal growth, fostering a well-rounded global perception and contributing to the development of culturally aware and socially conscious citizens.

Language Proficiency

NEP 2020 prioritises communication skills along with language proficiency by promoting regional languages, considering linguistic diversity, and developing students with a deep appreciation for the social and cultural heritage of our nation. Multilingual education enhances communication skills, motivate then to recognize their crucial role in a universal context. The emphasis on language proficiency ensures that students become enrich proficient communicators, competent of navigating diverse linguistic landscapes with confidence and understanding. This approach facilitates and equips students with various skills in an interconnected world.

Inclusive Education and accessibility

The education system as per NEP 2020 prioritises inclusivity and accessibility ensuring that education transcends socio-economic barriers. Provisions are made to guarantee that every student from various back ground, has access to quality education. Further, the education system of India embraces inclusive practices, considering the diverse learning needs of students. By creating an environment where education is accessible to all, irrespective of socio-economic, cultural diversities. The NEP 2020 shall play a pivotal role in creating a more accessible and inclusive society, preparing students from various backgrounds to pursue and in their educational endeavours.

Digital Literacy

There is a lot of scope for the inclusion of ICT in the education as well as to train students for the use of ICT. NEP 2020 significantly emphasises digital literacy, equipping students with essential skills for the utilization of digital platform. As the present era is of technology and artificial intelligence the students must be empowered with the skills of ICT and AI. We cannot deny the revolutionary impact of Artificial Intelligence on all these aspects. AI has brought drastic changes in education sector too. Artificial Intelligence is associated with intellectual abilities of human brains such as the ability of reasoning, discovering meaning and learning from past experiences. It is the ability of a computer-controlled robot to perform actions designed for particular tasks.

The Advantages of Artificial Intelligence over Human Intelligence

- Artificial Intelligence ensures tremendous speed. What a scientist can do in 10 minutes, AI can do more than a million at the same time.
- AI is tireless and can work 24/7 hours.

- AI can have access to more information.
- AI ensures accuracy.

This approach ensures that students gain digital proficiency, allowing them to navigate and contribute in a digitally driven world. By incorporating digital literacy into the Indian Knowledge System through curriculum. The education system must prepare students to empower them for the use of technology for communication, problem-solving, and innovation in a technologically evolving global landscape.

Entrepreneurial Training

The Indian Knowledge System instils an entrepreneurial training and mindset by encouraging students to embrace innovation and skills. This approach cultivates an entrepreneurial spirit, motivate students to become job creators rather than job seekers. New education policy will empower students to contribute actively to economic growth of the nation by developing an environment that values innovation and startup which lead them for dynamic career paths. It nurtures a culture of self-reliance for facing the challenges of a rapidly evolving global economy.

Sensitivity towards Environment

The new education policy environmental enlighten consciousness that promotes sustainable practices. This approach equips students with the sensitivity towards environmental issues and instil a sense of duty toward ecological balance. By incorporating environmental considerations into the curriculum, students gain a theoretical understanding of environmental challenges and are motivated to develop eco-friendly behaviours. Ecological consciousness ensures that students transform as a citizen with awareness of their impact on the environment, contributing to responsible generation and actively participate in a sustainable development.

Conclusion

The Indian Knowledge System through New Education Policy strongly emphasises on holistic development of students by incorporating arts, sports, and extracurricular activities into the educational framework. This inclusion ensures development of students with a well-rounded skill beyond academic excellence. The new approach of education focus on creativity and critical thinking equips students with the tools to navigate diverse challenges, fostering a cognitive development beyond rote learning. By considering these aspects, students are academically proficient with creativity and analytical skills necessary for success in an emerging new world.

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The Interface of Indian Knowledge System and the Role of English Literature for the Holistic Development

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Abstract:

Over the course of millennia, India, with its diverse range of languages, civilizations, and knowledge systems, has seen significant changes. Indian knowledge systems (IKS) were profoundly impacted by the arrival of colonialism, especially with regard to the English language that was imposed and the English literature that was spread. Nonetheless, the English language and the literature it is connected with brought about a transforming influence that is still felt in modern Indian society as a result of the colonial encounter. The strong pillars of IKS Vedas, Upanishads, Ayurveda and Natyashastra have become more relevant today with the global exchange of philosophies. The literature of various countries has amalgamated due to translations and cultural exchanges. This paper examines the complex interactions, conflicts, and convergences that have occurred across time between IKS and English language and literature.

Keywords: Indian Knowledge Systems (IKS), English language, literature, colonialism

Introduction:

Indian Knowledge System (IKS), though old and having a long bright tradition, is quite relevant and significant in today's times also. With the introduction of NEP 2020, IKS has become more important as the focus is on imbibing the highly upheld values of Indian culture that have been lost or sidelined due to many factors including the foreign invasions, the British rule and westernization of Indian culture and education. Considering the revolutionary changes in the fields like medicine, technology, international trade and geo-politics, the role and place of English cannot be overlooked. Today's education cannot be imparted without it. Hence, it is imperative to discuss the ways how English literature and language can be utilised and incorporated with its fusion with the IKS for holistic development through NEP 2020.

There is a significant interrelation between the IKS and English Language and Literature, albeit with complex historical and cultural dynamics.

IKS has laid the strong foundation for the forthcoming generation to impart value-based education. The glorious past is lit by the significant contributions in almost all spheres of life. The Vedas and Upanishads have been upheld today also. The great Indian epics the Ramayana and the

Mahabharata have been widely discussed and many lessons have been learnt from them. The revival of Yoga in the recent decades showcases the significance it has even in the modern times. It has been rightly pointed out by Dr. Vaibhav Sabnis:

The main aim of yoga is also to attain Kaivalya or salvation. In this state, the seeker becomes completely free from sorrows, gets away from worldly pains, Yoga also tells us the goal of life, and also gives us the means to achieve it. The primary goal of yoga is to live life in control, to live a life of restraint, to be free from the problems of different levels in life, such as economic, family, social problems. (Sabnis, 2022: 29)

The great revolution in the technological field has brought new problems and newer sorrows where technological addiction has been feared to be the reason behind many psychological issues. Yog brings relevance in such a situation without which holistic development is impossible and Yog will certainly play a vital role in the imparting of education through NEP 2020.

Ayurveda is yet another important pillar of the IKS that has gained momentum in recent times. There are great efforts for the revival of the Sanskrit language as it is considered the mother of many languages and is unique as it is the classical language which contains profound linguistic value. The revival of ancient languages which are on the verge of extinction is necessary. The ancient religions like Buddhism and Jainism are necessary to be understood by today's generations as they preach and imbibe great philosophical values. This is impossible without the study of the languages like Ardhamagadhi and Pali. A rich treasure is hidden there and it needs to be unearthed. This can be done by facilitating translations. Rasa theory propounded by Bharat Muni in his *Natyashastra* is the essence of Indian Criticism. With the unique and exceptional contribution of the seers and spiritual gurus like Swami Paramhans, Swami Vivekanand, Swami Dayanand Saraswati, the spiritual legacy of India is matchless. India is the land of saints and hermits who have garnered highly profound philosophy through their verses. India has a rich heritage in the realms of philosophy, science, medicine, mathematics, astronomy, literature, and spirituality from the ancient times. This rich and fertile treasure could cross the seven seas through their translations in English. The West could understand the glorious tradition that we possess.

There has been cultural exchange right from the ancient times. The invasion of India by the Mughals brought their culture to India and sidelined the Indian cultural tradition for a significantly long time. The arrival of the British could be seen as a positive sign as it brought the western theory, philosophy, literature and culture to India. This could be termed as a fortunate happening as new vistas were opened and new arenas were available. The western philosophical thought challenged the superstitions in India. The cultural assimilation, shock, transition, effect and exchange was necessary for the revival of the age-old traditions. English literature is a facilitation of the same. It is not that only India and her rich culture got affected. The Indian ethos crossed the seven seas because of this cultural transmission. There are some notable and noticeable

observations of English literature that have been influenced by Indian culture.

T.S. Eliot is a modern and modernist writer who is well-known for his poems like *The Waste Land* and the religious drama like *Murder in the Cathedral*. *The Waste Land* has several literary, cultural, and philosophical influences, including Hindu and Indian philosophy. Though Eliot belongs to the Christian and European culture, there are many glimpses of Hindu/Indian philosophy in the poem. The poem concludes with this: “Shantih shantih shantih” which shows the clear reflection of the Hindu tradition. The young romantic poet P.B. Shelley in his poem *Ode to the West Wind* indirectly talks of the trinity- Brahma, Vishnu and Mahesha as Creator, Preserver and Destroyer. He draws parallels between the powerful waste wind and the Hindu divine trinity. In the poem *Ode on a Grecian Urn*, another young romantic British poet John Keats seems to have been influenced by the famous dictum: “Satyam Shivam Sundaram”. The concluding line of the poem is: “Beauty is truth, truth is beauty”.

Besides these poets, there have been cross cultural references in the works of the novelists like E.M. Foster who happened to visit India during the British Rule. One of his novels is titled *A Passage to India* which has been set against the British Rule in India and the Indian Freedom Struggle led by M.K.Gandhi in 1920. India is presented as a land of spiritual and mystical significance, with references to Hinduism, Buddhism, and other Indian religious traditions. The novel presents India as a rich and diverse cultural landscape, grappling with the complexities of colonialism, cultural identity, and the search for mutual understanding amidst the clash of civilizations. Interestingly American poet Walt Whitman has composed a poem with the similar name. While *A Passage to India* by E.M. Forster is set in the context of British colonial rule in India and explores the complexities of cultural encounter and colonial oppression, Walt Whitman’s work offers a broader meditation on the human condition and the interconnectedness of all life. Whitman contemplates the interconnectedness of all life and the cosmic unity that binds humanity together. The poem celebrates the vastness and diversity of the world, inviting readers to embark on a metaphorical journey of discovery and self-realization.

What has been discussed so far is the impact of Indian philosophy on the English minds which has been duly reflected in the literature. The impact otherwise is far greater as the British ruled over India for hundred and fifty years. Naturally, the language of the rulers was to be learnt. However, another reason for English being introduced in India was its being the language of science and technology, law, trade and commerce and library. Hence, rather spontaneously and also for being the global tongue, English has become one of Indian languages and it will be a taboo if we still label it as a foreign language. IKS is primarily in Sanskrit and other ancient languages which have been beyond the reach of the laypersons. Moreover, the opposition to Hindi hindered the expansion of IKS in the southern parts of India. English became a vehicle to connect the south with the north and other parts of India. This inevitability facilitates interrelation, interconnection

and interaction of the languages and literatures that exist for centuries.

The very impact of Indian philosophical thought on the English poetic minds was possible because of English only. This exchange sowed the seeds of equality, liberty and fraternity in the Indian soil that used to live in orthodoxy. Greek philosophy was introduced to Indians through the English language. The French, Roman and Greek literatures, schools of thought and their scholarship was available to Indians. Because of this, the fertile IKS has multiple dimensions and perspectives. The Indian classics were translated into world languages through English and the global classics were translated into Indian languages. The first Prime Minister of India Pt. Jawaharlal Nehru opines that the understanding of India's past provides the basis of the optimistic visualization of India's future. He says about Indians, "...proud of their Indian heritage, they will open their minds and hearts to her peoples and other nations, and become citizens of this wide and fascinating world, marching onwards with others in that ancient quest in which their forefathers were the pioneers." (Nehru, 1946: 523)

However, the IKS has been looked down upon by the western scholars and thinkers. Dr. Barche has rightly expressed that despair in the following words: "It is a sad historical fact that various western discourses, including those of imaginative literature have depicted false images and the myths about the eastern or the "oriental". The concerted drive to show the cultural superiority of the West over the East paved the way for imperialism" (2010: 10). However, the impact has been visible. The language of the colonisers has been adopted and assimilated not just because it was the language of the emperors but it proved to be an adaptive language that became the global language.

As a result of this, Western literary works, ranging from classical texts to contemporary bestsellers, have been translated and studied in India, contributing to the enrichment of the Indian literary landscape. Translations allow Indian readers to access a diverse range of Western literary traditions, from Shakespearean drama to modernist fiction to post-colonial literature. The study of Western literature in India provides insights into different cultural perspectives, historical contexts, and aesthetic traditions, fostering cross-cultural understanding and dialogue. For example, the works of Shakespeare, Dickens, Austen, and Hemingway have been widely read and studied in Indian schools and universities, shaping the literary sensibilities of generations of readers. This paved the way for the fertile Indian English literature where women also have been contributing significantly. English Language and Literature facilitated a rich exchange of ideas between Indian and Western thinkers. Indian authors writing in English, such as Rabindranath Tagore, R.K. Narayan, and Arundhati Roy, have made significant contributions to world literature. Conversely, Western literary works have been translated and studied in India, enriching the Indian literary landscape.

One of the consequences of the cultural and philosophical exchange between the east and

the west through English is Dr. Gangadhar Barche's monumental book on Patanjali & Shakespeare. It is the best model of the interface of IKS in the form of Maharshi Patanjali's Yog Sutras and William Shakespeare's great tragedies. The veteran English professor and Yog Guru Dr. Barche says,

William Shakespeare has been a poet and playwright of unparalleled height from England in English literature, while Maharshi Patanjali, an expert in yoga and psychology, equally of the same or rather of more height from India in Sanskrit...apparently the transmission system of Shakespeare and Patanjali are different, but basically what they have transmitted is the same, viz., secrets of higher and better human life...the best way out seems to study and understand one with the help of the other.(Barche, 2010: 9-10)

This interdisciplinary nature is the need of the hour as far as holistic development through NEP 2020 is concerned. We cannot afford to sideline the English language and the western philosophy as it is very much a part of our socio-cultural ethos. The inevitability is the fine fusion of both which has been ably exemplified by Dr.Barche. He further proves his point by saying:

Maharshi Patanjali, a great yoga philosopher and psychologist from India, has not been known to the wider world so much as his high stature and significance has deserved. Similarly, though Shakespeare has been known to the wider world as a poet and playwright, he has not been adequately known as a great psychologist, and as a yogi par excellence. Further, it is very interesting to note that the key to understanding the major tragedies of Shakespeare, a great genius from the West, is found to be in the sutras of Patanjali, another great genius from the East and vice versa. (Barche, 2010: 10)

The analysis and interpretation help understand the root cause of Shakespearean hero's suffering and at the same time helps in understanding the Yog philosophy propounded by Maharshi Patanjali. The amalgamation and fortunate fusion of western literature and IKS paves way for holistic development.

The interaction between Indian Knowledge Systems and English Language and Literature has resulted in syncretism, where elements from both traditions merge and interact. This fusion is evident in various literary works, where Indian themes, myths, and philosophical concepts are explored through English language and literary forms.

Indian writers who choose to write in English, such as Rabindranath Tagore, R.K. Narayan, Arundhati Roy, Salman Rushdie, and many others, have made significant contributions to world literature. These authors often incorporate Indian themes, settings, characters, and philosophical ideas into their works, providing international audiences with insights into Indian culture, society, and history. For example, Rabindranath Tagore, through his poetry, fiction, and essays, introduced Western readers to the rich tapestry of Indian spirituality, philosophy, and social issues. His work

transcended cultural boundaries and earned him the Nobel Prize in Literature in 1913.

There have been apparent colonial influences in Indian English literature especially during colonialism. However, there has been a significant switch in the themes that got shaped in the post-colonial literature. The Indian diaspora and writers of Indian origin like V.S. Naipaul, Salman Rushdie, Gayatri Spivak, Chitra Banerji and Jhumpa Lahiri have talked of the Indian sensibility in their respective novels and made the world aware of the IKS. Post-colonial literature and theory have emerged as important fields of study that critically engage with the legacy of colonialism and its impact on language, culture, and identity. Indian writers and scholars have played a crucial role in shaping these discourses, offering nuanced insights into the intersection of Indian Knowledge Systems and English Language and Literature.

Conclusion:

The literary exchange facilitated by English Language and Literature has been instrumental in fostering dialogue, understanding, and creative collaboration between Indian and Western thinkers. It has broadened the horizons of both traditions, enriching the global literary canon with diverse voices, perspectives, and stories. The interrelation between the IKS and English Language and Literature is multifaceted, encompassing historical, literary, cultural, and socio-political dimensions. It reflects the complexities of colonial encounters, cultural exchange, and the ongoing negotiation of identity and representation in a post-colonial world. This interface will certainly contribute to holistic development especially through the very innovative NEP 2020.

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ICT and Indian Knowledge System**Dr. Plabita Roy***Asstt. Professor, Dept. of Philosophy,
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Abstract:

NEP (National Education Policy)2020 added a new transformation in the Indian Education System using holistic development for the welfare of all. NEP 2020 focused on coping up with current and future challenges of the Indian Knowledge System. A rapid change has been observed in the Indian Knowledge System through the application of new technologies. Information and Communication Technology (ICT) has a key role in education and training that enhances scope for sharing knowledge all over the world. ICT makes the teaching learning process more interesting and creative for the students. In today's education scenario students can learn their lessons in a more collaborative and interactive environment. This paper will throw light on critical observation of the changing concept of ICT in the Indian Knowledge System. It will also focus on the role of ICT integration in teaching learning pedagogy in the education system. The challenges and barriers of implementation of ICT in the Indian Knowledge System will also be highlighted in this paper.

Keywords: NEP, ICT, Indian Knowledge System, Teaching- Learning

Introduction:

The Indian Knowledge System (IKS) is a systematic transformation of knowledge from one generation to the next generation. The Indian Knowledge System comprises Jnan, Vignan and Jeevan Darshan that have evolved out of experience, observation, experimentation and rigorous analysis. It is sustainable and strives for the welfare of all. In the field of education, the IKS aims to support and facilitate further research to solve the contemporary societal issues in several fields such as holistic health, mathematics, astronomy, philosophy, architecture, agriculture, engineering, literature, sports, as well as governance, polity and conservation.

In the NEP curriculum the IKS occupies a significant position. NEP 2020 recognizes the Indian Knowledge and thought as a guiding principle. The New Education Policy (2020) has emphasized that the IKS will be part of the curriculum and will be incorporated scientifically. It will be taught as an elective course for students of secondary school through modern technologies under NEP 2020. ICT plays a key role for an information rich life and for the development of the

country in every sphere. The ICT adds value to teaching and learning by enhancing the effectiveness of learning and also provides facilities for research and scholarly communication. NEP 2020, develops a new teaching-learning process which follows activity based, research based, inquiry based and collaborative learning methods.

Objectives of the study: The main objectives of the study are

1. To understand the critical observation of the changing concept of ICT in the Indian Knowledge System.
2. To observe the role of ICT integration in teaching-learning pedagogy in the education system.
3. To evaluate the challenges and barriers of implementation of ICT in the Indian Knowledge System.

Review of Literature:

Roy & Paul (2017) discussed in their paper about the integration of ICT in higher education as well as the teacher training program.

ICT in higher education is not a technique for educational development but also a way of socio-economic development of the nation (Babu & Sridevi, 2018)

According to Mushahary (2020), ICT has influenced the teaching-learning process and research in the field of education. It challenges in promoting excellence in education.

Prakash (2022), has discussed the challenges faced by Higher Education Institutions in integrating ICT in education and also discussed how to overcome such barriers.

World is moving towards a digital society. But there are many challenges in implementing ICT in education (Saha, 2023).

Methodology: The study is based on secondary data from both online and print documents.

The foundation of the IKS lies in the ancient texts of the Vedas, the oldest scriptures of the world. The holistic approach of the Indian Knowledge System is reflected in various Indian practices, teachings of ancient Indian sages and philosophers. Being a significant aspect of the NEP curriculum, the IKS covers various domains such as science and technology, philosophy, ayurveda, literature, yoga etc. In today's magnificent education system, the Indian Knowledge System has introduced a scientific way in education system curricula. It aims to promote interdisciplinary research on all aspects and to spread and preserve the same for future research and application.

The NEP 2020 is based on access, equity, quality, affordability and accountability. It will prepare the youth of our country to meet the challenges of the present and the future all over the world. NEP-2020 is designed to take advantage of modern technologies, particularly ICT. The main concern of this policy is to utilize the technology in teaching and learning. In the NEP the

integration of ICT enhances access to quality education, digitalization of education and also improves student-teacher engagement as well as fostering critical thinking and digital literacy skills. The NEP aims at technology based adult learning including apps, online courses/ modules, satellite base TV channels, online books, ICT equipped libraries etc. in the coming years. It moves forwards towards ICT implementation in bridging the gap between rural and urban education to develop universal digital literacy within a very short period. Incorporating the IKS into higher education curricula is a visionary step that enriches student learning experiences, promotes cultural understanding and bridges the gap between traditional wisdom and modern knowledge.

In education, ICT is considered as an important component. The development of society depends on ICT to keep pace with the most recent development. It is a diverse set of technological tools and resources that has become an important part of society for the last few decades. Integration of ICT in education means technology-based teaching-learning process. It enhances the effectiveness of learning. It adds value to the teaching- learning process and also provides e-learning facilities. It makes the students more active. The students can search their needed information on their own which makes them responsible. Availability of course materials in electronic/digital form, online digital repositories for lectures, digital library including e-resources etc. makes teaching learning more interactive and interesting. ICT helps in the professional development of teachers. Regarding their research purpose, they can search their relevant information by using e-journals, e-books, e-magazines, e-library etc.

The benefits of using ICT makes every life quite comfortable and easy. It acts as a motivating factor among the youth. It promotes profound learning. The quality of research work has been enhanced by integrating ICT in higher education. It delivers greater flexibility with high quality lessons and resources. The availability and facilities of ICT cannot be regarded as the same at every place because of the challenges that people face in integrating ICT in the education system. Some of such challenges are like lack of proper infrastructural facilities, insufficient trained teachers, language problems, lack of funds, lack of knowledge towards ICT etc. It leads the learners towards a position where analytical skills, judgmental skills are absent.

To overcome such barriers the authority of the organizations should provide sufficient funds, and more and more teachers should be trained in ICT. Children should be taught how to use and handle ICT equipment. The various problems on using ICT should be judged and viewed properly so that there are opportunities to develop and solve such problems.

Conclusion: -

The IKS is regarded as a treasure of wisdom that inspires and guides every individual. It has adapted to the changing times from the early Vedic period to the modern era. It emphasizes on holistic development of students. This integration will ensure students to cultivate a well- rounded skill set beyond the academic. The NEP 2020 will reform the education system of India in both

rural and urban areas. Because of implementing technologies like ICT in education there are only arbitrary lines on maps nowadays. No one can deny the necessity of ICT. If it is utilized properly then only it can promote the IKS to a position where every individual will be digitally literate.

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GOEIIRJ

A Study Of Opinion Of High School Level Teachers On National Education Policy 2020

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Abstract

Teachers play an essential role in education, most especially in the lives of the students they teach in the classroom. A teacher's defining characteristic is their ability to teach students and exert a positive influence on them. Generally, the role of a teacher in education goes beyond teaching. In today's world, teaching has different faces, and a teacher has to carry out the part of being an external parent, counselor, mentor, role model, and so on. Education is the most valuable weapon in 21st century education. Many changes and plans in education are adapting to societal demands, including the 2020 education policy, which has the potential to revolutionize education. The purpose of this research is to consult the opinion of rural and urban high school teachers in Dharwad, Hubli city, so keeping the new education policy in perspective, this research aims to observe the impact of the new education policy on the opinions of high school teachers, both in urban and rural areas. It collects the opinions of government high school teachers in Dharwad and Hubli cities and villages using online interview techniques.

This paper aims to gather data and conduct a review to study the major pros and cons of implementing the new education policy of 2020. This paper aims to understand the perceptions of the impact of the new education policy, determine its practical implications in providing adequate training resources, and explore ways to complement the existing education policy.

Keywords: Teachers, Education, National Education policy 2020

Introduction

Education enables the mind to find out the ultimate truth which gives us the wealth of inner light and love gives significance to life. **- Rabindranath Tagore**

Education is a human right, a powerful driver of development, and one of the strongest instruments for reducing poverty and improving health, gender equality, peace, and stability. It delivers large, consistent returns in terms of income, and is the most important factor to ensure equity and inclusion.

National Education Policy (NEP) is a comprehensive framework to guide the development of education in the country. The need for a policy was first felt in 1964 and by the suggestions of

Kothari Commission first education policy was passed in 1968. The second policy for education came in 1986 and it was revised in 1992.

Drastic changes had happened in the educational field in the past 34 years and the policies framed should be modified according to the needs of the people and the nation. Strong foundation should be laid in Education and then only it will produce an all-round development of future citizens. All Indians should receive a quality education at an affordable price. In this context, the education sector needs to drive itself towards the needs and demands of the 21st century.

After 34 years, the third National Education Policy was released on 29.07.2020. The new NEP 2020 suggests structural changes right from school education to higher education and regulatory bodies. Any change in the system or policy is not directly accepted by the people. After a strong arguments and empirical reasons, it is accepted by all. Implementation of this policy after 34 years, has given rise to several arguments among the educational sectors, politicians, experts, stakeholders, common people, etc.

After framing the policy, it should be properly implemented in the educational set up. Then only it will make the desirable changes in the educational system. NEP 2020 is going to be implemented in the educational system successfully through the teachers. They are the real, direct and significant stakeholders. While implementing the policy, the stakeholders should be recognized and included in the process for its crucial effectiveness. It is essential also, to know their opinion about the NEP 2020. Hence, this study tries to find out the opinion of teachers on NEP 2020.

Review Of Related Literature

- **Boylu and Kardas (2020)** conducted a study on the views of teachers and students on slang in teaching Turkish as a foreign language. Based on the findings of the study, it was concluded that the majority of teachers and students generally had a positive opinion about the learning. In addition to this result, teachers stated that this situation which students use without knowing the meaning of some words may cause problems in their social environment.
- **Yasmin and Rumi (2020)** conducted a study on the impact of Pre-primary Education on Children in Bangladesh. Results delineated that the majority of the respondents consider that pre-primary education is important for children's early age learning to compete in this changing world and ensure better communication for young children.
- **Argawati and Suryani (2020)** conducted a study on Project-based learning in teaching writing: the implementation and students' opinion. The results of the study found that the implementation of project-based learning in teaching writing worked well. It could be seen from the student's responses during the implementation of this method as they gave positive opinions toward the method used; they were actively involved in learning process.

- **Virgin and Bharati (2020)** conducted a study on teachers' perception, plan, and implementation of portfolio assessment in students' writing assessment. From the results of the analysis, the study revealed that both teachers had a positive perception of portfolio assessment in students' writing assessment. That was indicated from their agreement and positive thoughts on portfolio development and implementation, its effectiveness as an educational tool and its influence on the instructional practices, teacher and students' roles and responsibilities during the portfolio development.

Need For The Study

This research aims to gather insights from secondary school teachers in both rural and urban areas of Dharwad and Hubli city regarding the new education policy. Through online interviews with government high school teachers in these regions, the study seeks to observe the policy's impact and assess its effectiveness, particularly in terms of training resources and practical implementation. The paper aims to review the significant advantages and disadvantages of the new education policy of 2020, aiming to understand perceptions and practical implications for education policy implementation.

Objectives

- To assess the levels of opinion of teachers about the new education policy (2020).
- To examine the relationship between teachers' demographic factors their opinion of NEP-2020 and its implementation.

Hypothesis

1. There is no significant difference in the level of opinion about NEP-2020 among male and female teachers.
2. There is no significant difference in the level of opinion about NEP-2020 among teachers with different types of schools.

Limitations Of The Study

The study is limited to collecting the opinion from secondary school teachers including both male and female teachers, from rural and urban areas.

Methodology

The study used a survey method to collect data from teachers.

The sample size of the study was 120 teachers from various schools of Dharwad and Hubli. The self-made questionnaire is divided into three parts. The first part was related to the demographic factor of teachers, the second part was related to the opinion of teachers about the new education policy and the third part was related to the perception of teachers about the implementation of NEP-2020.

Below Table 1 show t-values of different variables relating to the opinion of Secondary School Teachers towards implementation of NEP-2020 in school education and Figure 1 shows write details here about what graph shows

Table 1: t-values for Secondary School Teachers; Opinions on NEP-2020 Implementation

S. No.	Variable	N	Mean	S.D.	t-ratio	Result
Gender	Male	130	108.96	28.24	1.47	Not Significant at 0.05 and 0.01 levels
	Female	170	113.91	29.59		
Area	Urban	190	107.13	32.59	2.94	* Significant at 0.05 and 0.01 levels
	Rural	110	118.14	30.39		

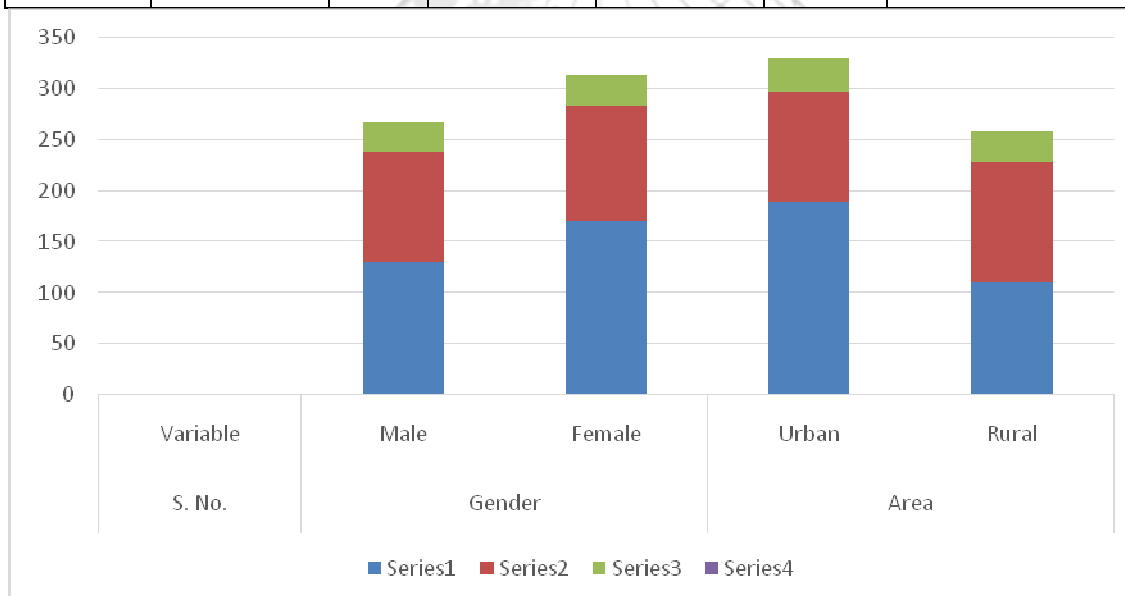


Figure 1: It is inferred from the above graph that the opinions about National Education Policy 2020 among secondary Male and Female teacher is Not Significant at 0.05 and 0.01 levels and Urban and Rural teachers is Significant at 0.05 and 0.01 levels respectively. Hence the hypothesis is rejected. There is a significant difference among secondary school teachers on opinions of New Education Policy 2020 with respect to gender. In this graphical representation show that male teachers are more aware than the female teachers related to new education policy.

Findings Of The Study

On the basis of the analysis and interpretation of data the researchers have arrived at the following findings and drawn the conclusions.

- ☐ There is no significant difference in the opinion of secondary school teachers towards implementation of NEP-2020 in school education.
- ☐ There is a significant difference in the opinion of teachers working in rural and urban secondary schools towards implementation of NEP-2020 in school education.

- ☐ The teachers working in urban secondary schools have exhibited a better opinion towards implementation of NEP-2020 in school education as compared to their counterparts working in rural schools.

Conclusions

The National Education Policy 2020 anticipates complete renovation of the school and higher education system. NEP 2020 is designed for transforming the Indian education system to meet the needs and challenges of the 21st century. Implementing a new policy is a big task and it requires a detailed plan for smooth execution. This study tries to contribute a valuable suggestion and support for the newly framed policy. Findings of this study may have direct or indirect impact on the features of NEP 2020. This study also helps in modifying the features of framed policy. May the authorities concerned will reconsider and restructure it on the basis of the demands raised by the people who derive benefit from it. Implementing new educational policy in the Indian educational system will make a drastic change and provide a high-quality education to all. Then it will also produce an all-round development of the future citizens to the nation.

Educational Implications

- ☐ The study would bring about opinions among secondary school teachers on different aspects of NEP2020.
- ☐ The present study helps the teachers take initiative in the effective implementation of NEP-2020 in school education.
- ☐ The study would help the government and policy makers to take necessary steps for developing strategies in the effective implementation of the policy.

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Importance of inclusion of History of Ancient Indian Commerce in curriculum

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Abstract

The inclusion of the history of Ancient Indian Commerce in educational curricula is of paramount importance for a multitude of reasons, offering students a comprehensive understanding of the roots of modern commerce, economics and their cultural impacts. This inclusion not only enriches the academic landscape but also fosters a deeper appreciation for India's rich heritage and its contributions to global civilization. Ancient India was a cradle of economic activity and innovation, engaging in extensive trade networks that reached far beyond its borders to Europe, Africa and Southeast Asia. By studying the intricate trade routes, such as the Silk Road and the Spice Routes, learners can gain insights into the early globalization processes and the interconnectivity of ancient economies. This knowledge helps students understand the complexities of contemporary global trade networks and the foundational role India played in them. Moreover, the inclusion of this subject sheds light on the advanced nature of Ancient Indian commerce, highlighting pioneering banking systems, the concept of guilds (Shrenis) and maritime trade that underscore the sophistication of economic practices of the time. Such historical insights encourage a deeper understanding of economic principles, entrepreneurship and the evolution of business practices. Incorporating the history of Ancient Indian Commerce into the curriculum also promotes cultural pride and identity among students. It serves as a reminder of India's historical prowess in trade and commerce, fostering a sense of belonging and appreciation for the country's ancestral wisdom and ingenuity. Furthermore, this inclusion has the potential to inspire innovative thinking and entrepreneurial spirit among students. By learning about ancient trade strategies, economic ethics and the management skills of our ancestors, students can draw valuable lessons applicable to modern business challenges. In conclusion, the history of Ancient Indian Commerce is not merely a subject of the past; it is a vital link to understanding our present and shaping our future. Its inclusion in the curriculum not only educates but also inspires, making it an indispensable part of a holistic education.

Key words : Academic Landscape, Heritage, Historical Prowess

Introduction

History of Ancient Indian Commerce

The history of Ancient Indian Commerce is a testament to the region's early sophistication in trade and economic organization, showcasing a period rich with innovation, extensive networks and cultural exchanges that have shaped global commerce as we know it today. Ancient India, with its strategic geographical location, was a hub of commercial activities and a bridge between the East and the West. From as early as 3000 BCE, the Indus Valley Civilization exhibited signs of thriving trade practices, including the use of standardized weights and measures for trade and the production of goods like cotton, beads and pottery for export. The discovery of seals and remnants at sites like Harappa and Mohenjo-Daro suggests trade links with Mesopotamia and beyond. With the Vedic period, the focus shifted towards agrarian economies but trade and commerce continued to play a crucial role. The later Mauryan and Gupta periods saw the expansion of trade routes, both overland and maritime, reaching out to Central Asia, the Middle East and Southeast Asia. The Silk Road and the Spice Routes not only facilitated the exchange of goods like silk, spices, gold and ivory but also enabled a rich cultural exchange, spreading religions, ideas and innovations.

Ancient Indian texts, including the Arthashastra, provide detailed insights into the economic principles, taxation, market regulations and trade policies of the time, highlighting a sophisticated understanding of commerce and governance. The use of coinage, which began in the 6th century BCE, further facilitated trade and is a significant indicator of the economic prosperity and complexity of ancient Indian society. Maritime trade flourished during the Sangam period, with the southern coast of India engaging in extensive commerce with Rome, Southeast Asia and China. This period is marked by the prominence of Tamil guilds, which managed trade operations and ensured the protection of traders.

In conclusion, the history of Ancient Indian Commerce reveals a civilization deeply engaged in the complexities of trade, economic strategy and global interaction. This legacy of innovation and connectivity not only underscores India's pivotal role in ancient economics but also lays the groundwork for understanding global trade dynamics today.

Inclusion of The History of Ancient Indian Commerce in Educational Curricula

The inclusion of the History of Ancient Indian Commerce in educational curricula is a transformative step towards acknowledging and integrating the rich tapestry of India's economic heritage into modern learning. This initiative is not merely about revisiting the past; it's about unlocking the potential of historical insights to inform and inspire future generations of learners, thinkers and entrepreneurs.

Ancient India's commerce was marked by remarkable advancements in trade, banking and economic strategies, which played a pivotal role in shaping early global trade networks. From the Harappan civilization's trade with Mesopotamia to the maritime expeditions that connected India

with the Roman Empire, Southeast Asia and beyond, these historical narratives highlight India's early integration into global commerce. By studying these, students gain a nuanced understanding of the economic forces that have shaped human history and continue to influence the global economy.

Integrating this history into the curriculum does more than expand knowledge; it builds a bridge connecting ancient wisdom with contemporary economic practices and challenges. It instills a sense of pride and identity among students, highlighting India's contributions to global commerce and the innovative spirit of its people. This awareness can inspire a new generation of entrepreneurs and business leaders to draw on India's rich heritage to innovate and drive forward in today's competitive global marketplace.

Moreover, this inclusion fosters critical thinking, enabling students to analyse historical data, understand the evolution of economic systems and appreciate the complexity of global interdependencies. It also encourages an interdisciplinary approach, blending economics, history, geography and cultural studies, thus providing a well-rounded education.

In essence, incorporating the History of Ancient Indian Commerce into the curriculum is a strategic step towards creating informed, proud and innovative future citizens. It empowers students with a deep understanding of their heritage, equipping them with the inspiration and knowledge to contribute meaningfully to the global economy.

Importance and significance

The inclusion of the History of Ancient Indian Commerce within educational curricula stands as a significant educational strategy, emphasizing the importance and relevance of India's commercial past in understanding both historical and contemporary economic landscapes. This educational inclusion serves multiple pivotal roles: it enlightens students about India's rich heritage in global trade, underscores the evolution of commerce and economics and cultivates a profound sense of cultural identity and pride.

Ancient India was a powerhouse of economic activity, pioneering in areas such as trade, finance and market organization. Its vast networks reached across Asia, Europe and Africa, facilitating not only the exchange of goods like spices, textiles and precious stones but also the cross-cultural exchange of ideas, technologies and agricultural practices. By studying these ancient commerce systems, students can gain invaluable insights into the origins of modern trade practices and economic theories.

Moreover, this inclusion holds the promise of fostering a deeper connection between students and their heritage. Understanding the sophisticated economic systems, trade routes and commercial laws of ancient India helps build a bridge between past and present, encouraging a sense of pride in India's historical contributions to global commerce.

Educationally, integrating this history encourages interdisciplinary learning, combining economics,

history, archaeology and geography to provide a more holistic view of the world. It aids in developing critical thinking and analytical skills as students examine economic concepts, trade dynamics and their impact on societies and cultures through time.

In essence, the inclusion of the History of Ancient Indian Commerce in curricula is more than an academic requirement; it's a means to empower students with a comprehensive understanding of global economic history, enhance their appreciation of India's rich cultural legacy and inspire them to innovate and contribute to the world's economic future. This approach not only broadens their knowledge base but also instills a deep-seated respect for the intricate web of human civilization and its continuous evolution.

Objectives of the study

To investigate the impact of integrating the History of Ancient Indian Commerce into educational curricula on students' economic understanding, cultural identity and interdisciplinary learning.

Hypothesis of the study

Including Ancient Indian Commerce in curricula enhances students' economic literacy, cultural pride and promotes a holistic educational approach.

Data collection and Analysis

Trade and commerce in ancient India were pivotal in shaping not only the region's economic landscape but also its interactions with the broader world. The subcontinent's rich resources, strategic geographic location and the ingenuity of its people facilitated a flourishing network of trade both within India and beyond its borders, encompassing a vast array of goods, including spices, textiles, metals and precious stones.

From as early as the Harappan civilization (around 2500 BCE), evidence suggests that India was engaged in international trade. The discovery of Harappan seals in Mesopotamia and vice-versa points to an active exchange of goods, ideas and culture between these ancient civilizations. The Harappans, known for their urban planning and sophisticated trade systems, traded goods such as cotton textiles, beads and metals through overland and maritime routes.

As time progressed, the Vedic texts (circa 1500-500 BCE) further illuminate aspects of trade and commerce, highlighting the importance of agriculture, cattle rearing and handicrafts. During this period, the barter system was prevalent, with a transition towards the use of currency seen in later periods, which facilitated easier trade.

The Mauryan and Gupta empires (circa 322 BCE-550 CE) represent another significant era for trade and commerce in India. The Mauryan Empire, under Emperor Ashoka, expanded trade networks and the state regulated commerce to ensure fair trade practices. The Gupta period, often referred to as the Golden Age of India, saw a profound advancement in arts, sciences and trade.

The Silk Road, extending from China to the Mediterranean, served as a vital trade route for Indian silk, spices and other commodities.

Maritime trade also flourished, particularly in the southern part of India, where the Chola, Chera and Pandya kingdoms (known collectively as the Tamil kingdoms) engaged in extensive trade with Southeast Asia, China and the Roman Empire. The Periplus of the Erythraean Sea, a Greek travel manuscript from the 1st century CE, describes detailed trade routes and goods exchanged between India and the Roman Empire, highlighting the global significance of Indian commerce.

The commodities traded were diverse: spices (notably black pepper), diamonds from Golconda, textiles (such as fine muslin and silk) and unique handicrafts were highly sought after. This trade brought immense wealth to the Indian subcontinent and contributed to a vibrant cultural exchange with other civilizations.

Trade guilds, known as 'Shrenis,' played a crucial role in organizing trade and ensuring the welfare of its members. These guilds were powerful entities that regulated prices, quality of goods and even had their own judicial systems to resolve disputes among merchants.

The impact of trade and commerce in ancient India was profound, fostering not only economic prosperity but also cultural and intellectual exchanges that enriched both India and the civilizations it interacted with. The advanced maritime capabilities, pioneering use of currency and a well-structured trade network laid the foundation for India's long-standing reputation as a centre of trade and culture, a legacy that resonates to this day.

Economic activity in ancient India

Economic activity in ancient India was a complex interplay of agriculture, trade, crafts and taxation systems, reflecting the subcontinent's diverse geography, resources and evolving social structures. These activities not only sustained the local populace but also contributed to India's interactions with distant civilizations. Here are six key points that encapsulate the essence of economic activity in ancient India:

1. Agricultural Foundation:

Agriculture was the backbone of the ancient Indian economy, benefiting from the fertile plains of the Indus, Ganga and Brahmaputra rivers. The primary crops included wheat, barley, pulses and later, rice. The introduction of iron plows in the later Vedic period significantly enhanced agricultural productivity. Irrigation techniques, such as canals and tanks, were developed to ensure consistent water supply. The agricultural surplus generated not only supported the local population but also facilitated trade by providing goods for export.

2. Trade and Commerce:

Trade, both internal and external, was a vital component of ancient India's economy. Overland routes and maritime trade were extensively developed. Internally, trade was facilitated

by a network of roads and rivers, connecting various regions of the Indian subcontinent. Externally, India engaged in trade with the Roman Empire, Southeast Asia and China, exporting spices, textiles, gems and metals. The existence of well-established trade routes like the Silk Road and maritime routes across the Indian Ocean underscores the importance of trade in ancient India.

3. Crafts and Manufacturing:

The urban centres of ancient India were hubs of manufacturing and craftsmanship. Skilled artisans produced a wide range of goods, including pottery, textiles, metalwork and jewellery. The quality of Indian cotton textiles and silk was renowned across the world. Artisans often organized into guilds, known as "Shrenis," which regulated production standards, prices and trade practices, ensuring the welfare of their members and maintaining the quality of the crafts.

4. Monetary System and Trade Guilds:

The evolution of a monetary system facilitated trade and commerce. Initially, barter was the primary mode of exchange, but over time, coins made of precious metals like gold, silver and copper became prevalent. These coins, issued by various rulers, helped standardize economic transactions. Trade guilds or "Shrenis" played a crucial role in the economy by regulating trade, providing training and supporting members in times of need. These guilds had significant autonomy and power, often negotiating with rulers on behalf of their members.

5. Taxation and State Economy:

The state played an active role in the economy, primarily through the imposition of taxes. Taxes were levied on land, trade and crafts. The Arthashastra, an ancient Indian treatise on statecraft, economics and military strategy, provides detailed insights into the taxation system and economic policies of the time. The revenue collected was used for the maintenance of the army, public works and the welfare of the state.

6. Cultural and Economic Exchange:

Economic activity in ancient India was not just about wealth accumulation; it facilitated cultural and intellectual exchanges. The trade routes became conduits for the spread of ideas, philosophies and technologies. Indian numerals, mathematical concepts, spices and religious texts travelled across continents, influencing cultures far beyond the Indian subcontinent.

In conclusion, economic activity in ancient India was diverse and sophisticated, underpinned by agriculture, bolstered by trade and crafts and regulated by a structured system of taxation and guilds. This economic framework not only supported the material needs of the society but also fostered a rich cultural exchange that shaped global civilizations.

Conclusion

Enhances economic literacy, fosters cultural pride, develops critical thinking, encourages interdisciplinary learning and inspires innovation by reflecting on ancient commerce practices and innovations.

1. Enhanced Economic Understanding:

Incorporating the History of Ancient Indian Commerce into the curriculum broadens students' perspectives on the origins and evolution of trade and economics, providing a foundational understanding of modern economic systems and principles through the lens of historical commerce practices.

2. Cultural Pride and Identity:

Learning about the significant contributions of ancient Indian civilizations to global trade instills a sense of pride and identity among students. Recognizing their ancestral heritage in shaping world commerce enhances their cultural appreciation and fosters a stronger connection to their national history.

3. Critical Thinking Skills:

Analysing ancient economic systems, trade networks and commercial innovations encourages students to develop critical thinking and analytical skills. Such historical analysis prompts students to draw connections between past and present economic challenges and solutions, promoting a deeper level of cognitive engagement with the subject matter.

4. Interdisciplinary Approach:

The inclusion of this history encourages an interdisciplinary approach to learning, connecting economics, history, geography and cultural studies. This broadens students' academic horizons, promoting a more rounded and comprehensive educational experience.

5. Inspiration for Innovation:

Studying the advanced trade mechanisms, entrepreneurial spirit and innovative practices of ancient Indian commerce can inspire students to adopt innovative thinking in their own future careers. Understanding how ancient traders overcame challenges with creativity and resilience can motivate students to approach modern business and economic challenges with a similar mindset.

Suggestions

- 1. Curriculum Integration:** Ensure that the History of Ancient Indian Commerce is seamlessly integrated into existing history and economics curricula at appropriate grade levels.
- 2. Multimedia Resources:** Develop multimedia resources such as videos, interactive simulations and virtual tours to engage students and bring the historical context of ancient Indian commerce to life.
- 3. Interdisciplinary Approach:** Encourage collaboration between history, economics, geography and cultural studies departments to provide a comprehensive understanding of ancient commerce from various perspectives.
- 4. Guest Lectures and Workshops:** Invite scholars, historians and experts in ancient Indian commerce to conduct guest lectures and workshops, offering students first-hand insights

and expertise.

5. **Field Trips:** Organize field trips to historical sites, museums and archaeological excavations related to ancient Indian commerce to provide students with tangible experiences and visual aids.
6. **Primary Source Analysis:** Incorporate primary sources such as ancient texts, inscriptions and artifacts into the curriculum, allowing students to engage directly with historical evidence.
7. **Project-Based Learning:** Implement project-based learning activities where students research and present on topics related to ancient Indian commerce, fostering independent inquiry and critical thinking skills.
8. **Role-Playing Exercises:** Conduct role-playing exercises where students assume the roles of ancient traders, merchants, or government officials to understand the complexities of commercial transactions and trade regulations.
9. **Comparative Studies:** Encourage comparative studies between ancient Indian commerce and other ancient civilizations, highlighting similarities, differences and the interconnectedness of global trade networks.
10. **Assessment Strategies:** Develop assessment strategies that evaluate students' understanding of ancient Indian commerce through diverse formats such as essays, presentations, debates and creative projects, ensuring a comprehensive evaluation of learning outcomes.

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Gamification in Education: Empowering Students Through the Prahelika Concept

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Abstract

This quasi-experimental study, involving 84 students, explores the integration of the gurukul system's Prahelika concept into education through gamification within a flipped classroom strategy, focusing on mathematics education. Drawing on student-centered learning principles from the Vedic period and the cultural significance of Chausath Kalas, particularly "Prahelika," the study investigates the effect of gamified learning on academic achievement in alignment with the principles of Indian Knowledge Systems (IKS). Findings reveal that gamified flipped approaches significantly enhance achievement in mathematics learning as compared to non gamified flipped approaches. The study advocates for the adoption of gamification to create dynamic learning environments and highlights its transformative potential in education.

Keywords : Indian Knowledge System (IKS), Vedic period, Gurukul system, Chausath Kalas, Prahelika, Gamification, Mathematics, Gamified flipped & Non-Gamified flipped

1. Introduction

The Indian knowledge system (IKS) encompasses the traditional systems of knowledge that have evolved and thrived throughout India's rich history. These systems encompass a diverse array of disciplines, including but not limited to philosophy, Ayurveda (traditional medicine), astronomy, mathematics, literature, and spirituality. It is the systematic transmission of knowledge from one generation to the next generation (Mandavkar, 2023). But as time progresses and modernity advances, there is a concern that the traditional IKS, rich with wisdom, is gradually fading away. In the face of the swiftly evolving global landscape, it has become imperative to periodically rejuvenate the education system to align with contemporary trends and address the demands of the present scenario Vaz(2024). Taking into consideration, the New Education Policy (NEP) 2020, launched to transform the Indian education system, emphasizes holistic development of the learners (Chandel & Prashar, 2014). NEP 2020 plays a crucial role in safeguarding this invaluable heritage for future generations. It recognizes this rich heritage of ancient and eternal Indian knowledge and thought as a guiding principle (Nic, n.d.).

As technology has changed our lives as adults, it has almost rewired this younger generation to think differently than previous generations (Osheim, 2013). Moreover as we are in technological era it becomes imperative that we learn from our past and adopt ways of designing our curriculum and pedagogy to meaningfully address current societal needs (Vaz, 2024).

The concept of flipped learning brought about a paradigm shift in the traditional teaching learning process. It has reversed the ownership resulting from a student teacher classroom to student centered classroom resulting in autonomous, and self-regulated learner. But some challenges are still reported as unpreparedness of students for in class activity, Smith (2015) found no statistical difference in academic achievement in mathematics, it requires more time to adjust (Dusenbury & Olson, 2019).

On the other hand various studies reported the positive impact of gamification in education. Improved learning outcomes are reported by Domínguez et al. (2012); Simões (2015, it strengthens learners' motivation towards their learning (Lee & Hammer (2011); Sahin & Namli (2016); Ölmefors (2016); Hamari et al. (2014)). It promotes self-directed learning (Hei, 2019), individual's soft skills (Adhiatma et al. 2019) and social relatedness (Dindar & Jervenoja, 2020 & Simões, 2015). Some studies reported mitigation of the engagement crisis by supplementing flipped classes with games. Gamified flip-class setting fosters better motivation and engagement (Zainuddin, 2018; Ozer, 2018).

Taking into consideration the above discussion the researcher conducted the study comparing Gamified flipped and Non-Gamified flipped classroom strategy in mathematics classroom.

The below body of the paper discusses the rationale and background of the study, followed by details on planning and implementation. It presents data analysis, discussion of findings, and concludes with limitations of the study.

2. Rationale of the Study

The rationale for this study arises from the current technological landscape where students are proficient in digital tools, as observed by Santos & Castro (2021). In this era, technology has transcended its role as a mere teaching aid to become an essential component of the learning process itself. Moreover, Prensky (2001) identifies the generation born in 1990 as the "Games Generation." In today's world, teachers must not only be experts in their subjects and effective instructors but also adept at utilizing technology to assist students to meet demand of the emerging knowledge based society. Wepee (2015) underscores the importance of educators comprehending the processes by which learners acquire knowledge, to tailor their teaching methodologies effectively. Moreover, the scarcity of research utilizing gamification approaches in India prompts the need for this study.

To address the aforementioned gap the researcher has formulated the research question as-
RQ: - How do students in the classroom utilizing Gamified Flipped and Non Gamified Flipped instructions in learning topic integers compare on the achievement test?

Null hypothesis- The null hypothesis was framed as below-

H0- There is no significant difference between adjusted mean scores of Achievement of Gamified

Flipped and Non Gamified Flipped group by considering Pre-Achievement as a covariant.

3. Background of the study

The paragraph below discusses the methods of Teaching in the Gurukul Education System, the History of Mathematics in India, and Concept of Gamification.

a. Methods of Teaching in the Gurukul Education System

The Vedic period saw teaching being student-centered. It incorporates teaching methodologies in secondary education, including an emphasis on experiential learning and the practical application of concepts, encouragement of interdisciplinary study and collaboration, and the promotion of critical thinking and problem-solving skills through case studies and real-life examples Vaz (2024).

Christ (2019a) described Chausath kala as the 64 forms of art. Kala means performing art in Sanskrit. The mastery of as many of the 64 traditional arts known as the Chausath Kalas or the Chathausashti Kalas, formed an important basis in the development of a cultured individual in many parts of ancient India. "Prahelika" is one of the 64 arts mentioned in ancient Indian texts, particularly in the context of the Chausath Kalas. It means the Art of Riddles. Prahelika means puzzle. In trying to solve the puzzle, children think, then guess and find the right solution, then they get pleasure. As suggested by Chandel & Prashar (2024), the data available about IKS needs to be streamlined with the help of information technology, considering that the present study utilized the concept of gamification in flipped classrooms. Here, the practice of solving mathematical problems was presented in a fun way to create interest and motivate the students. In line with this a study conducted by Singh, 2022 reported that in this education system, an attempt is made to increase the imagination, thinking power, and observation power of the children through puzzles.

b. The History of Mathematics in India

India has a rich mathematical heritage, contributing two significant concepts to the world: the number "zero" and the decimal place value system. Ancient mathematicians like Aryabhatta, Brahmagupta, Mahavira, and Bhaskara made notable contributions. The oldest mathematical records are the Sulba Sutras, dating back to between the 8th century BC and the 2nd century AD. The Jain tradition showed considerable mathematical activity from the 8th to the 14th century, with Mahavira's "Ganita Sara Sangraha" being influential. The Kerala school, led by Madhava in the late 14th century, advanced mathematics significantly until the 17th century. In modern times, Srinivasa Ramanujan's contributions stand as a hallmark in mathematical development.

c. Concept of Gamification

Gamification, a concept introduced by Nick Pelling in 2002, gained recognition in 2010. It is the use of game elements and design techniques in non-game contexts (Werbach & Hunter (2012). The main objective of gamification is to motivate users by making their experience more

playful and fun (Deterding et al, 2013). Essentially, gamification applies game mechanics, techniques, and theory to areas outside traditional gaming to enhance engagement and achieve specific objectives. Specifically, Gamification transforms the learning process into a game-like experience by integrating elements from gaming, such as achievement badges, points, leaderboards, progress bars, and levels/quests, into existing educational content and courses. By incorporating these game mechanics and gameplay elements, gamification enhances learner motivation and engagement, making the learning process more interactive and enjoyable. Ibharim et al.(2018) stated in his study that children can benefit from the integration of digital games in their learning environment as they will be able to memorize the learning better. Whereas, Martínez & García (2019) argue that educators can enhance the learning experience by transitioning from traditional roles of content dissemination to becoming guides or references, empowering students to navigate their own paths. This shift will foster a deeper and more enjoyable learning process for students.

4. Planning and Implementation

The researcher of the study took 12 online classes of both the groups at the same time during COVID. Initially the researcher gave awareness about the online gamification tools. Daily at the end of each class homework for practicing the concept and a video for preparing for the next class was shared with students. The paragraph below discusses the various Online tools used in the study for flipping and giving practice, and experimental procedure & statistical techniques.

i) Online Tools for Flipping and Giving Practice

The present study used Quizizz.com, 99math.com, and Mathplayground.com gamification tools for giving practice to the Gamified flipped group. The games were related to the concept explained and discussed during online classrooms. The same Edpuzzle videos but without gamifying them were shared with the NGF group for flipping the class. The NGF group was given worksheets to practice.

ii) Experimental Procedure & Statistical Techniques

A quasi-experimental nonequivalent group design was used in this study to compare the effect of gamification in Gamified Flipped Classroom (GFC) and Non Gamified Flipped Classroom (NGFC). A sample of 42 students in each GF (experimental) group and NGF (control) group from class VI SSC Board, Maharashtra Board were taken in the study. A pretest was administered to these two groups. The GF group is taught through GFC strategy and NGFC group with Flipped Classroom strategy. After experimental treatment, an immediate posttest was administered. The performance of the two groups on Achievement with respect to immediate posttest were taken into consideration. The scores obtained by the students in the pretest and posttest were classified and subjected to statistical analysis. This includes comparison of mean scores and standard deviation with a view to arriving at a rough estimate of the comparative

effectiveness of the treatment groups, followed by more precise comparison using the technique of Analysis of Covariance ANCOVA.

5. Data analysis

The Homogeneity of regressions was calculated using Levene's Test. The requirement of homogeneity is met as the f-ratio value is 0.0096 and the p-value is 0.76. The result is not significant at $p < .05$.

The results of Shapiro-Wilk test statistics for normality on posttest Achievement of experimental and control groups indicate that both groups are normally distributed with a statistic of 0.953 and a p-value of 0.125 for the GF group, and a statistic of 0.975 and a p-value of 0.601 for the NGF group. The following Tables 1 and 2 show the relevant statistics on posttest Achievement of experimental and control groups.

Class	Count	Low Score	High Score	Observed Mean	Adjusted Means	SD
GFC	42	18.5	25	22.35	22.45	2.48
NGFC	42	11.5	21.5	15.4	15.31	2.68

Table 1: Descriptive statistics of GF & NGF group on Achievement

Sources of Variation	SS	df	MS	F	P-Value
Adjusted Means	1068.27	1	1068.27	708.21	5e-7
Adjusted Errors	122.18	81	1.51		
Adjusted Total	1190.45	82			

Table 2: Analysis of ANCOVA on Posttest Achievement

6. Discussion

The research results show that there is an observable improvement in the performance of the students in both the groups. The increase in Achievement scores of the NGF group is supported by various studies which compared flipped classroom and traditional classroom teaching strategy. Chung & Lee (2018); Esperanza, Fabian & Toto (2016); Kaur (2018); Overmyer (2014); Preethi (2017); Ramaglia (2015); Segumpan & Tan (2018) found increase in achievement of students in flipped classroom. On the contrary the results found by Olmefors (2016); Smith (2015) show no statistical difference in academic achievement of students in the flipped classroom.

Though there is an increase in Achievement of NGF group it is still less as compared to GF

group when compared on their pre and posttest scores.

The researcher noticed a positive attitude of the students of the experimental group during the in-class activities. On the contrary, the researcher found a lack of motivation to watch the video resulted in unpreparedness of the NGF group during in-class activities which is inline with the study conducted by Akcayir & Akcayir, (2018). Moreover, the number of submissions of daily homework from the NGF group was found to be low. Whereas, students of the GF group played the games on a regular basis. Though the students in both the groups were low performers in the beginning of the study, the GF group shows greater performance after the intervention as compared to the NGF group.

Increase in performance of students in the GF group can be subjected to the intervention programme. The game based tool Edpuzzle.com made students practice the concept using flipped videos. It helped them to engage in the in-class activity and to master the concept in a fun learning way. The present study shows the use of appropriate technology in classroom instruction produces better confidence, retention and performance of the students which is supported by Segumpan et al. (2018).

Hence, it can be concluded that the gamification strategy is effective for increasing the performance of students in mathematics. The daily practice as fun oriented homework makes the GF group independent learners. It helps them take responsibility for their own learning.

7. Conclusion

The integration of the gurukul system's Prahelika concept into education via gamification, particularly through a gamified flipped classroom strategy, has shown significant benefits, especially in mathematics. The study revealed that students engaged in gamified learning scored notably higher in Achievement compared to non-gamified flipped groups. The combined approach of gamification and the flipped classroom resulted in a substantial increase in academic achievement, particularly among the gamified group. Factors such as instant feedback, trial and error, freedom to fail without judgment, increased motivation, engagement, and fun learning environments contributed to these positive outcomes. Overall, this study highlights the potential of gamification to enhance learning outcomes and revolutionize educational practices.

8. Limitations of the study

The study has many limitations, data on a small sample comprising 84 students, is too less to generalize the findings. Furthermore, while the study did not incorporate qualitative data in the form of responses for having the understanding of gamification before and after the course, it might have been constrained. These recognized limitations highlight the potential for future research to explore these areas and to address these gaps.

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GOEIIRJ

The Introduction of the Great Sanatani Hindu Education System and its Integration in New Education Policy 2020 for the restoration of Holistic Development of Nation

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Abstract

Education plays the key role in the development of young minds for respectful life. India is the highest populated nation of the world and the students will have to face strong competition in the future. The Sanatani hindu education system has given inventions to the world. After the invasion from various invaders and fall of the ancient Indian education system the nation has faced major problems like partition, poverty, illiteracy, naxalism and terrorism in India. After independence, there has been tremendous growth in the Indian education system providing teaching and training in all aspects, but it does not satisfy the global demands of the market. The one education policy is required for the total construction of India as a strong Nation of the World.

Keywords: History, Tradition, Inventions, Education, Vedas, Curriculum in NEP 2020 and construction of strong Nation.

1. Introduction

1.1 History of the Great Sanatani Hindu Education System

The ancient system of education was the education of the Vedas, Brahmanas, Upanishads, and Dharmasutras. The names of Aryabhata, Panini, Katyayana and Patanjali. Their writings and the medical treatises of Charaka and Sushruta were also some of the sources of learning. The distinction was also drawn between Shastras (learned disciplines) and Kavyas (imaginative and creative literature). Sources of learning were drawn from various disciplines such as Itihas (history), Anviksiki (logic), Mimamsa (interpretation) Shilpashastra (architecture), Arthashastra (polity), Varta (agriculture, trade, commerce, animal husbandry) and Dhanurvedya (archery). Physical education too was an important curricular area and pupils participated in krida (games, recreational activities), vyayam prakar (exercises), dhanurvedya (archery) for acquiring martial skills, and yogasadhana (training the mind and body) among others. The Gurus and their pupils worked conscientiously together to become proficient in all aspects of learning. To assess pupils' learning, shastrartha (learned debates) were organized. Pupils at an advanced stage of learning

guided younger pupils. There also existed the system of peer learning, like you have group/peer work¹.

In ancient India, both formal and informal ways of education existed. Indigenous education was imparted at home, in temples, pathshalas, tols, chatuspada and gurukuls. There were people in homes, villages, and temples who guided young children in imbibing pious ways of life. Temples were also the centers of learning and took an interest in the promotion of knowledge of our ancient system. Students went to viharas and universities for higher knowledge. Teaching was largely oral and students remembered and meditated upon what was taught in the class¹.

1.1.2 The Gurukul: Tradition of Going Away from the Home-Comfort Zone for Learning.

Gurukuls, also known as ashrams, were the residential places of learning. Many of these were named after the sages. Situated in forests, in serene and peaceful surroundings, hundreds of students used to learn together in gurukuls. Women too had access to education during the early Vedic period. Among the prominent women Vedic scholars, we find references to Maitreyi, Viswambhara, Apala, Gargi, and Lopamudra, to name a few. During that period, the gurus and their shishyas lived together helping each other in day-to-day life. The main objective was to have complete learning, lead a disciplined life, and realize one's inner potential. Students lived away from their homes for years together till they achieved their goals. The gurukul was also the place where the relationship between the guru and shishya strengthened with time. While pursuing their education in different disciplines like history, art of debate, law, medicine, etc., the emphasis was not only on the outer dimensions of the discipline but also on enriching the inner dimensions of the personality¹.

Many monasteries/viharas were set up for monks and nuns to meditate, debate and discuss with the learned for their quest for knowledge during this period. Around these viharas, other educational centers of higher learning developed, which attracted students from China, Korea, Tibet, Burma, Ceylon, Java, Nepal, and other distant countries.

1.1.3 The Invasion of India.

The Invasion by the Mughals, Britishers, and other foreigners had caused great damage to India. The Partition of India, the Conversion of Hindus, and the fall of moral values are the great challenges of Modern India. The Islamic invasion was one of the bloodiest leading to the massacre of around 80 million people, besides auctioning of around 2.5 million women as slaves² and British colonialism had killed 100 million Indians³. The Invasions had destroyed the Universities and precious Ancient Indian literatures^{4,6}.

1.2. The Vedas

There are four types of Vedas – Rigveda, Samaveda, Yajurveda, and Atharvaveda. One of the best sources of Ancient Indian History is Vedic literature. Vedas have formed the Indian scripture. The ideas and practices of Vedic religion are codified by the Vedas and they also form

the basis of Sanatani Hinduism. The four Vedas were transmitted in various śākhās⁷ (branches, schools). Each school likely represented an ancient community of a particular area or kingdom. *The Rigveda Samhita* is the oldest extant Indic text⁸. It is a collection of 1,028 Vedic Sanskrit hymns and 10,600 verses in all, organized into ten books (Sanskrit: mandalas). The hymns are dedicated to Rigvedic deities. *The Samaveda Samhita* consists of 1549 stanzas, taken almost entirely (except for 75 mantras) from the Rigveda. While its earliest parts are believed to date from as early as the Rigvedic period, the existing compilation dates from the post-Rig Vedic Mantra period of Vedic Sanskrit⁹. *The Yajurveda Samhita* consists of prose mantras. It is a compilation of ritual offering formulas that were said by a priest while an individual performed ritual actions such as those before the yajna fire. The core text of the Yajurveda falls within the classical Mantra period of Vedic Sanskrit at the end of the 2nd millennium BCE – younger than the Rigveda, and roughly contemporary with the Atharvaveda¹⁰. *The Artharvaveda Samhita* is the text belonging to the Atharvan and Angirasa poets. It has about 760 hymns, and about 160 of the hymns have in common with the Rigveda. Most of the verses are metrical, but some sections are in prose. Two different versions of the text – the Paippalāda and the Śaunakīya – have survived into modern times¹¹.

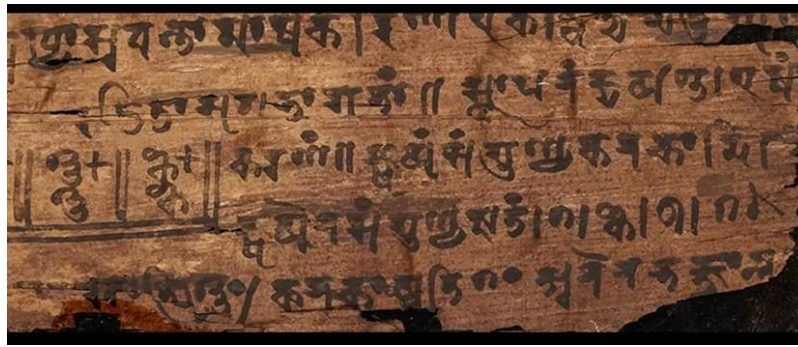
2 The Great Invention from India to the World

The Ancient Indians have contributed to unbelievably shaping the world. From plastic surgeries to the conceptualization of intellectual theories, there are many extraordinary ancient Indian inventions present.

In the quest for historical and archaeological documentation, people usually observe, preserve, and interpret the in-your-face evidence. Materialistic proofs such as monuments, palaces, etc., and written sources are prioritized. Along the way, the smaller, but not insignificant, developments and historical achievements are discarded. It is important to acknowledge the involvement of such material and philosophical contributions in the progression of the march of history. A summary of some important ancient Indian inventions is as follows.

2.1 The Concept of Zero

Present mathematics owes it to ancient Indian scholars¹¹ for developing the skill of counting. Trading of materials and ideas was a prevalent activity between ancient India and ancient Greece, and hence, there are many records of the exchange of mathematical ideas between the two civilizations. Even though Greece is credited for contributing some opinions on the concept of zero, the world of Math was revolutionized by ancient Indians in 500 CE.



(Bakhshali manuscript, the Oldest record of Zero Symbol (Dotted form), 3rd-4th century CE, via University of Oxford)

In the long list of surprising Indian inventions, the astronomer Aryabhata is always cited for first using the expression 'Kha' for zero in his numbering system. Through him, zero had finally gained a positional value. Its purpose now shifted from being a mere-named concept to becoming a number in its own right. 100 years later, you see another scientific genius, Brahmagupta employing the word sunya (empty), widely used in present-day India, to denote zero. Various synonyms such as akasa (sky) are used in later years, connoting the idea of an 'empty circle' and imagining the concept of zero in different forms, apart from simply tallying numbers. This is how the concept of zero transformed from an adjective to a noun (proper number).

2.2 Plastic Surgery: Facial Reconstruction

Today, the practice of plastic surgery is seemingly as important in show business, on an international level, as having actual skills and talents. These aesthetic surgeries are certainly on the list of Indian inventions, whose mentions you will find throughout the myths and historical texts of the subcontinent.

The theory of reconstructive surgery is recorded in Indian sources as old as 4000 years ago. Vedic records of the time retell the story of Shiva, a Supreme Hindu deity, replacing the head of his dead human son, Ganesh, with the face of an elephant baby. According to these sources, the knowledge of Ayurveda (the science of life) was passed down from Brahma, another Supreme Hindu deity, to Sushruta, the son of the King of Banaras, through a chain of gods and humans acting as the connecting links.

Sushruta then gathered all these learnings, including information about plastic surgery, in Sushruta Samhita, a section of the famous four-part religious texts called the Vedas. Many of the practices prevalent today, such as a nose job or skin grafting, are mentioned by Sushruta.



(Elephant-headed child Ganesha with Parvati, his mother, seated on his lap, 13th century CE, via the British Museum, London)

He describes the surgery of rhinoplasty in great detail, with steps as informative as using the patient's cheek or forehead flap to reconstruct a person's nose. Another source from 4th century India discusses the use of plastic surgery in Ashtanga Hridayam by the great ancient Indian scholar Athreya.

2.3 Weights: A System of Measuring



(Chert cubed weights excavated at Chanhudaro, Indus Valley, 2400-1700 BCE, via the British Museum, London)

The Indus Valley civilization is an evolved and recently-discovered ancient culture. The Harappan and the succeeding cultures of that time are credited with inventing many of the common things we use today, especially in the system of measuring¹²— for instance, the ruler and the weights. In the 1930s, fifty-eight cubed weights were discovered at Chanhudaro, an archeological site of the Indus Valley civilization which can be located in modern-day Pakistan.

The Indian inventions, dated 2400-1700 BCE, were made using the decimal and binary mathematical systems of measurement. The pieces discovered were multi-colored, made of different sands, and came in different shapes and sizes. Metrologists estimate that the stones were first shaped with a chisel, and then stroked on smooth surfaces till the required mass amount was achieved.

The Indus Valley people were extremely careful in producing these weights. Over time and

space, with a gap as wide as seven centuries, the level and degree of precision of the mass weight remained very accurate, with a margin error of more or less than only two percent. In addition to their mastery at hand-crafting, the weight range establishes that the Indus people were also aware of the usage of the powers of ten, the basis of the decimal system, and also employed numbers of large values in their computations.

2.4 Chess: Originally Four Players



(Ivory chest-piece, a man seated on two horses, 17th century, India, via The British Museum, London)

Chess is considered a game for intellectually evolved people. However, even in olden times, the model of Chaturanga (the four divisions), the most famous one out of the two premature Indian inventions of the board game, was played by the Indians. Robert Caplan designates the time of development for the strategy game anywhere between 3000 BCE – 500 CE. The game reached Persia and Europe through the Arabs. This infant Indian invention of chess had 64 squares and unlike its present counterpart, was played by four people instead of two. Each player had eight pieces: four pawns, a king, a bishop, a knight, and a rook. Alternatively, in place of a six-faced dice, an oblong one was used. In addition, the players facing each other were allied and two teams were formed based on the opposing directions of their seating positions.

In a general understanding, chess is attributed to have first been mentioned in the Puranas, a collection of 18 religious texts in ancient Indian literature. Legend says that to amuse Ravana, the villain of the epic Ramayana, with imagery of warfare, his wife invented the game of chess. Mahabharata, another Indian saga, recounts how the Pandava brother Yudhishtira lost his kingdom, estates, riches, and even, his wife to the sly Shakuni in a game of dice.

2.5 Cotton: Natural Fibers & Cultivation



(Indian man and woman of Punjabi descent card cotton, (possible) geographical successors of Indus natives, 19th century, India, via The British Museum, London)

Arguably, cotton is the most commercialized commodity in the world. With another achievement under its belt in the long list of Indian inventions, the Indus Valley civilization had started growing cotton way before anyone else. While the ancient Greeks adorned goatskins and other animal hides as clothing, ancient Indians started cultivating cotton in the 5th-4th millennium BCE.

Greek philosopher Herodotus describes Indian cotton as “a wool exceeding in beauty and goodness that of sheep”. Other accounts describe Indian cotton to be “woven in winds”. The Arab merchants carried the notion of cotton cultivation to Greece and then Europe in 800 CE. The oldest cotton thread, dated to the Neolithic age, was found at the archeological site of Mehgarh and Rakhigarhi. The Indian invention of cotton has been a part of its national identity for many centuries. The colonial desire for the trade of cotton fabrics was a driving factor behind British imperialism in 17th-century India. Hence, the *charkha*, a cotton spinning wheel, and *khadi*, plain cotton cloth, were symbolic of the struggles of the Indian independence movement in the mid-1900s.

2.7 Yoga: Connection of Mind & Body

The term yoga has varied meanings in the Sanskrit lexicon, ranging from the noun chariot (200 BCE–400 CE) to the union of the body with God. It is in the 3rd century BCE we see that the God of Death makes the comparison of the body and intellect to the rider and the chariot. In the text *Kathaka Upanisad*, Nachiketa, the youngest brother of Pandavas, is made privy to the three foundations of yoga: the importance and physiology of the human body; the connection of the individual to the Supreme being; and, the components of the mind and body.



(Yoga Narasimha in powerful discipline pose, Vishnu in his Man-Lion Avatar, 1250 CE, South India, via Yoga: The Art of Transformation Exhibition, Cleveland Museum of Art)

Buddhist and Jain schools of philosophical thought also embody the yogic theory in the later years. Between 300 BCE and 400 CE, the Yogic theory had been immortalized into some core principles that influence our understanding of the concept in this day and age. It employed all forms of human philosophy: cognition, perception, divine and supernatural knowledge, and consciousness.

2.7 Cataract: An Indian Invention in Medicine

The Bower Manuscript, named after the discoverer who unearthed the Sushruta Samhita (the book of medicine) in Turkestan, in 1890, details the possible variety of procedures and diseases for the benefit of humankind. The translation by Bhisgratna in 1907 recognizes the physician Sushruta, as the writer, and for his contributions to the philosophical and procedural theories of medicine. In this book, there is mention of couching, the operation used in the treatment of cataracts.



(Sushruta Samhita Palm Leaf, 12th-13th century, Nepal, via Los Angeles County Museum of Art)

Sushruta describes the procedure of cataract-couching. He outlines the removal of cataracts in various steps, by the use of a pointed instrument. The main task is to disturb the lens material, take it to the back of the eye, and burst it with an incision. He cleans the eye with butter and advises to rest it for 10 days. The stages of the procedure are as detailed and descriptive as his instructions on skin flap removal for a nose job.

Many modern-day ophthalmologists, namely eye doctors, refute that the form of ‘couching’ performed by Sushruta cannot be considered the correct procedure. According to them, Jacques Daviel introduced the method of extracapsular cataract surgery in the 1700s.

3. The Major Social Challenges of Recent India

India, being a diverse and populous country¹³, faces a range of social issues. Here are some of the prominent ones:

3.1 Poverty: India has a significant population living below the poverty line, leading to inadequate access to necessities like food, clean water, and shelter.

3.2 Gender Inequality: Despite progress, gender disparities still exist in India, including unequal access to education, limited economic opportunities for women, and issues related to gender-based violence.

3.3 Caste System: The caste system, although officially abolished, continues to influence Indian society. Discrimination and violence against lower-caste individuals, often referred to as Dalits, persist.

3.4 Child Labor: Child labor remains a problem in some parts of India, with children being forced to work in hazardous conditions instead of receiving an education.

3.5 Education Gap: There is a significant gap in the quality of education between urban and rural areas. Many children in rural regions lack access to quality education.

3.6 Healthcare Challenges: Access to healthcare is uneven across the country. Rural areas often lack adequate medical facilities, and healthcare expenses can be a burden for many.

3.7 Corruption: Corruption is prevalent in various sectors, from politics to public services, which hinders economic development and social progress.

3.8 Overpopulation: India’s population continues to grow, putting pressure on resources and infrastructure, which can exacerbate many of these social problems.

3.9 Terrorism by Religious Extremists: Islamist militant organizations¹⁴ have targeted India for more than a decade. Bombings have bloodied the sprawling metropolises of Delhi, Mumbai, and Hyderabad, as well as smaller cities and towns throughout India. Dramatic attacks have also hit the historic Red Fort in Delhi, the Indian Parliament, and Kashmir’s state assembly. Police and paramilitaries stand permanent guard outside government buildings, popular tourist sites, and crowded markets, while terrorism alerts have become familiar headlines. For India experiencing unprecedented economic growth, Islamist terrorism is a grim reminder of South Asia’s bitter

divisions.

3.10 The Conversion of non-Muslim Girl Bride: Islam strongly supports marriage and discourages celibacy¹⁵. Islamic law sees marriage as a contract, in contrast to Hindu law, which considers it as a sacrament. It is important to remember that a marriage between a Muslim and a Hindu is not recognized as lawful under Muslim law. As a result, these partnerships do not give birth to the many rights that come along with a legal marriage. The concepts¹⁶⁻¹⁷ of “Love Jihad” and “Ghazwa-e-Hind” have become threat to the non-Muslims. Such kind of soft terrorism has created various kinds of social tensions in India.

3.11 The Violence of Naxalism: Naxalite¹⁸⁻²¹ is a generalized term representing the Maoists and militant groups operating in a few areas of India since the mid-1960s. The word Naxalite has been derived from Naxalbari, a small town in North Bengal that falls in Northeastern India. The Naxal violence claims 12,000 lives in 20 years.

4. The Cure of the Social Issues in India.

Humans without the knowledge of their History become the History. With the Forty-second Amendment of the Constitution of India enacted in 1976, the Preamble to the Constitution asserted that "India is a Secular Nation". The term "Secular" means being "separate" from religion, or having no religious basis. A secular person does not owe his moral values to any religion. His values are the product of his rational and scientific thinking. In ancient India, the Santam Dharma (Hinduism) was allowed to develop as a holistic religion by welcoming different spiritual traditions and trying to integrate them into a common mainstream²².

It emphasizes the fact that constitutionally, India is a secular country that has no State religion. And that the state shall recognize and accept all religions, not favor or patronize any particular religion.

While Article 14 grants equality before the law and equal protection of the laws to all, Article 15 enlarges the concept of secularism to the widest possible extent by prohibiting discrimination on grounds of religion, race, caste, sex, or place of birth.

Article 16 (1) guarantees equality of opportunity to all citizens in matters of public employment and reiterates that there would be no discrimination based on religion, race, caste, sex, descent, place of birth and residence.

Article 25 provides ‘Freedom of Conscience’, that is, all persons are equally entitled to freedom of conscience and the right to freely profess, practice, and propagate religion.

As per Article 26, every religious group or individual has the right to establish and maintain institutions for religious and charitable purposes and to manage its affairs in matters of religion.

As per Article 27, the state shall not compel any citizen to pay any taxes for the promotion or maintenance of any particular religion or religious institution.

Article 28 allows educational institutions maintained by different religious groups to impart

religious instruction.

Article 29 and Article 30 provide cultural and educational rights to the minorities.

Article 51A i.e. Fundamental Duties obliges all the citizens to promote harmony and the spirit of common brotherhood and to value and preserve the rich heritage of our composite culture. Now, to integrate all of these above aspects in education, the National Education Policy 2020 has been introduced²³. The NEP, 2020 recognizes this rich heritage of ancient and eternal Indian knowledge and thought as a guiding principle. The Indian Knowledge Systems comprising Jnan, Vignan, and Jeevan Darshan have evolved out of experience, observation, experimentation, and rigorous analysis. This tradition of validating and putting into practice has impacted our education, arts, administration, law, justice, health, manufacturing, and commerce. This has influenced classical and other languages of Bharat that were transmitted through textual, oral, and artistic traditions. "Knowledge of India" in this sense includes knowledge from ancient India and its successes and challenges, and a sense of India's future aspirations specific to education, health, environment, and indeed all aspects of life.

5. The Conclusion

India has gone through the dark chapters of slavery, genocide, and partition. If the young minds of India learn of its Ancient Existence through the NEP-2020 on the soil of India, they will give their efforts to build up the Developed India.

6. Acknowledgments

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Teacher Education: Issues & Challenges of Sustainable Development**Dr. Vinod Nakul Gavit***Associate Professor**Gokhale Education Society's**College of Education and Research, Parel, Mumbai.12**(Affiliated to University Mumbai)*

Abstract

To achieve the outcome of enhanced quality at all levels of education, Govt. of India has been focusing its attention on quality and excellence in higher education and teacher education. Teacher quality has produced voluminous studies that line many a research library. Discussion on what it is, how it is developed, and its connection to student achievement have become the feature of educational slang in the 21st century. This article provides an overview of teacher education problems and evaluation in India and lastly we discuss issues and challenges in teacher education. Several studies related to classroom environment and teacher behavior in selected subjects are referenced. In addition, the potential use of teacher profiles to drive staff development and academic improvement is explored.

Keywords: Teacher Education, Quality Excellence, Practice Teaching Lesson, Indian Knowledge System (IKS)

Introduction:

Primary and secondary teachers in India are trained at universities, and the educational system is centralized and the Ministry of Education and its implementation units, such as local education centers, have the primary responsibility for education policy, curricula design and practice. The Parliament approves legislation on education and the Ministry of Education sets guidelines for all practical issues including teacher education, as well as being the main funder in the sector. In General India does not experience shortages of school teachers but there are shortages in particular subject fields and locations, such as in the areas of mathematics, and science, especially in remote areas. Quality and excellence in the education sector is one of the major initiatives of the Government of India in its plans. To achieve the outcome of enhanced quality at all levels of education, Govt. of India has been focusing its attention on quality and excellence in higher education and teacher education. Management of teacher education is a difficult task because of the fact that there are large numbers of variables in teacher education programmes including variations in the purpose for which persons join teacher training courses of various levels. There are four types of teacher education institutions: (a) government managed, (b)

examining bodymanaged, (c) government aided and privately managed and (d) self-financed and privately managed.

Government of India Organization Bodies in Teacher Education

Department of Elementary Education & Literacy of the Ministry of Human Resource Development of the Government of India is the apex body that looks after policy for teacher education. Its agencies include:

- ✓ National Council for Teacher Education (NCTE)
- ✓ National Council of Educational Research and Training (NCERT)
- ✓ National University for Educational Planning & Administration (NUEPA).
- ✓ University Grants Commission (UGC)

Is also involved with Departments of Teacher Education or Departments of Education in the Universities and Institutions Deemed to be Universities and Colleges of Teacher Education. Besides these, MHRD, there are also other ministries that have institutions which run teacher training programmes. The Ministry of Women and Child Development has a large network of training of *Anganwadi* workers, who take care of the pre-school component. At the State level, the apex body that looks after teacher education is the Government Department of Education. In certain States, it is looked after by the Department of School Education. A few States have independent Directorates for Teacher education. In a few others, the **Directorate and SCERT** function under one Director. The teacher training institutions offering programmes for elementary and pre-school teachers are in many states under the control of the Department of School Education, where as the teacher training institutions offering degree courses are under the **Department of Higher Education**. In certain States all teacher education institutions are managed by the State government. In certain other States, the majority of teacher training institutions are managed by private agencies under a self-financed category. At the State levels, there are teacher training institutions being run by the Departments of Tribal Welfare, and other administrative departments. Creation of separate cadre for teacher educators has been an important issue to be solved in many states.

WHAT IS IKS?

IKS is a collective range of Indian Knowledge that has exhibited in systematized ways of knowing. Starting from the oldest compositions of knowledge i.e., the Vedic literature to the country's native and tribal folklore, the Indian Knowledge is spread as a spectrum. There is a vast repository of knowledge available not only in Sanskrit, Pali and Prakrit, but also in all native Indian languages. This has been remaining unexplored for the last several decades. Indian Knowledge encompasses the Foundational knowledge, Science, Engineering & Technology, Humanities and Social Sciences through a structured classification. IKS (Indian Knowledge

System) has evolved over millennia. It has a wide range of several beaches such as Astronomy, Ayurveda & Yoga (Health and Well-being) Mathematics and Computing, Languages and Linguistics, Metallurgy, Rasa-Shastra, Public Administration, War Technology. Management Science and many more. IKS contributions to the various fields include understanding planetary movements, solar-centric world, shape and diameter of the Earth; nature of plants & herbs, skills of surgical procedures; discovery of zero, decimal system of numerals, and approximation algorithms for computation of Pi; Panini's universal grammar; method of steel-making, Good Governance and Taxation and what not ? Eighteen Vidya Sthanas - Schools of learning were part of Ancient Indian Education which were taught in Nalanda, Takshashila and other centers of learning. The Art & Architecture, Science & Technology, Craft & Engineering, Philosophy & Practices had been the source of India's reputation in the world. That attracted not only learners to gain but also the invaders to ruin India. Knowledge was the power and wealth of our country. Today this Knowledge base is much needed for Knowledge diplomacy which is going to rule the international relations in the future world. This is what brings power to any country. India has such a treasure of knowledge that enriched the Indian civilisation for millennia.

What is Teacher Education

Teacher education refers to the policies and procedures designed to equip teachers with the knowledge, attitudes, behaviors, and skills they require to perform their tasks effectively in the school and classroom. In early times, teachers were often scholars or clergymen who had no formal training in how to teach the subjects of their expertise. In fact, many believed that "teachers were born, not made." It was not until the emergence of pedagogy, the "art and science of teaching," as an accepted discipline that the training of teachers was considered important. Although there has been continued debate about whether teaching is a "science" that can be taught or whether one is "born" to be a teacher, it has generally been agreed, at least since the nineteenth century, that certain characteristics are needed to qualify a person as a teacher: knowledge of the subject matter to be taught, knowledge of teaching methods, and practical experience in applying both. Most educational programs for teachers today focus upon these points. However, the internal character of the individual is also an important aspect of teaching; whether that is something one is born with or can be taught, and what are the qualities that are needed for the role of teacher, are also a matter of debate.

Problems of Teacher Education in India

There has been a great expansion of higher education over the years. Today, there are more than 200 universities and 8000 colleges. Kothari commission remarks "The destiny of India is being shaped in its classrooms." No doubt education plays a significant role in a nation's development but the quality of education is greatly determined by the quality of teachers, therefore, great efforts were made and still are being made to improve the quality of teacher

education. Some of the problems concerning teacher education are discussed below:

✓ **Problem of selection**

Defects of selection procedure lead to deterioration of the quality of teachers. Better selection method would not only improve the quality of training but also save personal and social wastage. Some suggestions are mentioned: (a) Candidates should be interviewed (b) Test of General Knowledge should be applied. (c) Test in school subjects. (d) Test of language (e) Test of intelligence should be administered (f) Aptitude; interest and attitude inventory should be administered. (g) A well direct guidance service should be provided.

✓ **Deficiencies of small time period provided for Teacher's training**

In India, from the academic year 2015 the B.Ed. the course period is run two years divided in four semesters after the graduation - the effective session being of complete two years. The special things are nineteen month internships include Community work, reflective journal writing, Co teaching with peers and shadowing observation of school teachers (PBC). The main purpose of the teacher education programme is to develop a healthy attitude, broad based interest and values. Now it is possible during the two year duration.

✓ **Defects concerning papers**

A student teacher should know the meaning of education, its objectives, the socio-cultural and political-economic background, the principles that guide construction of curriculum etc. But a proper preparation towards a good orientation is impossible in a short duration. Following steps may be taken in this connection: (i) allowing more time to learners for good reading and sound build-up of the intellect and attitude, (ii) pruning the existing course (iii) arranging for exchange of experience than merely attending lectures, (iv) changing the mode of testing inputs (v) the content must have direct implications in the daily school teaching.

✓ **Problems of practice teaching**

The ratio of marks between theory and practice generally remains 5:2 although teaching practice plays a significant role in B.Ed. programme. In spite of all kinds of elaborate arrangements regarding practice in teaching, student teachers are non-serious to the task of teaching, deficient in sense of duty, irresponsible, aimless, different to children, lacking innovative measures in teaching which are great obstacles in the development of pedagogical skills.

✓ **Problem of supervision of practice teaching lessons**

The supervisory organization for practice teaching aims at bringing improvement in then structural activity of the student teachers by using various techniques and practical skills in teaching and help them to develop confidence in facing the classroom situations.

This is done through following types of supervisions:

(i) **Supervision before classroom teaching:**

It aims at guiding in planning their lessons, learning to organize contents,

formulating suitable gestures and developing other related skills. At present the lesson plans are checked superficially and no discussion is made by the subject method specialist.

(ii) Supervision during the classroom teaching:

It is done by teachers who are not method specialists generally. These supervisors offered descriptive type of criticism, while constructive type is desirable. Their remarks are related to the general personality of the student teachers. The percentage of lessons supervised by the subject method specialist varies from 5 per cent to 25 per cent due to faulty staffing patterns, lack of time, too many lessons to be supervised, defective time table etc. Here, the school teacher should be assisted by the college supervisor in his work. Frequent conferences and consultations between them will help to relate them to practice and the student teacher will improve the performance in a realistic school setting. Some principals do not send supervisors to observe practice lessons in practice teaching schools.

✓ **Lack of subject knowledge**

The B.Ed. the programme does not emphasize the knowledge of the basic subject. The whole teaching practice remains different with regard to the subject knowledge of the student teacher.

✓ **Faulty methods of teaching**

In India teacher educators are averse to innovation and experimentation in the use of methods of teaching. Their acquaintance with modern class-room communication devices is negligible.

✓ **Isolation of teacher education department**

As has been observed by the education commission, teacher education has become isolated from schools and current development in school education. The schools consider the teacher education department as an alien institution and not a nursery for the professional development of school teachers. These departments only observe the formality of finishing the prescribed number of lessons, not caring for the sounders of pedagogy involved in the procedure.

✓ **Poor academic background of student-teachers**

Most of candidates do not have the requisite motivation and an academic background for a well deserved entry in the teaching profession

✓ **Lack of proper facilities**

In India, the teacher education programme is being given a step-motherly treatment. About 20 percent of the teacher education institutions are being run in rented buildings without any facility for an experimental school or laboratory, library and other equipment necessary for a good teacher education department. There are no separate hostel facilities for student teachers.

✓ **Lack of regulations in demand and supply**

The State Education Departments have no data on the basis of which they may work out the desired intake for their institutions. There is a considerable lag between the demand and supply of teachers. This has created the problems of unemployment and under employment.

✓ **Inadequate Empirical Research**

In India, research in education has been considerably neglected. The research conducted is inferior quality. The teacher education programmes are not properly studied before undertaking any research.

✓ **Lack of facilities for professional development**

Most of the programmes are being conducted in a routine and unimaginative manner. Even the association of teacher educators has not contributed anything towards development of a sound professionalization of teacher education in the country

Others Emerging Issues and Challenges Are

- ☐ Innovation in pre-service teacher education curriculum
- ☐ Lack of up-to-date books, and materials on teacher education
- ☐ Development of national professional standards
- ☐ Strengthen workshops and partnership between universities and schools to prepare teachers
- ☐ Mentoring Inexperienced teachers
- ☐ Development of a system of on-going professional development for teachers
- ☐ Establish learning communities and networks among teachers;
- ☐ Professional learning for educational leaders
- ☐ A greater transparency in the funding of teacher education
- ☐ Staff appraisal systems and the use of peer observation in schools are still in development
- ☐ Teacher evaluation seems to place more emphasis on professional duties/ responsibilities than on actual classroom teaching practices.
- ☐ Teacher-centered strategies and pedagogy still dominate in the classroom
- ☐ There is a relatively large variation among schools in the area of instruction, particularly concerning independent student practice, questioning skills, and teacher expectations for student achievement
- ☐ There is a need to explore the development of performance-based evaluation or developmental teacher evaluation systems for the purposes of teacher evaluation
- ☐ Needs to separate developmental and judgmental appraisal, for developmental appraisal, teachers agreed that lesson observations enhance teaching quality. Teachers are more supportive of lesson observation if their goal orientation is more learner-oriented than performance-oriented

Conclusion

Teacher education is a difficult assignment, especially at the present stage where teacher education programmes are being delivered by a large number of unaided private teacher education institutions. These institutions are also not sure of their tenure, as in the near future; possibility of huge unemployment of trained persons may result in swinging fall. The surviving institutions can only be helped by appropriate authorities in improving the quality of their academic management. This paper suggests an increase in responsibility for teachers but not an increase in authority: teachers are losing decision-making authority in the classroom. This paper also indicates that a positive policy environment and ample support for growth are essential for creating and sustaining teacher quality. Government and educators will need to understand better the links between schooling and its social and cultural environment, the kind of socialization and informal learning provided to children both before school entry and outside of the classroom and ways to develop more literate and encouraging environments in the family and the community surrounding the school. Although the task of recruiting for both miscellaneous and quality seems discouraging, several well-documented and proven long-term strategies exist and now we should support the creation of a stable pipeline for recruiting more and better qualified, diverse teachers.

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Unlocking Creativity in Indian Education: Harnessing the Power of AI for Innovative Lesson Planning and Student Engagement

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Abstract:-

This research delves into the integration of artificial intelligence (AI) within the framework of the Indian educational system to elevate pedagogical methodologies and ignite creative thinking among students. It addresses the prevalent issue of lesson plans predominantly focusing on rote memorization, which often stifles creativity. By exploring the potential of AI tools, this study aims to revolutionize lesson planning, moving beyond mere memorization to foster innovative learning approaches. Through the utilization of AI-driven analytics, personalized learning platforms, and immersive technologies like virtual reality, educators can design bespoke lesson plans tailored to the unique needs and objectives of each student. This abstract encapsulates the core findings of the research, underscoring AI's pivotal role in nurturing creativity and critical thinking within the Indian educational landscape, thereby revitalizing its knowledge system.

Introduction :-

AI can provide additional support to students by offering personalized learning experiences based on their individual strengths and weaknesses. Adaptive learning platforms powered by AI algorithms can adjust the difficulty level of content, provide additional explanations or resources when needed, and track student progress in real-time. However, despite the potential benefits of AI in education, there are also concerns about its impact on the role of teachers and the overall learning experience. Some fear that the widespread adoption of AI could lead to job displacement for educators or a reduction in the quality of education as human interaction is replaced by technology.

To address these concerns, it's essential to recognize that AI should be viewed as a tool to enhance rather than replace human teachers. Teachers play a crucial role in providing guidance, mentorship, and emotional support to students, which cannot be replicated by AI. Instead of viewing AI as a threat, educators should embrace it as a valuable resource that can help them be more effective in their roles.

Additionally, integrating AI into education requires proper training and support for teachers to ensure they can effectively leverage these technologies in the classroom. Professional

development programs should focus on building teachers' skills in using AI tools, interpreting data insights, and designing instruction that integrates technology in meaningful ways.

Rationale of the Study :-

This study is motivated by the importance of equipping student teachers with the skills and knowledge necessary to excel in modern education environments. In today's rapidly evolving world, creativity is highly valued as it enables student teachers to think innovatively, solve problems effectively, and engage students in meaningful learning experiences. However, there is often a tendency for student teachers to rely on copying and pasting content rather than fostering their own creativity. By developing techniques to cultivate creativity among student teachers, this study aims to empower them to become more effective educators who can inspire and engage their students. Additionally, integrating practical knowledge of AI tools into the curriculum ensures that student teachers are prepared to leverage technology responsibly to enhance teaching and learning outcomes. Ultimately, this paper seeks to equip student teachers with the skills and competencies needed to succeed in their future teaching careers and make a positive impact on the education sector.

Curriculum designing:-

Curriculum designing for the ICT pedagogy paper in B.Ed. should evolve beyond basic computer knowledge such as types of computers, as these concepts are typically covered at the secondary level. Instead, the curriculum should be restructured to align with the demands of the 21st century, emphasizing skills and competencies that are essential for success in today's digital age. This includes integrating topics such as digital literacy, information fluency, critical thinking in a digital context, digital citizenship, internet safety, cybersecurity, data privacy, computational thinking, coding skills, and the ethical use of technology. Furthermore, the curriculum should emphasize practical applications of ICT tools and technologies in educational settings, focusing on how these tools can be leveraged to enhance teaching and learning experiences, promote collaboration, creativity, and problem-solving skills, and personalize learning to meet diverse student needs. By updating the curriculum to reflect the demands of the 21st century, B.Ed. programs can better prepare student teachers to effectively integrate technology into their teaching practice and meet the evolving needs of today's learners.

- **Digital Literacy and Information Fluency:**

The curriculum should focus on developing students' ability to critically evaluate and analyze information found online. This includes teaching them how to assess the credibility of sources, discern biases, and synthesize information from multiple digital sources.

- **Critical Thinking in a Digital Context:**

Students should be encouraged to apply critical thinking skills to digital media and information. This involves teaching them to question assumptions, evaluate arguments, and

identify logical fallacies in digital content.

- **Digital Citizenship and Internet Safety:**

The curriculum should include lessons on responsible digital citizenship, covering topics such as online etiquette, cyberbullying prevention, and protecting personal information online. Students should also learn about internet safety practices to safeguard themselves and others from online threats.

- **Cybersecurity and Data Privacy:**

Given the increasing importance of cybersecurity and data privacy, the curriculum should provide students with a foundational understanding of these concepts. This includes teaching them about common cybersecurity threats, best practices for protecting digital assets, and the importance of safeguarding personal data.

- **Computational Thinking and Coding Skills:**

To prepare students for the digital future, the curriculum should introduce them to computational thinking principles and basic coding concepts. This can help students develop problem-solving skills, algorithmic thinking, and an understanding of how computers process information.

- **Ethical Use of Technology:**

Students should learn about the ethical considerations surrounding technology use, including issues such as digital rights, intellectual property, and the ethical implications of emerging technologies like artificial intelligence and big data.

- **Practical Applications of ICT Tools:**

The curriculum should emphasize hands-on experience with a variety of ICT tools and technologies commonly used in educational settings. This includes learning how to integrate tools such as learning management systems, multimedia resources, educational apps, and collaborative platforms into teaching practice to enhance student engagement and learning outcomes.

- **Personalized Learning and Differentiated Instruction:**

Students should explore how ICT tools can be used to facilitate personalized learning experiences and accommodate diverse learning needs. This involves learning how to use data analytics and student assessment data to tailor instruction, provide targeted interventions, and support individualized learning paths for students.

Practical Assessment:-

Introducing practical assessments that incorporate both AI tools and creativity-building exercises can significantly enhance the development of teaching skills among B.Ed. students. Microteaching, which traditionally focuses on refining teaching techniques in a controlled environment, can be augmented with activities that encourage students to leverage AI tools creatively. For instance, students could design lesson plans that integrate AI-powered educational

software to personalize learning experiences for diverse learners. Additionally, they could explore innovative ways to use AI-driven data analytics to assess student performance and adapt instruction accordingly. Moreover, incorporating creative challenges within microteaching sessions, such as asking students to develop interactive multimedia presentations or gamified learning activities using AI tools, can foster their creativity while honing their teaching abilities. By blending AI integration with creativity-focused tasks in practical assessments, B.Ed. programs can better prepare future educators to harness technology effectively and inspire innovative teaching practices in the classroom.

Computer In Education Practical:-

In the B.Ed. sector, practical exercises related to computer use in education, such as reviewing Open Educational Resources (OER), creating PowerPoint presentations, and evaluating educational websites, are valuable for preparing future educators. However, integrating the application of AI tools into these practical activities can further enrich the learning experience for student teachers. By expanding the scope of the practical to include the utilization of AI tools in education, student teachers can explore various AI applications, such as AI-powered adaptive learning platforms, natural language processing tools for content analysis, and machine learning algorithms for personalized learning recommendations. This integration enables student teachers to gain hands-on experience with cutting-edge technologies and learn how to leverage AI tools to enhance teaching and learning processes effectively. Additionally, incorporating AI into practical exercises fosters creativity and innovation among student teachers, empowering them to explore new possibilities for integrating technology into their future classrooms. Thus, by updating the practical curriculum to include AI tool applications, B.Ed. programs can better equip student teachers with the skills and knowledge needed to navigate the evolving landscape of educational technology and effectively meet the needs of diverse learners.

Action Research:-

Incorporating training on the utilization of AI tools in various aspects of research work is crucial for enhancing the research capabilities of student teachers pursuing a B.Ed. degree. Action research, a core component of the B.Ed. curriculum, can benefit significantly from the integration of AI tools for data analysis, synthesis, and presentation. By providing proper orientation on how to use AI tools, student teachers can learn to leverage these technologies to streamline their research processes, enhance data analysis efficiency, and improve the quality of their research outcomes. Training in AI-powered tools for research writing, such as natural language processing applications for automated summarization and paraphrasing, can help student teachers refine their writing skills and effectively communicate their research findings. Moreover, instruction on AI tools for data mining and analysis enables student teachers to explore large datasets more comprehensively, uncover patterns and trends, and derive meaningful insights to inform their

research inquiries. By equipping student teachers with the knowledge and skills to integrate AI tools into their research practices, institutions can empower them to conduct more robust and innovative research, ultimately contributing to advancements in educational theory and practice. Therefore, incorporating training on AI tools in research work is essential for ensuring that student teachers are well-prepared to meet the evolving demands of the research landscape and make valuable contributions to the field of education.

Conclusion:-

In conclusion, the integration of artificial intelligence (AI) into Indian education holds immense potential for transforming teaching and learning practices to foster creativity and critical thinking among students. Through the use of AI-driven analytics, personalized learning platforms, and immersive technologies, educators can design dynamic lesson plans tailored to individual student needs, moving away from traditional rote memorization towards innovative learning approaches.

However, to fully realize the potential of this approach, it's essential to ensure that both student teachers and teacher educators receive proper training in utilizing AI tools effectively. AI can play a crucial role in enhancing language learning by providing personalized feedback, generating interactive content, and facilitating immersive language experiences. Without adequate training, there is a risk of perpetuating a "copy-paste" behavior among students, where they rely on rote memorization and imitation rather than developing their creativity and critical thinking skills. Properly trained educators can guide students in harnessing AI tools to create original and engaging language content, encouraging them to explore diverse perspectives, experiment with language usage, and express themselves authentically.

Incorporating AI tools into teacher training programs can empower educators to design innovative language learning experiences that cater to individual student needs and preferences. By embracing technology and adopting a multidisciplinary approach, we can unlock new avenues for language development and cultivate a generation of creative and proficient language learners.

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Nurturing India's Intellectual Heritage: Libraries, Indian Knowledge System and the Role of National Education Policy 2020

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Abstract :-

India's rich culture and heritage are testament to its ancient civilization spanning millennia. Its unique traditions, languages, religions, artistic expressions are awesome thereby enhancing the splendor of Incredible India. India continues to inspire awe and admiration captivating the world with its timeless charm and enduring legacy. India stands at a cradle of civilization, nursing the ancient Indian Knowledge System that has transcended time and borders. India's intellectual Heritage spans thousands of years, comprising diverse disciplines such as Philosophy, Science, Math, Medicine and Literature. The Indian Knowledge System evolved through the contributions of scholars, philosophers and knowledge is rooted in ancient texts like the Vedas, the Upanishads and epics like Ramayana and Mahabharata. This entire intellectual heritage is preserved, disseminated and advanced through a vast repository of knowledge and those are libraries. The harmonious integration of Indian Knowledge System, Libraries and National Education Policy holds the potential to propel India into a new era of intellectual resurgence and cultural revitalization not just impacting India but influencing globally.

Keywords: Libraries, NEP 2020, Indian Knowledge System

I) Introduction

India's intellectual legacy is a treasure trove of ancient wisdom comprising varied disciplines including Philosophy, Science, Medicine and Literature reflecting the richness of its cultural heritage. Libraries stand as the central custodians of India's rich heritage, preserving and disseminating knowledge for generations to come. National Education Policy is instrumental in molding the integration of indigenous knowledge systems into modern educational practices and contemporary learning.

From the Vedas, the Upanishads to the digital age Indian Knowledge System evolved, and assimilated diverse influences but retained a distinct identity. Both ancient and modern libraries are instrumental in nurturing this intellectual heritage bridging the gap between past wisdom and contemporary digital knowledge. Libraries are playing a crucial role in preserving and disseminating India's rich written wealth of knowledge, housing manuscripts texts and artifacts

that reflect India's varied intellectual heritage. From ancient repositories to knowledge, well known to us Nalanda and Takshila to modern academic institutions libraries continue to serve as sanctuaries for scholars and seekers of knowledge and have stood the test of time, fostering intellectual growth and providing a pathway to curious minds to excavate knowledge embodied in ancient texts. From the ancient manuscripts to extravagant collections of contemporary libraries, these institutions become crucial in collecting, preserving, disseminating information across generations. Libraries continue to enlighten, inspire, and empower individuals in pursuits of knowledge.

This article highlights the symbiotic relationship between Indian Knowledge System, Libraries and National Education Policy and explores collective influence on India's intellectual landscape.

II) Indian Knowledge System: The Rich Heritage

India has a profound history of knowledge systems encompassing the fields like Astronomy, Mathematics, Physics, Medicine, Philosophy and Literature. IKS encompasses a treasure trove of wisdom that embodies diverse disciplines and perspectives. The IKS is a multifaceted concept that has philosophical depth, advancement in science, artistically rich and spiritual depthness.

The Indian Knowledge System has endured the test of time, influences the world and has put an impression on the global thought and culture. Our philosophical foundations, the Vedas ancient scriptures are believed to be composed between 1500 BCE and 500 BCE. It embodies the essence of Indian thought and comprises metaphysical inquiries whereas Bhagavad-Gita embodies practical wisdom. These texts guide us on self, reality, the cosmos and the diverse path of spiritual realization. Indian epics Mahabharata and Ramayana are timeless classics that continue to inspire kin to folks of India. They are known for their value lessons, moral teachings, heroic deeds, spirituals, and philosophical insights.

The IKS is the systematic transfer of ancient and contemporary knowledge from one generation to another. It covers ancient knowledge from various domains to address current and future challenges. This knowledge exists in both literary and non-literary works. Literary resources cover Vedic and allied literature resources on other dharma traditions (Buddhism and Jainism), and knowledge that exists in Indian languages and dialects. Non-literary resources are present in oral traditions available across the country (Rajat et al., 2022).

The concept of Dharma comprises the ancient philosophy and the moral order form a central idea in Indian Philosophy. It embodies righteousness, duty, and ethical conduct. The concept of Karma embodies cause and effects and highlights the interconnectedness of all actions and their repercussions on human life. The spiritual quest Yoga originating from ancient texts like the yoga sutra of Patanjali offers mind calmness, self-discovery and salvation. The Indian

Knowledge System continues to inspire and enrich both Indian society and the global community (Patanjali, 2012).

The Indian Knowledge System is now finely interwoven into the National Education Policy document aimed at transforming the educational scenario of India. It is trying to integrate traditional wisdom with contemporary learning (Ministry of Education, IKS, January 2, 2024).

III) The integration of the IKS in the NEP 2020:-

The NEP 2020 is a visionary document that marks a significant step in India's education system. Its main aim is to enrich the learning experiences by embodying the country's rich intellectual heritage. The Indian Knowledge System plays a pivotal role in driving this transformation.

The National Education Policy encompassing, integrating and promoting Indian Knowledge System in educational framework fostering a deeper understanding of India's varied intellectual tradition. It has integrated traditional wisdom with contemporary learning and initiated a step towards promotion and incorporation in the Indian education system.

A) Key points highlighting diverse aspects covered in NEP 2020 in respect of IKS:-

1. **Advancement of Traditional Wisdom:-**The NEP emphasizes advancement of the traditional wisdom by integrating it into the modern educational framework. This integration aims to foster a deeper understanding of India's rich cultural heritage and traditional knowledge that is scripted in old texts. So integration will foster a deeper appreciation and understanding of India's cultural heritage and traditional knowledge systems. The NEP seeks to ensure a holistic and well-rounded education that honors indigenous practices and promotes interdisciplinary learning. So with this approach ancient knowledge is preserved and equips students with valuable insights with respect to contemporary challenges, practices and innovation.

2. **Multi-Disciplinary Education:-** As a fundamental educational reform National Education Policy encourages multi-disciplinary learning. NEP encourages students to explore diverse disciplines NEP encourages enhancement of skills like critical thinking, problem solving and creativity among students. Moreover, it incorporates elements of the Indian Knowledge System into varied subjects such as Science, History and Literature. National Education Policy aims to foster a holistic understanding of discipline, understanding of the world and enhance student's learning experience. In the curriculum, integration of various disciplines are done so that well-rounded education can be ensured and will help students to face diversities and choose innovative career paths.

3. **Promotion Of Indigenous Languages:-** Indian languages are repositories of indigenous knowledge. National Education Policy emphasizes the preservation and promotion of the Indian language so that school education in regional languages can be initiated. This offers instructions in local languages along with encouragement to the national language. To foster linguistic diversity,

the policy encourages the study of various languages, both regional and international. More emphasis is placed on documenting and researching endangered languages to prevent their extinction and to understand their importance in preserving cultural identities.

4. **Promotion of Research Culture and Exploration through Research and Innovation:-** NEP suggests integration of research in curriculum. NEP encourages research culture at all levels of education from school to higher level of education. To address the complex educational problems, societal challenges emphasis is placed on interdisciplinary research. It facilitates partnership between educational institutions and industries to encourage applied research, innovation driven partnership and innovation to address contemporary challenges.

5. **Continuous Professional Development (CPD):-** The importance of teacher training and skill enhancement highlights in National Education Policy to keep the teachers updated with innovative pedagogical practices, subject knowledge and technological advancement. Provision is made for providing training to support inclusive education practices to address diverse learning needs and create inclusive classrooms. So NEP has played a dynamic role in enhancing teacher development and skills enhancement. It is well recognized that well trained and motivated teachers are essential for attaining educational excellence and fostering student success.

6. **Community Engagement:-** The NEP encourages active participation of community members like parents, philanthropists, local leaders, and civilians to engage in the decision making process relating to education planning, curriculum development and school management. The NEP promotes community participation in school management to ensure accountability and transparency in educational institutions. Collaboration with communities on projects like environment, sustainability, civic responsibility to instill values of citizenship among students is the initiative taken care by the NEP. NEP highlights integration of local culture, tradition and knowledge systems into the education curriculum aligning with NEP objectives.

The NEP facilitates the implementation of more inclusive, comprehensive, contemporary policy enabling future generations to draw inspiration from glorious India's heritage.

B) Role of the Libraries under the NEP 2020 in context of The Indian Knowledge System

1. **Advancement and Conservation of Knowledge:-** Libraries serve as hubs of information resources that support academic exploration. Libraries support lifelong learning by promoting information literacy skills. Libraries provide educational opportunities beyond traditional classroom settings. Libraries possess a diverse range of materials including primary, secondary and tertiary sources of information, digital databases and multimedia resources fostering intellectual growth and inquiry. India's rich cultural heritage embodies a diverse range of traditional knowledge including ancient texts, philosophies and practices that can be accessed through libraries. Preservation of indigenous knowledge by curating collections pertaining to traditional texts, folklore and oral histories are preserved in the libraries.

2. **Language Conservation:-**Libraries safeguards linguistic diversity and cultural expressions by contributing to language conservation efforts by collecting literature in varied Indian languages. Libraries also possess cross cultural understanding by providing resources that centered on interconnectedness of diverse knowledge fosters dialogue and mutual respect. Libraries promote linguistic diversity by possessing, preserving, promoting materials in various languages spoken across India. Language conservation efforts within library initiatives align with objectives of NEP's heritage promotion and cultural conservation.
3. **Access to Traditional Texts and Resources:-**Traditional texts, scriptures and classical literature in regional languages, enabling learners to engage directly with primary sources of IKS.
4. **Documentation and Digitization:-** Libraries are taking initiatives to digitize ancient literature so that audiences at the broader level can access the literature.
5. **Promotion of Multilingualism:-**Libraries promote multilingualism by offering resources in various regional languages, facilitating the study and dissemination of IKS across linguistic and cultural boundaries.
6. **Interdisciplinary Research:-**For holistic understanding of IKS among students and scholars libraries facilitate interdisciplinary research by providing resources that bridge modern disciplines with traditional knowledge manifested in the IKS.
7. **Professional Development for Librarians:-** The NEP emphasis capacity building for librarians to effectively manage and promote collections related to IKS as facilitators of traditional knowledge resources.

Conclusion:-

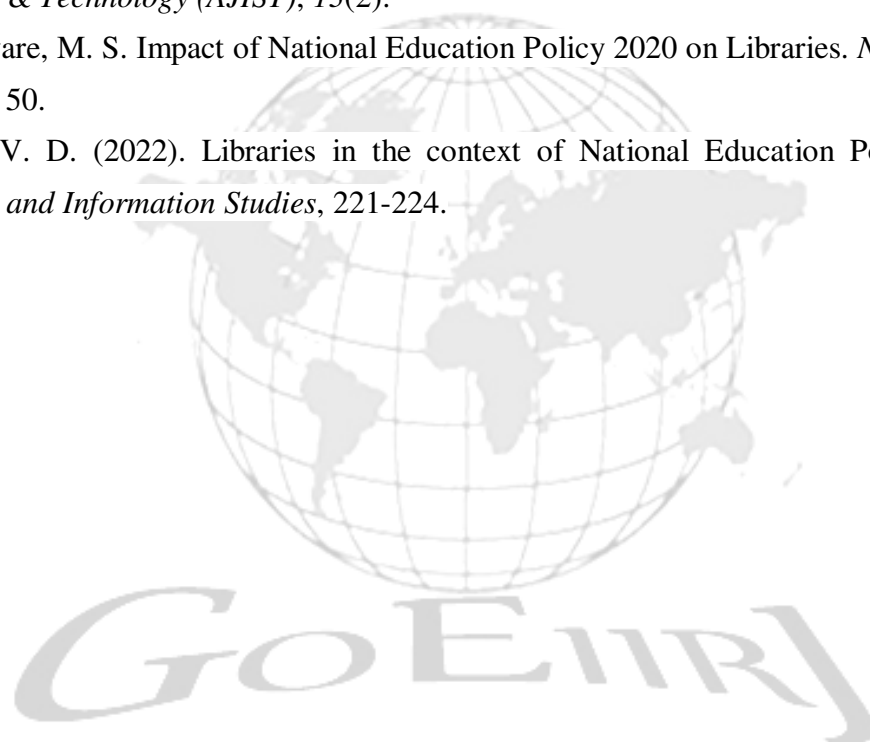
Libraries play a crucial role in promoting the Indian Knowledge System within the framework of the National Education Policy. They serve as vital hubs for preserving, disseminating India's rich intellectual heritage, ensuring that future generations have access to the profound insights and wisdom embedded within IKS. The NEP empowers learners with understanding of their culture, heritage and intellectual contributions by putting emphasis on IKS sources through well equipped libraries. So libraries become inclusive with respect to resources and so become crucial in intellectual exploration, creativity and cross cultural dialogues. Libraries are now the places of enlightenment where legacy of the past gets connected with the aspirations of the future projecting India towards educational excellence and societal transformation. Libraries are vibrant repositories of knowledge and ideas and serve as a catalyst for this transformative journey.

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Importance of Indian Knowledge System in NEP 2020

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Abstract

The Indian Knowledge System (IKS) is one of the significant aspects of the NEP curriculum. IKS encompasses diverse and rich heritage knowledge of India that covers various domains such as science and technology, literature, philosophy, culture, medicine (ayurveda), and yoga. The IKS covers the knowledge assets from the pre-historic to the current period. NEP fosters the creation of language resources and technology to facilitate the IKS as it recognizes its importance for disseminating indigenous knowledge. The paper will highlight how students can benefit from the Indian Knowledge System after implementation of NEP.

Keywords : Indian Knowledge System, New Education Policy, Contemporary Knowledge, and Holistic Development

Introduction:

India, with its rich tapestry of culture, history, and diversity, has always placed a deep value on education. The Indian government, recognizing education's key role in shaping the nation's future, has enforced a comprehensive framework known as the Indian Knowledge System. This system represents a holistic approach to learning, drawing inspiration from the country's ancient wisdom while incorporating contemporary knowledge and global perspectives.

Rooted in the ethos of inclusivity and cultural heritage, the Indian Knowledge System recalls a commitment to nurturing well-rounded individuals capable of contributing meaningfully to society. As we delve into the intricacies of this system, we witness a tapestry that weaves together traditional values, cutting-edge technology, and a forward-looking mindset. This introduction sets the stage for a closer examination of how the Indian government's educational endeavors shape the country's next generation of learners and leaders.

Understanding the IKS:

The Indian Knowledge System, championed by the government, embodies a holistic and culturally rooted approach to education. Drawing from India's ancient wisdom, it integrates traditional values with contemporary knowledge, fostering a comprehensive understanding of the world. In this system, education goes beyond textbooks, emphasizing holistic development through arts, sports, and extracurricular activities.

Cultural integration is a cornerstone, instilling pride and connection to heritage. Regional

languages are promoted, ensuring inclusivity and preserving linguistic diversity. Practical application of knowledge is prioritized, preparing students for real-world challenges. Digital literacy is a focal point, acknowledging the importance of technology in the modern era.

Cultural Enrichment:

The Indian Knowledge System, through its emphasis on cultural enrichment, profoundly influences students by exposing them to India's rich heritage. This exposure cultivates a deep sense of identity and pride, instilling in students a connection to their roots. Delving into ancient texts and philosophies within the curriculum offers a unique lens through which students can explore profound values and ethical principles. By engaging with the nation's cultural tapestry, students gain academic insights and develop a broader understanding of the historical and philosophical underpinnings that shape their society. This cultural enrichment becomes a foundation for personal growth, fostering a well-rounded worldview and contributing to the development of not only academically adept but also culturally aware and socially conscious individuals.

Holistic Development:

The Indian Knowledge System strongly emphasizes holistic development, incorporating arts, sports, and extracurricular activities into the educational fabric. This integration ensures students cultivate a well-rounded skill set beyond academic excellence. The system's focus on creativity and critical thinking equips students with the tools to navigate diverse challenges, fostering a mindset beyond rote learning. By nurturing these aspects, students are academically proficient and possess the creativity and analytical skills necessary for success in an ever-evolving world.

Practical Application:

The Indian Knowledge System places a premium on practical application, emphasizing hands-on learning and honing problem-solving skills. By prioritizing the real-world application of knowledge, students are equipped with theoretical understanding and gain invaluable skills in adaptability and innovation. This practice bridges the gap between theory and practice, preparing students for the dynamic challenges of the professional landscape. It instils a mindset where theoretical concepts find tangible expression, fostering a generation of learners capable of addressing real-world problems with creativity and practical insight.

Language Proficiency:

The Indian Knowledge System prioritizes language proficiency by promoting regional languages, preserving linguistic diversity, and enriching students with a deep appreciation for their cultural heritage. Bilingual education further enhances communication skills, recognizing their crucial role in a global context. This approach facilitates effective cross-cultural communication and equips students with a valuable asset in an interconnected world. The emphasis on language proficiency ensures that students are not only academically adept but also proficient

communicators, capable of navigating diverse linguistic landscapes with confidence and understanding.

Inclusivity and Accessibility:

The Indian Knowledge System prioritizes inclusivity and accessibility, ensuring that education transcends socio-economic barriers. Special provisions are in place to guarantee that every student, regardless of their background, has access to quality education. Additionally, the system embraces inclusive practices, offering support tailored to the diverse learning needs of students. By fostering an environment where education is accessible to all, irrespective of socio-economic disparities, the Indian Knowledge System plays a pivotal role in creating a more equitable and inclusive society, empowering students from various backgrounds to pursue and excel in their educational endeavors.

Digital Literacy:

The Indian Knowledge System significantly emphasizes digital literacy, equipping students with essential skills for the digital era. This focus ensures that students gain technological proficiency, allowing them to navigate and contribute effectively in a digitally driven world. By incorporating digital literacy into the curriculum, the education system prepares students to harness the power of technology for communication, problem-solving, and innovation. This emphasis on digital skills enhances their academic journey and positions them to excel in a technologically evolving global landscape, fostering a generation adept at leveraging digital tools for success.

Global Competence:

The Indian Knowledge System actively promotes global competence among students. Exposure to international perspectives within the curriculum ensures they are well-prepared for a globalized job market. This exposure broadens their horizons and enhances cross-cultural understanding, cultivating adaptability and collaboration skills. By fostering a global outlook, the system equips students to navigate diverse professional environments and contribute meaningfully internationally. This emphasis on international competence positions students to thrive in an interconnected world where cultural fluency and collaboration are integral to success.

Entrepreneurial Mindset:

The Indian Knowledge System instills an entrepreneurial mindset by encouraging students to embrace risk-taking and innovation. This approach cultivates an entrepreneurial spirit, inspiring students to become creators rather than job seekers. The system empowers students to contribute actively to economic growth by fostering an environment that values innovation and risk. This entrepreneurial mindset prepares students for dynamic career paths. It nurtures a culture of self-reliance, creativity, and problem-solving, essential for navigating the challenges of a rapidly evolving global economy.

Environmental Consciousness:

The Indian Knowledge System underscores environmental consciousness, integrating education that promotes sustainable practices. This approach equips students with an awareness of environmental issues and instills a sense of responsibility toward the ecosystem. By incorporating ecological considerations into the curriculum, students gain a theoretical understanding of environmental challenges and are motivated to adopt eco-friendly behaviors. This emphasis on ecological consciousness ensures that students graduate with a heightened awareness of their impact on the planet, contributing to an environmentally responsible generation and actively engaged in building a sustainable future.

Continuous Learning:

Incorporating a culture of continuous learning, the Indian Knowledge System equips students for a lifetime of education. Emphasizing adaptability as a core skill, it recognizes the importance of navigating an ever-evolving professional landscape. By instilling a mindset of perpetual growth and learning, students are academically prepared and develop the resilience needed to thrive in dynamic and challenging environments. This commitment to continuous learning ensures that graduates are well-positioned to embrace new opportunities, stay relevant in their careers, and contribute meaningfully to the progress of society.

Conclusion:

IKS in India may help the stakeholders to know their cultural heritage and they may develop a deep understanding of the environment. As IKS is based on tacit knowledge it can help students to face and tackle the challenges they are going to face in their real life such as challenges of climate change and food security. But this inclusion of IKS has certain challenges and these challenges need to be addressed before inclusion. The Indian government has taken a step under NEP to integrate IKS into the curriculum. There is an emergent need for proper training of the teachers so that they have proper knowledge of IKS and can deliver it in a meaningful way. The data available about IKS needs to be streamlined with the help of information technology and making it available as per the needs and capacity of the stakeholders. This cannot be done overnight as the Indigenous Knowledge Systems have evolved in India over thousands of years. It will be replaced gradually over time.

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Unveiling the rich tapestry of Nutrition: Insights from Indian Knowledge System

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Abstract :

Nutrition is a fundamental aspect of human well-being, with diverse cultures developing unique approaches rooted in traditional knowledge systems. The Indian Knowledge System (IKS) is a repository of ancient wisdom, offering insights into holistic approaches to nutrition. The literature within IKS about nutrition is vast and diverse, reflecting the deep-seated understanding of indigenous communities about the relationship between food and health. Oral traditions, folklore, and ancient texts provide rich narratives about food as medicine, seasonal diets, and the cultural significance of certain foods. The Indian knowledge system regarding food is a blend of traditional wisdom, Ayurvedic principles, regional variations, and contemporary dietary practices. Ayurveda, an ancient Indian system of medicine, emphasizes the balance of bodily energies (doshas) for health and well-being. It provides guidelines on food choices, cooking methods, and dietary habits based on an individual's dosha constitution. Regional diversity in India has led to a wide array of regional cuisines, each with unique flavors, ingredients, and cooking techniques. Seasonal eating is also emphasized, with foods classified into three categories: Satvik, Rajasic, and Tamasic. Vegetarianism, influenced by religious beliefs, is deeply rooted in Indian culture. Food as medicine is a common practice in Indian culinary traditions, with spices and herbs used to enhance flavor and promote health. Fasting is a common practice in India for spiritual and health reasons. Indian culture is rich in food rituals and customs associated with various life events, festivals, and religious ceremonies. Ayurveda and food play a crucial role in maintaining overall health and preventing illness. The present paper tries to discuss some of the aspects about food and nutrition from IKS perspectives.

Key word: IKS, Literature, Guidelines, Ayurveda, Practices, Curricula

Introduction:

Nutrition, a fundamental aspect of human well-being, has been intricately woven into the fabric of societies for millennia. Across the globe, diverse cultures have developed unique approaches to nutrition, often rooted in traditional knowledge systems. Among these Indian Knowledge System (IKS) stand out as repositories of ancient wisdom, offering invaluable insights into holistic approaches to nutrition. In this exploration, we delve into the perspective of Nutrition

as reflected from IKS, encompassing Literature, guidelines, practices, medicinal approaches, educational curriculum, and the incorporation of Nutrition approaches in modern education.

Literature in IKS about nutrition:

The literature within IKS regarding nutrition is vast and diverse, reflecting the deep-seated understanding of indigenous communities about the relationship between food and health. Oral traditions, folklore and ancient texts passed down through generations provide rich narratives about food as medicine, seasonal diets and the cultural significance of certain foods. For instance, in various indigenous cultures there are stories about the healing properties of specific herbs, fruits and traditional foods. These narratives not only serve as a repository of knowledge but also reinforce cultural identities and practices surrounding nutrition. In Maharashtrian homes, small children are often asked to begin their meal with the prayers:

" वदनी कवल घेता नाम घ्या श्रीहरीचे ।
सहज हवन होते नाम घ्या फुकाचे ।
जीवन करि जीवित्वा अन्न हे पूर्णब्रम्ह ।
उदरभरण नोहे जाणिजे यज्ञ कर्म ॥

अर्थ : तोंडात घास घेताना श्री हरीचे नाव घ्या, फुकटचे नाव घेतल्याने सहजच हवन (होम) होते. आपल्या शरीराचे पोषण करणारे अन्न हे साक्षात् परब्रह्म आहे. जेवण करणे म्हणजे फक्त पोट भरणे नाही तर एक यज्ञकर्म आहे म्हणून समजा असे समर्थ रामदास स्वामी सांगत आहेत.

Meaning:

It encourages us to take the name of God while taking a mouthful of food, which is believed to purify the food and remove impurities. Further, the process of Digestion is compared with the oxidation process. (Yadnyakarma)

Another Shloka from Sanskrit regarding food:

अन्नं ब्रह्मा रसं विष्णु भोक्ता देवो जनार्दनम्।
एवं ध्यात्व तथा ज्ञात्वा अन्न दोषो न लिप्यते ।

Meaning:

Food is Brahma, the essence in it is Vishnu, and the one who consumes it is Maheshwara the lord himself. If you know this, then any impurity in it will not be a part of you.

Bhagavad-Gita also has a shloka on food:

मूल श्लोकः
आयुःसत्त्वबलारोग्यसुखप्रीतिविवर्धनाः।
रस्याः स्निग्धाः स्थिरा हृद्या आहाराः सात्त्विकप्रियाः॥17.8॥

English Translation by Swami Adidevananda

17.8 Foods which promote longevity, intellectual alertness, strength, health, pleasure and happiness and those that are sweet, oil, substantial and agreeable, are dear to Sattvika men.

The Sanskrit quote "Ahara Suddhau, Sattva Suddhih" translates to the concept that the purity of

food leads to the purity of the inner self. 'Ahara' means food or diet, and 'Suddhau' signifies purity or cleanliness. Therefore, 'Ahara Suddhau' implies that when the diet is pure, it purifies the body. 'Sattva' is one of the three gunas or qualities of the mind, the others being 'rajas' and 'tamas'. Sattva embodies qualities such as clarity, harmony, and balance. 'Suddhih' refers to purification. So, 'Sattva Suddhih' suggests that by purifying our diet, we can cultivate a sattvic mind, which is essential for achieving higher states of consciousness and spiritual growth. The saying emphasizes the integral connection between the food we eat and our overall spiritual progression. It underlines the idea that a clean diet is not just about physical health, but it is also a vehicle for nurturing a pure, clear, and serene state of mind.

Guidelines:

IKS offers a set of guidelines and principles that underpin traditional approaches to nutrition. These principles are often holistic, emphasizing the interconnectedness of food health and environment. One such principle is the concept of food as medicine, where emphasis is placed not only on the nutritional content of food but also on its healing properties. Additionally, IKS often advocate for a balanced diet that incorporates locally sourced seasonal foods, reflecting and understanding of symbiotic relationship between humans and their environment. (Tiwari & Tiwari, 2019)

The IKS regarding food encompasses a blend of traditional wisdom, Ayurvedic principles, regional variations, and contemporary dietary practices. Here are some key aspects:

1. **Ayurveda:** Ayurveda, an ancient Indian system of medicine, emphasizes the balance of bodily energies (doshas) - Vata, Pitta, and Kapha - for health and well-being. Ayurvedic texts provide guidelines on food choices, cooking methods, and dietary habits to maintain this balance. For example, foods are categorized as heating or cooling, heavy or light, and are recommended based on an individual's dosha constitution.
2. **Regional Diversity:** India's vast geographical and cultural diversity has given rise to a wide array of regional cuisines, each with its unique flavors, ingredients, and cooking techniques. For instance, North Indian cuisine is known for its use of dairy products like ghee and paneer, while South Indian cuisine features rice-based dishes and extensive use of coconut and spices.
3. **Seasonal Eating:** The traditional Indian wisdom emphasizes the importance of consuming foods that are in season. Seasonal produce is believed to be more nutritious and better suited to the body's needs at different times of the year. For example, cooling foods like cucumbers and watermelon are preferred during hot summers, while warming spices like ginger and cinnamon are favored in colder months.
4. **Satvik, Rajasic, and Tamasic Foods:** According to Ayurveda, foods are classified into three categories based on their effects on the mind and body. Satvik foods are considered

pure, light, and conducive to spiritual growth, such as fresh fruits, vegetables, and grains. Rajasic foods are stimulating and include spicy, oily, and caffeinated items. Tamasic foods are heavy, dulling, and include processed, stale, or overripe foods.

5. **Vegetarianism:** Vegetarianism has deep roots in Indian culture, influenced by religious beliefs such as Hinduism, Jainism, and Buddhism. Many Indians, particularly in the Hindu community, follow a vegetarian diet, avoiding meat and sometimes even eggs and fish. However, there are also regions and communities where meat is consumed, albeit with regional variations in preferences and culinary practices.
6. **Food as Medicine:** Indian culinary traditions often view food as not just sustenance but also as medicine. Various spices and herbs are believed to have medicinal properties and are used liberally in cooking to enhance flavor and promote health. For instance, turmeric, ginger, garlic, and cinnamon are commonly used for their anti-inflammatory and immune-boosting properties.
7. **Fasting Practices:** Fasting is a common practice in India for both spiritual and health reasons. Different religious and cultural occasions call for fasting, during which certain foods or meals are avoided. Fasting is believed to detoxify the body, promote self-discipline, and enhance mental clarity.
8. **Food Rituals and Customs:** Indian culture is rich in food rituals and customs associated with various life events, festivals, and religious ceremonies. These rituals often involve specific foods prepared in a traditional manner and shared among family and community members, symbolizing unity, prosperity, and auspiciousness.

Ayurveda and Food:

Ayurveda, often referred to as the "science of life," is an ancient holistic healing system originating from India. It emphasizes the balance of body, mind, and spirit to achieve optimal health and well-being. Food plays a crucial role in Ayurveda, as it is believed to be a fundamental determinant of one's physical, mental, and emotional health. (Sharma & Dash, 2003) Here's how Ayurveda approaches food:

A. **Individual Constitution (Doshas):** Ayurveda categorizes individuals into three constitutional types, or doshas: Vata, Pitta, and Kapha. Each dosha is associated with specific physical, mental, and emotional characteristics. Dietary recommendations in Ayurveda are tailored to balance one's dominant dosha to maintain overall health and prevent illness.

- **Vata:** Individuals with a dominant Vata dosha tend to be creative, energetic, and imaginative but may experience imbalances such as anxiety, dry skin, and digestive issues. They benefit from warm, nourishing, and grounding foods such as cooked grains, root vegetables, and warming spices.

- **Pitta:** Pitta types are characterized by qualities of heat, intensity, and focus. They are prone

to conditions like inflammation, acidity, and irritability when out of balance. Pitta-balancing foods include cooling fruits and vegetables, whole grains, and herbs like cilantro and coriander.

- **Kapha:** Kapha dosha is associated with stability, strength, and endurance but can lead to sluggishness, congestion, and weight gain when aggravated. Kapha individuals benefit from foods that are light, stimulating, and warm, such as bitter greens, legumes, and pungent spices. (Shastri & Sharma, 2006)

B. **Six Tastes (षड्रस):** Ayurveda categorizes foods into six tastes - sweet, sour, salty, bitter, pungent, and astringent. Each taste has specific effects on the doshas and bodily functions. A balanced meal ideally contains all six tastes in appropriate proportions to satisfy the body's nutritional needs and maintain dosha equilibrium.

C. **Seasonal Eating:** Ayurveda emphasizes the importance of eating seasonally and locally available foods. Seasonal variations affect the balance of doshas in the body, and consuming foods that are in harmony with the environment helps maintain balance and prevent imbalances and illnesses.

D. **Digestive Fire (अग्नी):** Ayurveda places great importance on the strength of one's digestive fire, or Agni, which is responsible for breaking down food and assimilating nutrients. To support healthy digestion, Ayurvedic principles recommend eating according to one's digestive capacity, avoiding overeating, and consuming foods that enhance Agni, such as ginger, cumin, and fenugreek.

E. **Mindful Eating:** Ayurveda emphasizes the importance of mindful eating practices, such as eating in a calm environment, chewing food thoroughly, and paying attention to the taste, texture, and aroma of food. Mindful eating promotes better digestion, nutrient absorption, and overall satisfaction with meals.

F. **Herbal Remedies:** Ayurveda utilizes various herbs and spices not only for flavor but also for their medicinal properties. These herbs are often incorporated into cooking or consumed as herbal teas and tonics to address specific health concerns and imbalances. (Sharma,2011)

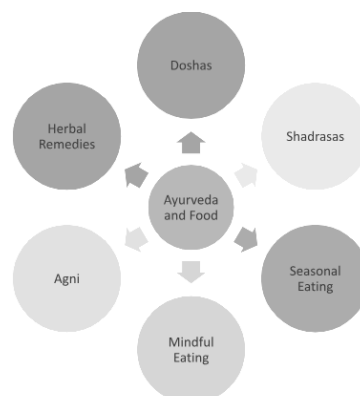


Fig 1: Ayurveda aspects of Food

Ayurveda views food as not just a source of nutrition but as a powerful tool for promoting holistic health and harmony within the body and mind. By understanding one's individual constitution, choosing appropriate foods, and adopting mindful eating habits, individuals can support their well-being and prevent disease according to Ayurvedic principles.

Practices regarding nutrition:

The practices surrounding nutrition in Indian communities are deeply rooted in traditional culture. Traditional food preparation methods, such as fermentation, soaking and sprouting are employed to enhance nutritional value of foods and improve digestibility.



Fig 2: Importance of Food

Communal practices while eating food are an integral part of many cultures in India, fostering social bonding, unity, and shared experiences among individuals and communities. In various societies, communal eating rituals often extend beyond mere sustenance to encompass cultural, religious, and familial traditions. Here are some common communal practices associated with food consumption in India:

- Family Meals: Family meals are a cornerstone of many cultures, providing an opportunity for family members to gather, connect, and share their daily experiences over food. In such settings, communal practices may include passing dishes around the table, serving each other, and engaging in conversation.
- Community Feasts and Celebrations: Festivals, holidays, and special occasions often involve communal feasting, where members of a community come together to share meals and celebrate cultural traditions. These events may feature elaborate spreads of traditional dishes, communal dining areas, and rituals specific to the occasion.
- Religious and Ceremonial Meals: Many religious traditions incorporate communal meals as part of religious observances, rituals, and ceremonies. These meals often have symbolic significance and may involve prayers, blessings, or rituals before and after eating.

Examples include the Eucharist in Christianity, the Seder meal during Passover in Judaism, and the langar in Sikhism.

- Sharing Food: Sharing food with others is a common practice across cultures, symbolizing hospitality, generosity, and solidarity. In communal settings, individuals may share portions of their meals with others, offer food as a gesture of goodwill, or participate in potluck-style gatherings where everyone contributes a dish to share.
- Food as a Social Bonding Tool: Communal eating fosters social connections and strengthens relationships among individuals within a community. Sharing meals provide an opportunity for people to interact, exchange stories, and deepen their interpersonal bonds in a relaxed and convivial atmosphere.
- Traditional Eating Etiquette: Many cultures have specific eating etiquettes and customs that govern communal dining experiences. These may include rules regarding seating arrangements, utensil usage, serving order, and gestures of politeness such as saying grace or expressing gratitude before and after meals.
- Food-Related Rituals and Traditions: Communal eating often involves rituals and traditions passed down through generations, reflecting cultural values, beliefs, and culinary heritage. These rituals may vary widely, ranging from simple acts like toasting or clinking glasses to more elaborate ceremonies performed during special events or festivals.

Thus, communal practices while eating food play a vital role in fostering social cohesion, preserving cultural identity, and strengthening interpersonal relationships within communities. By sharing meals together, people not only nourish their bodies but also nourish their souls, creating lasting connections and memories that transcend the act of eating itself.

Medicinal approach of traditional kitchens:

Traditional kitchens serve as hubs of medicinal knowledge, where age-old practices are passed down from elders to younger generations. Herbs, spices and other ingredients commonly found in traditional kitchens are often revered for their medicinal properties. For example, turmeric, ginger and garlic are staples in many traditional cuisines due to their anti-inflammatory and immune boosting properties. Furthermore, traditional cooking techniques such as slow simmering and herbal infusions are believed to extract maximum nutritional and medicinal benefits from ingredients (Lad, 2006).

Following Fig 3 gives benefits of some herbs to different parts of the body.

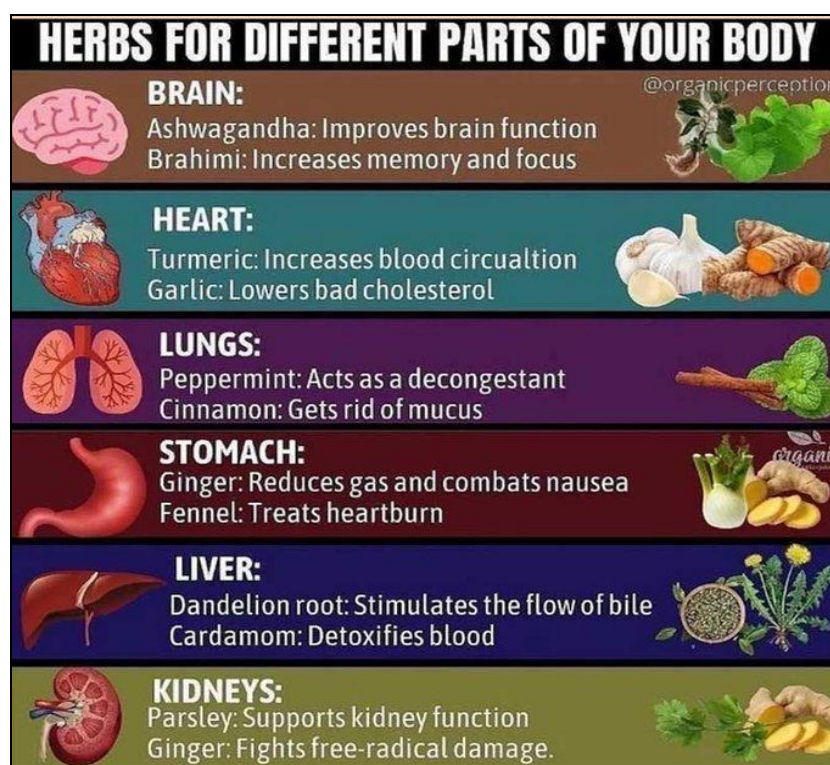


Fig. 3 Herbs for different parts of your body.

Curriculum component:

Integrating IKS nutrition perspective into the educational curriculum is crucial for preserving traditional knowledge and promoting holistic approaches to health and nutrition. Including modules on IKS nutrition in school curricula not only exposes students to diverse cultural perspectives but also instills a sense of pride of indigenous heritage. Moreover, incorporating IKS into educational curricula helps bridge the gap between traditional and modern systems fostering a more inclusive approach to education. Initiatives should be taken to incorporate IKS approaches into education at various levels. This includes integrating indigenous perspectives into existing nutrition curricula, establishing community-based learning programs and promoting collaboration between traditional healers and modern healthcare practitioners. Additionally, the use of digital platforms and interactive resources can help disseminate IKS nutrition knowledge to a wider audience, ensuring its preservation for future generations.

Conclusion:

The perspectives of Nutrition as reflected from IKS offer holistic and culturally relevant approaches to health and well-being. By drawing upon ancient wisdom and traditional practices, IKS provide invaluable insights into the interconnectedness of food, health and the environment. Integrating IKS nutrition approaches into education not only preserves traditional knowledge but also promotes cultural diversity and fosters a deeper understanding of the intricate relationship between humans and their food systems. As we navigate an increasingly complex and globalized

world, the wisdom of indigenous community serves as a guiding light, reminding us of the importance of honoring and preserving diverse cultural heritage.

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To Study the Impact of Vedic Mathematics Program to Enhance B.Ed. Students' Pedagogy and Mathematical Proficiency

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Abstract:

This research aims to study the impact of Vedic Mathematics (VM) on Bachelor of Education (B.Ed.) students to enhance their pedagogical approaches and mathematical proficiency. Vedic Mathematics, based on ancient Indian mathematical principles found in Vedic scriptures, particularly in Rig Veda, offered alternative methods for arithmetic, algebra, geometry, and calculus, which could promote creative problem-solving skills and deepen conceptual understanding. This study seeks to explore the potential benefits, challenges, and implications of introducing Vedic Mathematics to B.Ed. students, with a focus on its impact on teaching practices and students' mathematical proficiency.

Keywords: Vedic Mathematics, Ancient Indian Mathematics, Mathematical proficiency

Introduction:

In the National Education Policy (NEP) 2020, there is a notable emphasis on enhancing the Indian knowledge system. This policy recognizes the importance of integrating traditional Indian knowledge, including Vedic mathematics, into the education system. By promoting the incorporation of such knowledge, the NEP aims to foster a deeper understanding and appreciation of India's cultural heritage among learners. Moreover, the NEP advocates for the establishment of multidisciplinary institutions that will offer courses rooted in Indian knowledge systems (NEP, 2020, p. 11). Such initiatives are geared towards revitalizing traditional Indian knowledge and ensuring its continued relevance in contemporary education.

Vedic Mathematics:

Veda is a Sanskrit word which means 'Knowledge'. Vedic Mathematics is a collection of Techniques/Sutras to solve mathematical arithmetic in an easy and faster way. .

Vedic Mathematics is a system of mathematics which was discovered by Indian mathematician Jagadguru Shri Bharathi Krishna Tirthaji in the period between A.D. 1911 and 1918 and published in a Vedic Mathematics Book by Tirthaji Maharaj.

Vedic Mathematics is the art of superfast calculation. Using regular mathematical steps, solving problems sometimes are complex and time consuming. But using specific techniques, numerical calculations can be done very fast.

It consists of 16 Sutras (Formulae) and 13 sub-sutras (Sub Formulae) which can be used for problems involved in arithmetic, algebra, geometry, calculus, and conics. Jagadguru Shri Bharathi Krishna Tirthaji discovered these sutras by constant studying through Rig Veda.

It is a mathematical system that is very independent, efficient, and complex, and is based on sixteen equations as well as many sub formulas with basic principles and regulations. With the help of Vedic Mathematics sutras basic mathematical operations like subtraction, addition, division, and multiplication can be done quickly.

Need for inclusion of Vedic Mathematics in B.Ed. Curriculum:

The inclusion of Vedic mathematics in the B.Ed (Bachelor of Education) syllabus could offer several potential benefits:

- 1) **Cultural Heritage Preservation:** Vedic mathematics is rooted in ancient Indian culture and traditions. Including it in the syllabus could help preserve this cultural heritage and promote pride in India's mathematical legacy.
- 2) **Alternative Methods:** Vedic mathematics offers alternative methods for solving mathematical problems. These methods can sometimes be simpler, more intuitive, or faster than conventional approaches. B.Ed students could benefit from learning these techniques to better understand mathematical concepts and to teach them effectively to their future students.
- 3) **Enhanced Problem-Solving Skills:** Vedic mathematics often emphasizes mental calculation and problem-solving skills. By incorporating it into the B.Ed syllabus, future educators could improve their own abilities in these areas and then pass on these skills to their students.
- 4) **Catering to Diverse Learning Styles:** Not all students learn best through traditional methods. Vedic mathematics offers different approaches that may resonate with students who have diverse learning styles or who struggle with conventional techniques. B.Ed students could learn how to adapt their teaching methods to accommodate these differences.

Importance of including Vedic Mathematics in B.Ed. Curriculum:

As a teacher educator, researcher sees both potential benefits and considerations regarding the inclusion of Vedic Mathematics in the B.Ed. syllabus and introducing this pedagogy to student teachers.

- 1) Vedic Mathematics offers alternative and sometimes more intuitive methods for solving mathematical problems. These techniques can enhance students' problem-solving skills and mental agility, which are valuable attributes for both educators and learners. By incorporating Vedic Mathematics into the B.Ed. curriculum, we provide future teachers with a diverse toolkit of instructional strategies to cater to the varied learning needs of their students. This inclusion aligns

with the broader goal of fostering critical thinking and creativity in education.

2) Moreover, integrating Vedic Mathematics into the syllabus can help preserve and promote India's rich cultural heritage. It offers an opportunity for student teachers to explore the historical and cultural roots of mathematical concepts, fostering a sense of pride and connection with their cultural identity. This can also contribute to a more inclusive and diverse curriculum that reflects the plurality of Indian society.

3) However, it's essential to approach the inclusion of Vedic Mathematics with careful consideration. Teacher educators must ensure that student teachers receive adequate training and support to effectively integrate these techniques into their teaching practice. This includes not only learning the methods themselves but also understanding the pedagogical principles behind them and how to adapt them to different learning contexts.

4) Additionally, teacher educators should be mindful of balancing the inclusion of Vedic Mathematics with other essential components of the B.Ed. curriculum. While valuable, it should not overshadow other foundational concepts or skills that are critical for effective teaching.

Review of Related Researches:

After identifying need and getting importance of Vedic Mathematics researchers reviewed related research. Researchers found the following research for review.

- 1) Raikhola, S. , Panthi, D. , Acharya, E. and Jha, K. (2020) did their research on the topic " A Thematic Analysis on Vedic Mathematics and Its Importance.". They concluded that these calculations can often be carried out independent of direction & orientation.
- 2) Krishna Kanta Parajuliet al. studied Ancient Sanskrit literature and recreated Vedic Mathematics own approach which promotes creativity and intuition.
- 3) Ajay Kumar Shukla and colleagues investigate Ancient Indian Mathematical Systems known as Vedic Mathematics, which were discovered in the early twentieth century from the Atharvaveda,an old Indian book.
- 4) Tarunika Sharma et al. 2022 did their study entitled, "Study of Mathematics through Indian Vedas."
- 5) Yogeshwari did her study under the title "Effectiveness of Vedic Mathematics based instruction on the attitude towards learning Mathematics of Grade III school students".
- 6) T., Premalatha and E, Suriya (2024) did their study on the topic,"Awareness of vedic mathematics among college students: a quantitative report from Coimbatore city"
- 7) Kumar, Ranjeet (2023) conducted research and found proof of Nikhilam Sutra for multiplication by applying modular arithmetic.
- 8) Tarunika Sharma¹, Rashi Khubnani¹ and Chitiralla Subramanyam (2022) did their research on " Study of mathematics through Indian Veda's : A review"

After considering the importance of Vedic Mathematics and reviewing related research to

include Vedic Mathematics researchers have decided to introduce some sutras of Vedic mathematics to B.Ed. students and decided to enhance B.Ed students' pedagogy and mathematical proficiency. So researcher has taken following subject for her study

Title of the Study:

To Study the Impact of Vedic Mathematics Program to Enhance B.Ed Students Pedagogy and Mathematical Proficiency.

Objectives of the Study:

1. To find the historical development of Vedic Mathematics and its relevance in contemporary educational contexts.
2. To evaluate the effectiveness of Vedic Mathematics Program in promoting mathematical proficiency, and conceptual understanding among pre-service teachers.
3. To identify strategies for integrating Vedic Mathematics into the B.Ed. curriculum, including practice lessons.
4. To investigate pre-service teachers' perceptions, attitudes, and experiences regarding the incorporation of Vedic Mathematics in their teacher preparation program.
5. To explore the challenges and limitations associated with the implementation of Vedic Mathematics in B.Ed. colleges and propose recommendations for overcoming these barriers.

Methodology:

1. **Literature Review:** Conducted a comprehensive review of scholarly literature, educational research, and historical texts on Vedic Mathematics and its applications in education.
2. **Curriculum Analysis:** Both researchers analyzed the existing B.Ed. curriculum frameworks to identify opportunities for integrating Vedic Mathematics into relevant courses or modules.

After analysis of B.Ed. curriculum of Mathematics Education, of S.N.D. T. Women's University, Mumbai, it is found that in Module 2: Planning of teaching Mathematics, Content Point 3, there is a subunit of Introduction of Indian Mathematician, where we can further add Introduction of Vedic Mathematics.

3. **Pedagogical Intervention:** Designed and implemented Vedic Mathematics-based instructional activities.

For pedagogical intervention researchers organized a Workshop of Vedic Mathematics on April 5, 2024.. In this workshop researchers introduced three sutras to the student teachers, which are related to multiplication and performing square. These sutras are 1. *Ekadhikena Purvena* 2. *Nikhilam Navatash caramam Dashatah* – meaning all from 9 and last from 10. 3. *Anurupyena-Shunyamanyat* – a sub-formula of Nikhalam sutra

- a) ***Ekadhikena Purvena*** (One More than the Previous) is a sutra useful in finding squares of

numbers having unit place number is 5 like 25×25 , 95×95 , 105×105 .

b) **Nikhilam Navatash caramam Dashatah** – meaning all from 9 and last from 10. This method is for the multiplication of numbers closest to any power of 10. It uses a combination of addition, subtraction, multiplication, and division to make complicated multiplications easier and quicker.

In this sutra- researchers introduced three varieties of multiplication

- i) When both numbers (Multiplier and multiple) are smaller than their base but near to base
for example – 95×96 , 993×997
 - ii) When both numbers are greater than their base but near to base.
for example- 104×112 , 1009×1007
 - iii) One number is greater than base and one number is smaller than the base
for example - 96×107 , 999×1005
- c) **Anurupyena- Shunyamanyat** – a sub-formula of Nikhalam sutra - This method is used when the numbers that you are multiplying are close to one another like 60, 70, 80, etc. and not close to a power of 10 but close to a multiple of 10. In this concept, the base of both numbers (multiplier and multiple) should be the same and then by using Nikhalam sutra you can find the answer.

For example- 47×52

Here both numbers are near to 50 so by considering base 50, can perform the multiplication by this *Anurupyena- Shunyamanyat* sutra.

Researchers introduced above three Vedic sutras of multiplication to student teachers. Through these Vedic sutras researchers showed a simple and faster way of multiplication and gave practice of performing multiplication.

In this workshop researchers introduced only those sutras which are easy to understand and perform.

4. **Surveys and Interviews:** Administered surveys and conducted interviews with student teachers to gather feedback and insights on the integration of Vedic Mathematics and pedagogical intervention.

5. **Classroom Observations:** Observed teaching sessions where Vedic Mathematics techniques are implemented to assess teaching strategies and students' engagement.

Observations:

Researchers observed the following behavioral changes during the workshop.

a) Engagement and Interest:

Student teachers displayed heightened curiosity and interest as the session began with a brief introduction to the origins and principles of Vedic Mathematics. The historical context seemed to intrigue them, setting a positive tone for the lesson.

Visual aids such as posters and multimedia presentations were used effectively to illustrate key concepts, capturing students' attention from the outset.

b) **Active Participation:**

Throughout the session, students actively participated in discussions and problem-solving activities. They were eager to apply Vedic Mathematics techniques to solve mathematical problems, showcasing a willingness to explore alternative approaches.

Group activities encouraged collaborative learning, with students exchanging ideas and assisting each other in grasping the techniques. This collaborative atmosphere fostered a sense of camaraderie among peers.

c) **Demonstration of Techniques:**

Both researchers skillfully demonstrated various Vedic Mathematics techniques, such as sutras (aphorisms) for multiplication and squaring numbers. Clear explanations and step-by-step demonstrations aided student teachers in understanding the underlying principles.

Interactive black board demonstrations allowed for real-time visualization of the techniques, facilitating comprehension and retention among students.

d) **Application and Problem-Solving:**

Student teachers enthusiastically applied Vedic Mathematics techniques to solve mathematical problems of varying complexity. They demonstrated proficiency in mental calculation and showed a preference for the streamlined methods offered by Vedic Mathematics. Their speed of doing particular types of multiplication has increased too.

Feedback and Reflection:

The workshop concluded with a reflective discussion, during which student teachers shared their experiences and insights gained from learning Vedic Mathematics techniques. Many expressed newfound confidence in their mathematical abilities and eagerness to explore further.

Important conclusions from analysis of questionnaire in the form of Google-forms

- 1) 66.7% students were familiar with the concept of Vedic Mathematics.
- 2) 41.7% students incorporated Vedic Mathematics techniques in their teaching practices.
- 3) All the 100% students believe that Vedic Mathematics can enhance mathematical skills among students.
- 4) 66.7% students feel that the integration of Vedic Mathematics in the B.Ed. curriculum is very effective & will use sutras in their teaching & 33.3% students believe that it is effective.
- 5) 75% of students believe that the workshop was very effective & useful.
- 6) The potential benefits of integrating Vedic Mathematics in the B.Ed. curriculum as per their understanding are-Enhancing students' mathematical skill, Fostering creative problem solving abilities, Promoting faster computation techniques.& Encouraging the deeper

understanding of mathematical concepts.

- 7) 75% students feel that the Vedic mathematics is relevant in modern settings

Feedback from student teachers indicated a positive reception to the integration of Vedic Mathematics into the curriculum. They appreciated the techniques, recognizing their potential utility beyond the classroom.

The student teachers expressed the feeling that ‘as a Mathematics teacher, we need to be introduced to Vedic Mathematics, to know the intricacies of multiplication.’

Conclusion:

Overall, the classroom observation and analysis of the questionnaire, highlighted the effectiveness of integrating Vedic Mathematics techniques to introduce innovative teaching strategies and enhance student engagement.

The workshop fostered a dynamic learning environment characterized by active participation, collaborative problem-solving, and student-led inquiry. Moving forward, continued exploration and integration of such alternative approaches hold promise for enriching the mathematical learning experience and nurturing students' mathematical proficiency and confidence.

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भारतीय ज्ञान प्रणाली-शिक्षणात उपयोग

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Abstract

भारतातील मौखिक परंपरा अध्यात्मिक, वैज्ञानिक, तात्विक, धार्मिक, सांस्कृतिक आणि भाषिक अशा अनेक पैलूंवर केंद्रित आहेत. राष्ट्रीय विकासाच्या चौकटीत, उच्च शिक्षणाची भूमिका जागतिक स्तरावर ओळखली गेली आहे आणि 21 व्या शतकातील आवश्यकतांच्या संदर्भात, आंतरराष्ट्रीय संस्था, समित्या आणि त्यांनी स्थापन केलेल्या आयोगांद्वारे त्याची व्याख्या केली गेली आहे. 1948 मध्ये प्रथमच उच्च शिक्षणाचे महत्त्व औपचारिकपणे ओळखले गेले. उच्च शिक्षणाद्वारे आपण शास्त्रज्ञ, तंत्रज्ञ, अभियंते, डॉक्टर इत्यादी निर्माण करत आहोत पण "माणूस" नाही. नवीन शैक्षणिक धोरणाने सर्व स्तरांवरील शिक्षकी पेशात प्रवेश करण्यासाठी सर्वोत्कृष्ट आणि हुशार व्यक्तींची नियुक्ती करण्यात मदत केली पाहिजे. उच्च शिक्षणामध्ये गुणवत्तापूर्ण शिक्षक प्रवाहात येणे हा संशोधनचा उद्देश आहे. तसेच जीवनमान, सन्मान, प्रतिष्ठा आणि स्वायत्तता सुनिश्चित करून, तसेच गुणवत्ता नियंत्रण आणि जबाबदारीच्या मूलभूत पद्धती प्रणालीमध्ये स्थापित केल्या पाहिजेत.

Introduction

आपण जेव्हा प्राचीन भारतीय ज्ञान प्रणाली आणि त्याच्या उपयोगांबद्दल बोलतो तेव्हा आपल्या मनात एक गोष्ट येते ती म्हणजे तिची समृद्धता आणि शाश्वतता. भारतातील मौखिक परंपरा अध्यात्मिक, वैज्ञानिक, तात्विक, धार्मिक, सांस्कृतिक आणि भाषिक अशा अनेक पैलूंवर केंद्रित आहेत. तर्कशास्त्र आणि तर्कशुद्धता हे प्राचीन भारतीय ज्ञान प्रणालीचा एक भाग होते. अक्षपाद गौतमाचे न्यायसूत्र हा भारतीय तर्कशास्त्रावरील सर्वात प्राचीन विद्यमान पद्धतशीर ग्रंथ आहे. तर्कशास्त्राचे शास्त्र सांगणारा सर्वात जुना शब्द म्हणजे अनाविक्षिकी. कौटिल्य, त्याच्या अर्थशास्त्रात, असे सांगतात की, "तर्कशास्त्र हे असे शास्त्र आहे जे लोकांना त्यांच्या सामर्थ्याचे किंवा कमकुवतपणाचे मूल्यांकन करण्यास सक्षम करते". ज्यांनी सत्याच्या पडताळणीसाठी तर्काचे महत्त्व मान्य केले त्यांच्याकडून तर्कशास्त्राला खूप आदर होता. उदाहरणार्थ, गौतमाच्या धर्मसूत्रात असे म्हटले आहे की, राजांना तर्कशास्त्राच्या प्रशिक्षणातून जावे लागेल.³ न्याय हे याज्ञवल्क्य यांनी चौदा प्रमुख शास्त्रांमध्ये गणले आहे आणि महर्षी व्यास स्पष्टपणे सांगतात की त्यांनी उपनिषदांच्या मांडणीत तर्कशास्त्राची मोठी मदत घेतली आहे.¹ भारतात विविधता साजरी केली जाते. कला आणि साहित्य, नृत्य, नाटक आणि संगीत, योग, क्रीडा, कृषी, मूलभूत विज्ञान, अभियांत्रिकी आणि तंत्रज्ञान, वास्तुकला, व्यवस्थापन, अर्थशास्त्र इत्यादी विविध क्षेत्रांमध्ये पारंपारिक ज्ञानाद्वारे विविधता प्रस्थापित केली जाते.

प्राचीन भारतीय ज्ञान प्रणाली व्यक्तिमत्त्वाचा सर्वांगीण विकास शिकवते. हे सर्वांगीण, आध्यात्मिक, वैज्ञानिक, सामाजिक आणि भौतिक आहे. कोणत्याही शाश्वत आणि विकासात्मक मॉडेलमध्ये कॉस्मिक लॉ ऑफ ऑर्डर आणि धर्म यासारख्या संकल्पना महत्त्वाची भूमिका बजावतात. हे व्यक्तीच्या मानसिक, शारीरिक, आध्यात्मिक आणि सामाजिक विकासाची काळजी घेते. वैयक्तिक स्वायत्तता, आदर आणि प्रतिष्ठा हे श्रुती

परंपरेतून मांडलेल्या आणि स्मृतींनी पुढे नेलेल्या नैतिक प्रवचनाचा भाग आहेत. परंपरा श्रवण, मनन आणि निधिध्यासन या उपनिषदिकध्वेदांत पद्धतींवर उच्च शिक्षणात जोर देण्याची आणि सराव करणे आवश्यक आहे. भारताला पुन्हा जागतिक शक्ती बनविण्यासाठी आपल्याला स्वराज्याची गरज आहे. राज्याचा नवीन सिद्धांत, आर्थिक तत्त्वज्ञान, सामाजिक रचना इत्यादी सादर करण्यासाठी भारतीय ज्ञान प्रणालींवर आधारित सखोल अभ्यास करणे आवश्यक आहे.

राष्ट्रीय विकासाच्या चौकटीत, उच्च शिक्षणाची भूमिका जागतिक स्तरावर ओळखली गेली आहे आणि 21 व्या शतकातील आवश्यकतांच्या संदर्भात, आंतरराष्ट्रीय संस्था, समित्या आणि त्यांनी स्थापन केलेल्या आयोगांद्वारे त्याची व्याख्या केली गेली आहे. 1948 मध्ये प्रथमच उच्च शिक्षणाचे महत्त्व औपचारिकपणे ओळखले गेले. याच वेळी संयुक्त राष्ट्रांनी मानवी हक्कांवरील सार्वत्रिक घोषणापत्र स्वीकारले. शिक्षणाने सर्व राष्ट्रांमध्ये समजूतदारपणा, सहिष्णुता आणि मैत्री वाढवली पाहिजे, असा आदेश दिला.

उच्च शिक्षणात काय चूक आहे की आपण सर्वसमावेशक वातावरण निर्माण न करता केवळ धोरणात्मक नियोजन करत आहोत, नियमांची पुस्तके तयार करत आहोत आणि महाविद्यालय आणि विद्यापीठाच्या व्यवस्थेत त्यांची अंमलबजावणी करत आहोत. उच्च शिक्षणाद्वारे आपण शास्त्रज्ञ, तंत्रज्ञ, अभियंते, डॉक्टर इत्यादी निर्माण करत आहोत पण "माणूस" नाही.

- शिक्षक आणि विद्यार्थ्यांमध्ये अनास्था
- शिक्षणाची गुणवत्ता ही महत्त्वाची नाही
- विश्वास, प्रामाणिकपणा आणि सचोटी उरली नाही
- प्रामाणिकता, कठोर परिश्रम, परस्पर समंजसपणा आणि आदर व्यवहारात नाही.
- संस्थेत आता करुणा आणि कृतज्ञता पाळली जात नाही
- अभ्यासक्रम व्यावहारिक शिक्षण आणि गंभीर विचारांसाठी पुरेशी जागा देत नाही अभ्यासक्रम शारीरिक आणि मानसिक स्थिरतेसाठी जागा देत नाही आणि त्यामुळे शिक्षक आणि विद्यार्थ्यांमध्ये तणाव, चिंता निर्माण होते.

चांगली शैक्षणिक संस्था म्हणजे ज्यामध्ये प्रत्येक विद्यार्थ्याची काळजी घेतली जाते, जिथे सुरक्षित आणि उत्तेजक शिक्षण वातावरण असते, जिथे शिकण्याच्या अनुभवांची विस्तृत श्रेणी दिली जाते आणि जिथे चांगली भौतिक पायाभूत सुविधा आणि शिक्षणासाठी उपयुक्त संसाधने उपलब्ध असतात. चांगले गुण प्राप्त करणे हे प्रत्येक शैक्षणिक संस्थेचे ध्येय असले पाहिजे. 2 तथापि, त्याच वेळी, संस्था आणि शिक्षणाच्या सर्व टप्प्यांमध्ये अखंड एकात्मता आणि समन्वय असणे आवश्यक आहे. सर्वात महत्त्वाचे म्हणजे गुरु आणि शिष्य यांच्यात चांगला संबंध आहे आणि दोघांनी तणावमुक्त, मैत्रीपूर्ण वातावरणात काम केले पाहिजे. उच्च शिक्षणात या गोष्टींचा अभाव आहे. मूल्यांचा र्हास, परंपरा आणि संस्कृतीचा आदर न केल्याने पोकळी निर्माण झाली आहे. यावरून सिद्धांत आणि सराव यात अंतर असल्याचे दिसून येते. म्हणून, मानसिक, शारीरिक, सामाजिक, वैज्ञानिक आणि अध्यात्मिक विकासाचा समावेश असलेल्या प्राचीन भारतीय ज्ञान प्रणालीचा पुनर्विचार करण्याची गरज आहे. हे केवळ प्राचीन भारतीय ज्ञान प्रणाली आणि उच्च शिक्षणातील त्याच्या वापराद्वारेच आपण मानव निर्माण करू शकतो. शैक्षणिक आणि गैर-शैक्षणिक दोन्ही क्षेत्रांमध्ये प्रत्येक विद्यार्थ्याच्या सर्वांगीण विकासाला

चालना देण्यासाठी शिक्षकांना तसेच पालकांना संवेदनशील करून प्रत्येक विद्यार्थ्याची क्षमता पुन्हा पाहण्याची, ओळखण्याची, आणि वाढवण्याची वेळ आता आली आहे. स्वामी विवेकानंदांनी म्हटले आहे की, “Education is the manifestation of perfection already existing in man”. आज शिक्षण प्रणाली औद्योगिक जगाला सेवा देणार्या अणुयुक्त व्यक्तीसाठी तयार केलेली आहे. शिक्षक बरेच काही करण्यास सक्षम आहेत, परंतु शिक्षण आपल्याला मर्यादित करते. नवीन शिक्षण व्यवस्थेचा उपाय भारतीय ज्ञान प्रणालीमध्ये आहे. आपल्या पूर्वजांनी मानवी स्वभाव आणि ते स्वतःला कसे व्यक्त करू शकते याचा खोलवर अभ्यास केला आहे. महाभारत म्हटले आहे की, “A student learns one&fourth from his teacher] one&fourth from his own intelligence] one&fourth with the passage of time and one&fourth from his peers”. यावर आधारित शिक्षण प्रणाली तयार करण्याची गरज आहे.

प्राचीन भारतीय ज्ञान प्रणाली वेदांमध्ये सापडतात. वेद हा मूळ शब्द "विद" पासून आला आहे ज्याचा अर्थ "जाणणे" आहे आणि वेद म्हणजे ज्ञान. वेदांना 'श्रुती' असे म्हटले जाते जे शाश्वत आणि अधिकृत आहे. सर्व प्राचीन भारतीय तत्त्वज्ञान प्रणालींनी वैदिक अधिकार स्वीकारून किंवा वैदिक अधिकार नाकारून त्यांचे ज्ञानशास्त्रीय सिद्धांत विकसित केले. प्राचीन भारतीय ज्ञान प्रणालीमध्ये चार आवश्यक घटक समाविष्ट आहेत, ते म्हणजेय तत्त्वविचार, ज्ञानशास्त्र, नीतिशास्त्र आणि तर्कशास्त्र जेव्हा अनुभवजन्य जगाच्या स्पष्टीकरणाचा विचार केला जातो तेव्हा हे सर्व घटक एकमेकांशी संबंधित असतात. ज्ञानावरील सर्व चर्चा दर्शन, ज्ञान आणि विद्या यांच्याभोवती फिरतात. असे म्हटले जाते की "दर्शन" (तत्त्वज्ञान) ही "प्रणाली," दृष्टीकोन आहे, जी ज्ञान मिळवून देते. जेव्हा एखाद्या विशिष्ट क्षेत्राविषयी गोळा केलेले ज्ञान विचार आणि अध्यापनशास्त्राच्या उद्देशाने व्यवस्थित केले जाते, तेव्हा त्याला "विद्याशाखा" असे म्हणतात.

प्राचीन भारतामध्ये विज्ञानातील प्रगती कधीही आध्यात्मिक वाढीस अडथळा ठरली नाही. भारतात खगोलशास्त्र, गणित, रसायनशास्त्र, भौतिकशास्त्र आणि वैद्यकशास्त्र यांसारख्या शाखा एकत्रितपणे विकसित होतात. वैदिक ग्रंथ तसेच चरक संहितेत नियम आणि शिस्त पाळल्या जातात आणि त्यांचा उल्लेख केला जातो. आर्यभट्ट यांनी भौतिकशास्त्र, गणित आणि खगोलशास्त्र लिहिले. मानवी संस्कृतीची वाढ ही विज्ञान आणि तंत्रज्ञानाच्या प्रगतीवर आधारित आहे. भारत प्राचीन काळापासून विज्ञान आणि तंत्रज्ञानाच्या क्षेत्रात योगदान देत आला आहे. आजही आपण ज्याला "पारंपारिक ज्ञान" म्हणतो ते वैज्ञानिक विश्लेषणावर आधारित आहे. प्राचीन भारतीय ज्ञानाचे मुख्य उद्दिष्ट असा समाज निर्माण करणे हा होता की जेथे सर्व जीव एकत्र राहतील, निरोगी आणि श्रीमंत जीवन जगतील. उच्च शिक्षण व्यवस्थेची पुनरावृत्ती करण्याची आणि एक निरोगी वातावरण तयार करण्यासाठी पारंपारिक अध्यापनशास्त्र लागू करण्याची वेळ आली आहे जिथे आपण शिक्षक आणि विद्यार्थ्यांमध्ये रस निर्माण करू शकतो. नवीन शैक्षणिक धोरण 2020 ने प्राचीन भारतीय ज्ञान प्रणालीचे महत्त्व आणि उच्च शिक्षणामध्ये त्याचा उपयोग मान्य केला आहे.

NEP 2020 ने प्राचीन भारतीय ज्ञान प्रणालीची व्याख्यारू प्राचीन आणि शाश्वत भारतीय ज्ञान आणि विचारांचा समृद्ध वारसा या धोरणासाठी मार्गदर्शक प्रकाश आहे. भारतीय विचार आणि तत्त्वज्ञानामध्ये ज्ञान, प्रज्ञा आणि सत्य यांचा शोध हे सर्वोच्च मानवी ध्येय मानले गेले. प्राचीन भारतातील शिक्षणाचे उद्दिष्ट केवळ या जगातील जीवनाची किंवा शालेय शिक्षणाच्या पलीकडे जीवनाची तयारी म्हणून ज्ञान संपादन करणे हे नव्हते,

तर आत्मस्वरूपाची पूर्ण अनुभूती आणि मुक्ती हे होते. तक्षशिला, नालंदा यांसारख्या प्राचीन भारतातील जागतिक दर्जाच्या संस्थांनी बहुविद्याशाखीय अध्यापन आणि संशोधनाचे सर्वोच्च मापदंड स्थापित केले आहेत आणि विविध पार्श्वभूमी आणि देशांतील विद्वान आणि विद्यार्थ्यांना यजमान केले आहे. भारतीय शिक्षण व्यवस्थेने चरक, आर्यभट्ट, वराहमिहिरा, भास्कराचार्य, ब्रह्मगुप्त, चाणक्य, चक्रपाणी दत्त, पाणिनी, पतंजली, नागार्जुन, गौतम, मैत्रेयी, गार्गी आणि थिरुवल्लुवर असे महान विद्वान निर्माण केले. गणित, खगोलशास्त्र, धातूशास्त्र, वैद्यकीय विज्ञान आणि शस्त्रक्रिया, नागरी अभियांत्रिकी, आर्किटेक्चर, जहाज बांधणी आणि नेव्हिगेशन, योग, ललित कला, बुद्धिबळ आणि बरेच काही यासारख्या विविध क्षेत्रातील जागतिक ज्ञानात महत्त्वपूर्ण योगदान दिले. भारतीय संस्कृती आणि तत्त्वज्ञानाचा जगावर मोठा प्रभाव आहे. जागतिक वारशाच्या या समृद्ध वारशांचे पालनपोषण आणि वंशजांसाठी जतन केले पाहिजे असे नाही तर आपल्या शिक्षण व्यवस्थेद्वारे संशोधन, वर्धित आणि नवीन उपयोगात आणले पाहिजे."³

"शिक्षण व्यवस्थेतील मूलभूत सुधारणांच्या केंद्रस्थानी शिक्षक असणे आवश्यक आहे. नवीन शैक्षणिक धोरणाने शिक्षकांना सर्व स्तरांवर, आपल्या समाजातील सर्वात आदरणीय आणि आवश्यक सदस्य म्हणून पुनर्स्थापित करण्यास मदत केली पाहिजे, कारण ते खरोखरच आपल्या पुढील नागरिकांच्या पिढीला आकार देतात. शिक्षकांना सक्षम करण्यासाठी आणि शक्य तितक्या प्रभावीपणे त्यांची कामे करण्यास मदत करण्यासाठी सर्व काही केले पाहिजे. नवीन शैक्षणिक धोरणाने सर्व स्तरांवरील शिक्षकी पेशात प्रवेश करण्यासाठी सर्वोत्कृष्ट आणि हुशार व्यक्तींची नियुक्ती करण्यात मदत केली पाहिजे, तसेच जीवनमान, सन्मान, प्रतिष्ठा आणि स्वायत्तता सुनिश्चित करून, तसेच गुणवत्ता नियंत्रण आणि जबाबदारीच्या मूलभूत पद्धती प्रणालीमध्ये स्थापित केल्या पाहिजेत."⁴ उच्च शिक्षणाची एकमेव कल्पना पदवीधर विद्यार्थी आणि व्यावसायिक तयार करणे हा नसावा. त्याऐवजी सर्वांगीण वातावरण तयार करा आणि त्यांना मानव आणि स्वावलंबी बनवा. उच्च शिक्षणाचे सार तेव्हाच न्याय्य ठरेल जेव्हा आपण आपल्या प्राचीन ज्ञानप्रणालीला उत्तरदायी असू आणि वर्तमान व्यवस्थेत ती लागू करू आणि सुरक्षित भविष्य घडवू.

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Challenges in implementing Indian Knowledge System and Strategies for overcoming it for Human Well Being

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Dadra and Nagar Haveli, Daman and Diu.

Abstract

The Indian Knowledge Systems (IKS) are scientifically integrated, encompassing tribal knowledge, indigenous, and traditional modes of learning. They address topics such as mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, among others. Key areas of focus include tribal ethno-medical practices, forest management, and natural farming. Embracing and practicing this knowledge will be a defining trait of future aspiring leaders.

This research paper critically analyzes the challenges and opportunities on India's journey towards becoming a global leader in the knowledge economy. It examines the four pillars outlined by the Knowledge Assessment Model (KAM) of the World Bank: economic and institutional regime, education, information and communication technology, and innovation. Fundamental questions include understanding the essence of IKS, its introduction objectives, the required infrastructure/ecosystem for effective impartation, its impact on inclusive growth, current baselines, and strategies to bridge gaps.

The National Education Policy (NEP) 2020 acknowledges Indian culture, philosophy, and the country's rich knowledge history. Guided by principles such as Jnana, Vignan, and Jeevan Darshan, evolution through experience and experiments has had a significant global impact. The nation's emphasis on Atmanirbhara Bharata and ongoing initiatives to implement the NEP 2020 are set to enhance the Indian education system, particularly in higher education, with the aim of restructuring it.

The vision is to position India as a global leader. The NEP 2020 reforms the Indian education system comprehensively, with a keen understanding of the current socio- economic landscape and anticipation of future challenges. Proper implementation of these reforms is expected to propel India to become a global education hub by 2030.

Keywords: Indian Knowledge Systems (IKS), Indian Culture and Philosophy, NEP 2020, Education System Reforms, Atmanirbhara Bharata.

Introduction to Indian knowledge system

The Bhartiya way is sustainable and strives for the welfare of all human well-being as it has significance that will regain the comprehensive knowledge system of our heritage and demonstrate the 'Indian way' of doing things to the world. The Indian Knowledge Systems comprise of Jnana, Vignan, and Jeevan Darshan that have evolved out of experience, observation, experimentation, and rigorous analysis. This tradition of validating and putting into practice has impacted our education, arts, administration, law, justice, health, manufacturing, and commerce. This has influenced classical and other languages of Bharat, that were transmitted through textual, oral, and artistic traditions. "Knowledge of India" in this sense includes knowledge from ancient India and its successes and challenges, and a sense of India's future aspirations specific to education, health, environment and indeed all aspects of life. This requires training generations of scholars who will demonstrate and exemplify to the world a way of life so unique to our great civilization.

The World Bank has initiated the Knowledge for Development Program to help client nations assess their Capability to tap global knowledge for social welfare and development. The four pillars of knowledge assessment ((www.worldbank.org/kam, n.d.)) as stated by the World Bank's Knowledge Assessment Methodology are as follows:

- (1) Economic and institutional regime: The country's economic and institutional regime must provide incentives for the efficient use of existing and new knowledge and the flourishing of entrepreneurship. The indicators are tariff and non-tariff, regulatory authorities and the rule of law.
- (2) Education and skills: The country's people need to attain education and skills that enable them to create and share, and to use it well. Gross secondary and tertiary enrollment rates and adult literacy rates are key indicators of educational achievement.
- (3) Information and communication infrastructure: A dynamic information infrastructure is needed to facilitate the effective communication, dissemination, and processing of information. The indicators are telephone, internet and computers per 1000 people.
- (4) Innovation system: The country's innovation system firms, research centers, universities, think tanks, consultants, and other organizations must be capable of tapping the growing stock of global knowledge, assimilating and adapting it to local needs, and creating new technology. The indicators are royalty and payments/receipts per person, technical journal articles per million and patents granted to nations by US Patent and trademark offices per million people. The World Competitiveness Index published by the Centre for International Competitiveness sets the overall benchmark of the knowledge capacity, capability and sustainability of each region, and the extent to which this knowledge is translated into economic value, and transferred into the wealth of the citizens of each region. (www.worldbank.org/kam, n.d.)

The NEP 2020 has recognized this rich heritage of ancient and eternal Indian knowledge

and thought as a guiding principle.

The main objective of introducing Indian Knowledge Systems

The main objective of drawing from our past and integrating the Indian Knowledge Systems is to ensure that our ancient systems of knowledge represented by an unbroken tradition of knowledge transmission and providing a unique perspective (Bharatiya Drishti) is used to solve the current and emerging challenges of India and the world.

The Indian Knowledge Systems is to be incorporated in scientific manner in the school and higher educational curriculums as it would include tribal knowledge and indigenous and traditional ways of learning and will cover and include mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, as well as governance, polity and conservation. Specific courses in tribal ethno-medicinal practices, forest management, traditional (organic) crop cultivation, natural farming, etc. will also be made available.

The New Education Policy has recognized that the knowledge of the rich diversity of India should be imbibed first hand by learners as this would mean including simple activities, like touring by students to different parts of the country, which will not only give a boost to tourism but will also lead to an understanding and appreciation of diversity, culture, traditions, and knowledge of different parts of India. Towards this direction under 'Ek Bharat Shreshtha Bharat', 100 tourist destinations in the country will be identified where educational institutions will send students to study these destinations and their history, scientific contributions, traditions, indigenous literature, and knowledge, etc., as a part of augmenting their knowledge about these areas.

In order to realize these goals of NEP 2020, a number of activities have been undertaken by the Ministry of Education, Regulatory Bodies (UGC & AICTE) and HEIs.

Some of the guideline and initiatives taken by Ministry are as under:

- **Guidelines for Incorporating Indian Knowledge in Higher Education:**

It emphasizes on the promotion of Indian Languages, Arts and Culture, and tries to remove the discontinuity in the flow of Indian Knowledge System (IKS) by integrating IKS into curriculums at all levels of education.

It prescribes that every student enrolled in a UG or PG programme should be encouraged to take credit courses in IKS amounting in all to at least 5% of the total mandated credits (interested students may be allowed to take a larger fraction of the total mandated credits). At least 50% of the credits apportioned to the IKS should be related to the major discipline and should be accounted for the credits assigned to the major discipline.

The medium of instruction for the IKS courses could be any of the Indian languages.

- **Guidelines for Training/Orientation of Faculty on Indian Knowledge System (IKS):**

It enables the faculties to generate a positive attitude towards IKS and promote interest in knowing

and exploring more through induction programs and refresher courses.

- **Guidelines for Empanelment of Artists/Artisans in Residence in Higher Educational Institutions:**

To create collaboration between Artists and HEIs, to develop an effective structure of art education, involving skilled Kala Gurus in teaching, research, and other academic activities on a regular basis, which will synergize the artistic experience with the conventional education to be more productive and beneficial for the students.

- **Guidelines for the introduction of courses based on Indian heritage and culture:**

To make people familiar with the rich cultural and intellectual heritage of India and offer short term multi-tier credit based modular programmes with multiple entry and exit based on Indian heritage and culture.

It includes dissemination and imparting of knowledge of various dimensions of learning in the spheres of Universal human values, Vedic Maths, Yoga, Ayurveda, Sanskrit, Indian Languages, sacrosanct religious regions located in the Indian subcontinent, Archaeological sites and monuments, Heritage of India, Indian Literature, Indian Sculpture, Indian Music and dance forms, Drama, Visual Arts, Performing Arts, Crafts and Craftsmanship etc.

- ☐ The IKS has made provision for awarding minor degrees to students who complete 18 to 20 credits in IKS.
- ☐ 32 IKS Centres established to catalyze original research, education, and dissemination of IKS.
- ☐ Ongoing 75 high end interdisciplinary research facilities like ancient metallurgy, ancient town planning and water resource management, ancient rasayanshastra etc. projects are being put in place.
- ☐ Around 5200 internships on IKS have been offered.
- ☐ Conducted 50 faculty development programs, workshops, and National/International conference.
- ☐ 8000+ HEIs have started adopting IKS in their curriculum and worked on digitization of 1.5 Lakhs book.
- ☐ The IKS Division of the Ministry of Education in collaboration with the Ministry of Culture and partner institutions through the Dhara Conference series has succeeded in reaching at least 6 Cr+ citizens of this country directly and indirectly regarding various contributions of ancient Indian Knowledge Systems, taking into consideration their relevance in the present and exploring their scope for the future.
- ☐ The IKS Division has brought together leading thinkers and practitioners of various knowledge domains to develop Vision 2047 documenting a roadmap for establishing thriving Bharatiya Gnana Parampara (Nic, n.d.).

Challenges in implementation of Indian Knowledge System.

The various constructive recommendations of NEP 2020 need a pragmatic integration in our curriculum which emphasizes not only being technologically endowed but an ethical usage of latest technologies in our everyday life. For such a revolutionary step it needs to identify the various challenges of the educational ecosystem of India, some of which are as follows:

- At present our education system is reeling under the ills of Westernization, excessive privatization and an exclusion from its cultural underpinnings. This alienation from its indigenous wealth and repository has not let us achieve much in the domain of education in the 21st century.
- All know that just achieving the literacy targets is insufficient for intellectual enlightenment of the masses. Thus, the need is to incorporate Indian Knowledge and Tradition in the fold of education in such a way that it becomes our 'way of life'.
- Being home to one of the youngest populations in the world, it also needs to realize the demographic dividend for the growth and development of our country.
- Lack of awareness and understanding of IKS: Many people, including college administrators and faculty, are not aware of IKS or its importance. This lack of awareness and understanding can make it difficult to implement IKS in colleges.
- Lack of resources: IKS is often undocumented and passed down orally from generation to generation. This makes it difficult to develop and implement IKS-based courses and programmes in colleges. Additionally, there is a lack of funding for IKS research and education in India.
- Resistance to change: A few people may be resistant to the idea of implementing IKS in colleges. They may view IKS as outdated or irrelevant. Additionally, a few faculty members may be reluctant to change their teaching methods and curriculum to accommodate IKS.
- Language barrier: IKS is often transmitted in Indian languages. This can create a language barrier for students and faculty who do not speak these languages.

In addition to these challenges, there are a few other factors that can make it difficult to implement IKS in colleges in India:

- The colonial legacy: The British colonial education system in India was designed to replace Indian knowledge systems with Western knowledge systems. This legacy has created a bias against IKS in the Indian education system.
- The focus on Western knowledge systems: The Indian education system is still largely focused on Western knowledge systems. This can make it difficult to accommodate IKS in the curriculum.

- The lack of qualified faculty: There is a shortage of qualified faculty to teach IKS courses in colleges. This is because IKS is not widely taught in universities in India (Nic, n.d.)

Overcoming the challenges in implementation of the Indian Knowledge System.

It is thus the moral responsibility of all the stakeholders in the Indian educational system to strive for quality and equitable education for all by extending stimulating courses on Indian Knowledge System to the students at a young age so that they know the importance of “doing what's right”, with a logical framework for making ethical decisions.

□ Increase learning opportunities for students

Mandatory credit component - Universities in all States/UTs may introduce learner credits or IKS electives in all courses for imbibing learners across all disciplines with traditional knowledge and pride. UGC has already made it mandatory to include 5% of the total credits in the curriculum related to the IKS courses. AICTE has introduced an IKS course for the first-year students in Engineering colleges.

Designing regional courses - States/UTs may document their respective native cultures, arts, crafts, traditions, architecture, food habits, languages, etc. to tailor dedicated courses for learners.

Scope of collaborations - Given the globalized history of India, multidisciplinary courses designed by universities may consider the scope of collaborating internationally wherever possible. For example, NCERT is undertaking inclusion of text highlighting historical ties between India and Indonesia at school level.

Online/ODL courses - Existing IKS courses may be synced to digital learning platforms (SWAYAM, NPTEL) and via ODL for learners across geographies.

□ Promote teacher recruitment and training

Recruitment - Entrance exam syllabus may be launched as a subject for testing under UGC-NET to create a cadre of specialized IKS faculty and researchers.

Regularized faculty training - Modules for training and orientation of educators may be designed to improve quality of classroom delivery on IKS courses.

Establishment of specialized teacher training centers for training teachers in specialized topics of the Indian Knowledge Systems by specialized IKS faculty.

□ Provide hands on learning opportunities

IKS Internships – Provide avenues for student internships/apprenticeships and provide counseling to IKS learners in convergence with BGSamvahan Karyakram, the internship programme launched by the IKS Division of MoE.

Hands-on-workshops: Provide opportunities for students to learn various skills in hands-on workshops from the experts.

Hackathons: Conduct specialized IKS themed Hackathons and include IKS related topics in the Smart India Hackathon in synergy with the topics given by IKS Division of MoE.

Translation of academic content – Translation of Teaching Learning Materials for all disciplines into local languages may be done by IKS Centres to engage diverse learners & preserve indigenous identity.

□ **Support research and innovation in IKS**

Priority research funding - Dedicated research grants may be proposed through NRF in the future to boost IKS-related research proposals.

Make catalytic grants that encourage original, serious, and deep scholarly research in the IKS and rejuvenate IKS research in India.

Introduce IKS into the prestigious schemes such as PMRF for attracting best talent into the interdisciplinary IKS research.

Promote innovation in the IKS through various grand national challenges, national competitions, and hackathons and incentivizing the innovation.

International collaborations – Institutions may access global collaborations through institutions such as Indian Council of Historical Research (ICHR) for conducting India-centric research.

Include IKS as a theme in the ASEAN fellowships to foster collaborations among scholars and nurture the next generation of scholars.

□ **Fund institutional support mechanisms**

Establish institutional support mechanisms through the establishment of the IKS centers which will be catalysts for initiating research, education, and outreach activities in various parts of the country.

Provide initial seed funding for the establishment of IKS Centers in various HEIs. Provide additional funding to establish global Centers of Excellence in focused areas.

□ **Promote Jan Bhagidari**

Reach out to the public through various mechanisms (MyGov competitions, conferences, exhibitions, programs on radio and television, social media, etc.) to disseminate and popularize authentic IKS knowledge to develop informed and confident citizenry.

Involve people in various IKS initiatives through Jan Bhagidari programs similar to citizen science initiatives.

□ **Create employment opportunities**

Create employment opportunities for youth through skill based IKS based programs such as IKS based beautician and cosmetician training programs, Ayurveda based dietician programs, Gandhashastra based perfumery, among many uniquely IKS based skills.

Promote heritage technology by bringing technology solutions to showcase the Indian heritage to Indians and the world. Aim to capture 10% of the world tourism market value at \$10.5 Trillion in 2022 and provide massive employment opportunities to our youth (Nic, n.d.)

Conclusion:

The Indian knowledge system is an incredibly rich and diverse collection of ancient wisdom and practices that have stood the test of time. The Indian Upanishads revolving around the concepts of the Brahman (the universal soul) and the Atman (the individual soul), the teachings of the Bhagavad-Gita elucidating the ideals of the 'Karma Yoga' (the path of action), the 'Bhakti Yoga' (the path of devotion), and the 'Gyan Yoga' (the path of knowledge) for self-realization . Today we need to draw our identity from such a sprawling belief system which gives a unique stature to India at the global platform where people from abroad look up to India and resort to yoga and meditation to de-stress and rejuvenate their mind. It is a system that emphasizes the holistic understanding of the self, nature, and the universe, and seeks to create harmony and balance in all aspects of life.

From the early Vedic period to the modern era, Indian knowledge has evolved and adapted to the changing times, but its core principles remain deeply ingrained in the culture and society of India. Its teachings have influenced not only the development of India but also the world at large, through its spread and adoption by other civilizations. One of the most remarkable aspects of the Indian knowledge system is its inclusivity and universality. It is not limited to a specific religion, belief system, or social class. Instead, it is open to all, making it accessible and relevant to people from all walks of life.

Furthermore, the Indian knowledge system is not just theoretical but deeply practical. It not only imparts knowledge and understanding but also provides practical tools and techniques for personal growth and development. Through practices such as yoga, meditation, and Ayurveda, it offers ways to achieve physical, mental, and spiritual well-being. It is deeply rooted in a reverence for nature and a deep understanding of the interconnectedness of all living beings. It promotes sustainable living practices, mindful consumption, and a harmonious relationship with the environment. Despite its immense contributions and relevance, the Indian knowledge system has faced challenges and criticism in recent times. However, there has been a revival of interest in this ancient knowledge, both within India and globally, as people recognize the value and applicability of its teachings in today's world.

Thus, the Indian knowledge system is a treasure trove of wisdom that continues to inspire and guide countless individuals to move towards a more interconnected and fast-paced world, the principles and practices of this ancient system can serve as a guiding light for a more conscious and balanced way of living moreover better and more enlightened future for ourselves and generations to come (Timane, 2024).

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Bridging Indian Knowledge Systems and Machine Learning for Inclusive Education: A Thematic Exploration.

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Abstract:

In the landscape of education, there exists a rich tapestry of knowledge systems deeply rooted in the cultural heritage and traditions of various regions, including India. These indigenous knowledge systems encompass a wide array of disciplines, ranging from traditional medicine and agriculture to philosophy and cosmology. However, in the era of rapid technological advancement, there is a growing need to integrate this traditional wisdom with modern tools such as machine learning to foster inclusive education.

This paper aims to explore the intersection of Indian knowledge systems (IKS) and machine learning within the realm of education, with a specific focus on inclusivity. By leveraging the principles of computational power of machine learning algorithms, we can devise innovative approaches to cater to diverse learning needs and bridge gaps in access and quality. The paper begins by elucidating the foundational principles of IKS, highlighting their holistic and integrative nature, as well as their emphasis on experiential learning and contextual understanding.

Lastly, the paper discusses the implications of this thematic exploration for policymakers, educators, technologists, and other stakeholders in the field of education. It advocates for a collaborative approach that honors both traditional wisdom and technological innovation, thereby creating a more inclusive and equitable educational ecosystem that empowers learners from all backgrounds.

In conclusion, this thematic paper underscores the significance of bridging IKS and machine learning for inclusive education. By harnessing the strengths of both domains, we can pave the way towards a more culturally responsive, contextually relevant, and learner-centered educational paradigm that nurtures the full potential of every individual.

Keywords: Indian knowledge system (IKS), machine learning, inclusive education.

Introduction:

In the ever-evolving landscape of education, the fusion of traditional wisdom with modern technological advancements has become imperative. India, with its rich tapestry of indigenous knowledge systems spanning various disciplines, presents a unique opportunity to bridge the gap

between ancient wisdom and contemporary tools like machine learning. This paper delves into the thematic exploration of integrating Indian knowledge systems (IKS) with machine learning to foster inclusive education.

The Indian knowledge system (IKS)

The Indian knowledge system (IKS) stands as a testament to the profound wisdom accumulated over millennia within the Indian subcontinent. Rooted deeply in the cultural fabric and historical heritage of the region, IKS embodies a holistic approach to understanding the universe, human existence, and the interconnectedness of all life forms. It encompasses a vast array of disciplines, ranging from ancient sciences like Ayurveda, astronomy, and mathematics to spiritual philosophies such as Vedanta and Yoga. At its core, IKS emphasizes a harmonious coexistence with nature, a reverence for the interconnectedness of all phenomena, and a pursuit of knowledge that transcends mere intellectual understanding to encompass spiritual enlightenment. As one of the oldest and most enduring knowledge systems in the world, IKS continues to inspire and inform contemporary discourse, offering timeless insights into the human condition and the mysteries of existence.

The concept of machine learning

The concept of machine learning has emerged as a transformative force within the realm of education, promising to revolutionize traditional teaching and learning paradigms. Machine learning, a subset of artificial intelligence, entails the development of algorithms that enable computers to learn from data, identify patterns, and make predictions or decisions without explicit programming. In the educational context, machine learning holds the potential to enhance various aspects of the learning process, from personalized instruction and adaptive learning to automated assessment and data-driven decision-making. By analyzing vast amounts of educational data, including student performance metrics, learning preferences, and instructional materials, machine learning algorithms can offer insights that inform instructional design, optimize learning experiences, and tailor interventions to meet individual learner needs. As educators and policymakers explore the educational implications of machine learning, they are confronted with both opportunities and challenges in harnessing this technology to improve educational outcomes and foster innovation in teaching and learning.

The concept of Inclusive education

Inclusive education represents a fundamental shift in educational philosophy, aiming to ensure equitable access, participation, and success for all learners, regardless of their background, abilities, or differences. Rooted in principles of diversity, equity, and social justice, inclusive education goes beyond mere integration or accommodation of students with diverse needs; it fosters a culture of belonging, respect, and acceptance within educational settings. The concept of inclusive education recognizes that every learner is unique, with varying strengths, challenges, and

learning styles, and seeks to create learning environments that accommodate this diversity.

Aim:

The aim of this paper is to explore the intersection of IKS and machine learning within the realm of education, with a specific focus on fostering inclusivity.

Objectives:

- To elucidate the foundational principles of IKS, highlighting their holistic and integrative nature, as well as their emphasis on experiential learning and contextual understanding.
- To investigate how the synergy between IKS and machine learning can foster inclusive education by addressing challenges such as language diversity, cultural relevance, and socio-economic disparities.
- To explore case studies and pilot initiatives where these synergies have been applied, showcasing promising outcomes and identifying areas for further research and development.
- To discuss the implications of this thematic exploration for policymakers, educators, technologists, and other stakeholders in the field of education.
- To advocate for a collaborative approach that honors both traditional wisdom and technological innovation, thereby creating a more inclusive and equitable educational ecosystem that empowers learners from all backgrounds.

Foundational Principles of Indian Knowledge Systems:

IKSs are deeply rooted in the cultural heritage and traditions of the land, encompassing diverse domains such as traditional medicine, agriculture, philosophy, and cosmology. At their core, these systems emphasize holistic and integrative approaches to learning, emphasizing experiential learning and contextual understanding. By acknowledging the interconnectedness of all disciplines and the dynamic relationship between theory and practice, IKS offers a profound framework for education. IKS represents a vast body of knowledge accumulated over centuries within the Indian subcontinent, characterized by its profound integration of spiritual, philosophical, and scientific insights. These systems are a testament to the intellectual and cultural legacy of India, offering a multidimensional understanding of various aspects of life and the universe.

Principles of Indian knowledge systems:**Holistic View of Knowledge:**

IKS approaches knowledge as an interconnected whole, where different domains such as medicine, philosophy, mathematics, and cosmology are seen as parts of a greater continuum. This holistic perspective fosters a comprehensive understanding of the self, society, and nature.

Experiential Learning:

IKS prioritizes direct, hands-on experiences as a means of gaining knowledge. This approach values learning through observation, practice, and reflection, allowing individuals to internalize knowledge deeply and apply it practically.

Contextual Understanding:

Context plays a central role in IKS, where knowledge is not abstract but deeply intertwined with the local environment, culture, and traditions. This contextual awareness ensures that knowledge remains relevant and applicable to the specific needs of the community.

Interdisciplinary Integration:

IKS does not compartmentalize knowledge into rigid disciplines; rather, it encourages the integration of multiple fields of study. This interdisciplinary approach facilitates a broader understanding of complex phenomena and promotes innovative problem-solving.

Spiritual and Ethical Dimensions:

Many domains of IKS, such as yoga and Ayurveda, incorporate spiritual and ethical teachings as intrinsic parts of their practice. This emphasis on inner well-being, moral conduct, and self-awareness aligns education with personal and collective growth.

Oral Traditions and Transmission:

Historically, IKS has been transmitted through oral traditions, including storytelling, recitation, and apprenticeship. These methods fostered strong mentor-mentee relationships and ensured the preservation of knowledge across generations.

Emphasis on Balance and Harmony:

IKS places a strong emphasis on maintaining balance and harmony in all aspects of life, including health, relationships, and the environment. This perspective guides individuals towards sustainable practices and lifestyles that respect the interconnectedness of all beings.

Adaptability and Continuity:

IKS has evolved over time, adapting to changing circumstances while retaining its core principles. This adaptability has enabled the systems to remain relevant and resilient in the face of modern challenges.

Synergy between Indian Knowledge Systems and Machine Learning:

Machine learning, with its computational prowess, offers innovative avenues to enhance the accessibility, relevance, and effectiveness of education. By leveraging machine learning algorithms, educators can tailor learning experiences to cater to diverse needs and bridge gaps in access and quality. The synergy between IKS and machine learning holds immense potential in addressing challenges such as language diversity, cultural relevance, and socio-economic disparities in education.

Case Studies and Pilot Initiatives:

Several case studies and pilot initiatives exemplify the successful integration of IKS and machine learning in education. These initiatives range from developing AI-powered educational tools rooted in indigenous knowledge to implementing adaptive learning systems that accommodate individual learning styles and preferences. Promising outcomes from such endeavors underscore the transformative impact of synergizing traditional wisdom with modern technology in education. The synergy between prowess IKS and Machine Learning (ML) represents a promising frontier in educational innovation. Machine learning, driven by its computational power and ability to analyze vast amounts of data, offers unprecedented opportunities to enhance the accessibility, relevance, and effectiveness of education. By harnessing machine learning algorithms, educators can personalize learning experiences to cater to the diverse needs and learning styles of students, thereby bridging gaps in access and quality. Moreover, the integration of IKS principles with machine learning techniques holds immense potential in addressing long standing challenges in education, such as language diversity, cultural relevance, and socio-economic disparities. By leveraging the insights and wisdom embedded within IKS, educators can enrich machine learning algorithms with culturally sensitive and contextually relevant content, ensuring that educational interventions resonate deeply with diverse learners. This symbiotic relationship between IKS and machine learning not only fosters inclusivity but also promotes a deeper understanding and appreciation of diverse cultural perspectives within educational settings. As educators and researchers explore the possibilities of this synergy, they pave the way for a more equitable, culturally responsive, and impactful educational landscape.

Implications for Stakeholders:

The thematic exploration of bridging IKS and ML not only underscores the significance of collaborative efforts but also necessitates a paradigm shift in educational practices. For policymakers, the integration of IKS into educational curricula and policies presents an opportunity to promote cultural diversity, preserve indigenous knowledge, and foster a sense of cultural identity among learners. Moreover, policymakers are tasked with ensuring equitable access to technological resources and implementing supportive frameworks that facilitate the ethical and responsible use of machine learning in education.

Educators play a central role in this transformative journey, as they are called upon to embrace innovative pedagogical approaches that seamlessly integrate IKS principles with machine learning techniques. By leveraging the strengths of both domains, educators can create dynamic learning environments that cater to the individual needs and cultural backgrounds of diverse learners. Furthermore, educators are encouraged to undergo professional development initiatives aimed at enhancing their digital literacy skills and proficiency in utilizing machine learning tools

effectively in the classroom.

Technologists, including developers, engineers, and data scientists, are pivotal in developing AI-driven solutions that are not only technically robust but also culturally sensitive and contextually relevant. Collaborating with educators and cultural experts, technologists can ensure that machine learning algorithms are ethically designed, free from biases, and aligned with the values and aspirations of diverse communities. Additionally, technologists are responsible for designing user-friendly interfaces and platforms that promote inclusive access to educational resources and facilitate meaningful engagement among learners.

Other stakeholders in the education sector, such as researchers, community leaders, and parents, also have a role to play in advancing the integration of IKS and ML for inclusive education. Researchers can contribute to the body of knowledge by conducting interdisciplinary studies that explore the intersections between IKS, ML, and educational outcomes. Community leaders and parents can advocate for culturally relevant and inclusive educational practices within their communities and support initiatives aimed at bridging the digital divide and promoting equitable access to quality education for all learners.

Challenges and Solutions for Bridging Indian Knowledge Systems and Machine Learning

Language Diversity:

Bridging IKS with ML encounters the challenge of language diversity, as traditional wisdom is often documented in regional languages. The solution lies in developing natural language processing (NLP) models tailored to Indian languages, enabling machine learning algorithms to understand and process content in regional languages effectively. Additionally, investing in translation technologies can bridge the language gap, making Indian knowledge more accessible to a wider audience.

Cultural Relevance:

ML algorithms may struggle to capture the cultural nuances inherent in IKS, posing a challenge to their integration. Culturally aware ML algorithms can address this challenge by considering socio-cultural contexts, values, and practices embedded within Indian knowledge. Collaborative efforts between cultural experts, linguists, and ML researchers are essential to develop culturally sensitive models and datasets that preserve the contextual relevance of Indian knowledge systems.

Socio-Economic Disparities:

Socio-economic disparities in access to technology and education present a significant challenge to the adoption of machine learning-enhanced educational solutions in underserved communities. To overcome this challenge, inclusive policies and initiatives are needed to bridge the digital divide by providing access to technology and internet connectivity in remote and marginalized areas. Additionally, designing lightweight and mobile-friendly machine learning

applications can ensure accessibility for users with limited technological infrastructure.

Integration with Traditional Pedagogy:

Integrating ML technologies with traditional pedagogy rooted in IKS may face resistance or skepticism from educators and learners. Teacher training programs and professional development initiatives can play a crucial role in familiarizing educators with the principles of machine learning and its potential applications in enhancing traditional pedagogy. Promoting collaborative learning environments where educators and learners co-create educational content can facilitate the seamless integration of machine learning-based tools while preserving the essence of Indian knowledge systems.

Data Bias and Ethical Considerations:

ML algorithms trained on biased or incomplete datasets may perpetuate stereotypes or inaccuracies, particularly in sensitive domains within IKS. Addressing this challenge requires prioritizing the collection of diverse and representative datasets while upholding ethical guidelines throughout the data collection, annotation, and model development processes. Transparency and accountability mechanisms must be implemented to mitigate algorithmic biases and promote responsible use of machine learning technologies in education.

Resource Allocation and Infrastructure:

Limited resources and infrastructure constraints pose challenges to the scalability and sustainability of machine learning initiatives aimed at bridging Indian knowledge systems with education. Solutions involve advocating for increased investment in research and development initiatives focused on leveraging machine learning for educational purposes, particularly within the context of Indian knowledge systems. Partnerships between government agencies, academic institutions, non-profit organizations, and private sector entities can mobilize resources and establish robust infrastructure for deploying and maintaining machine learning-driven educational solutions.

Benefits of bridging Indian Knowledge Systems (IKS) with Machine Learning (ML) for Inclusive Education

Bridging Indian Knowledge Systems (IKS) with Machine Learning (ML) for inclusive education offers a multitude of benefits that extend beyond traditional educational approaches.

key advantages are as follows:

Cultural Relevance and Contextual Understanding: Integrating IKS with ML enables educators to provide culturally relevant and contextually meaningful learning experiences for students. By drawing on traditional wisdom embedded in IKS, educational content can resonate more deeply with learners, fostering a sense of cultural identity and pride while promoting a holistic understanding of diverse knowledge systems.

Personalized Learning: ML algorithms can analyze vast amounts of data on individual learner preferences, strengths, and challenges, allowing educators to tailor instruction to meet the unique needs of each student. By leveraging insights from IKS, personalized learning pathways can be designed that honor diverse learning styles and incorporate culturally relevant pedagogical approaches, thereby promoting greater engagement and academic success for all learners.

Enhanced Accessibility and Inclusivity: ML-powered educational tools can help bridge gaps in access to quality education by providing alternative modes of instruction that cater to diverse learning needs and abilities. By integrating IKS principles of inclusivity and equity, such tools can empower learners with disabilities, those from marginalized communities, and non-native language speakers to participate fully in the educational process, thus fostering a more inclusive learning environment.

Leveraging Indigenous Knowledge for Innovation: By combining the insights of IKS with the computational power of ML, educators and researchers can unlock new opportunities for innovation in education. From developing AI-driven educational content rooted in traditional knowledge to creating adaptive learning platforms that dynamically adjust to individual learner progress, the synergy between IKS and ML can drive transformative advancements in educational technology and pedagogy.

Community Engagement and Empowerment: Bridging IKS and ML for inclusive education can facilitate greater community engagement and collaboration in the learning process. By involving local communities, elders, and cultural experts in the design and implementation of educational initiatives, educators can foster a sense of ownership and empowerment among learners, strengthening connections between formal schooling and indigenous knowledge systems.

Socio-Economic Development: Investing in educational initiatives that bridge IKS with ML can contribute to socio-economic development by equipping learners with the skills and knowledge needed to thrive in a rapidly changing world. By empowering individuals to draw upon the rich heritage of IKS while harnessing the transformative potential of ML, inclusive education can serve as a catalyst for personal growth, community resilience, and sustainable development.

In conclusion, the integration of Indian Knowledge Systems with Machine Learning holds tremendous promise for fostering inclusive education that honors cultural diversity, promotes personalized learning, and empowers learners from all backgrounds to realize their full potential in a rapidly evolving global society.

Conclusion:

In summary, the integration of Indian Knowledge Systems (IKS) with Machine Learning (ML) presents a transformative opportunity to enhance inclusive education by combining traditional wisdom with modern technology. This thematic exploration highlights the profound potential of leveraging IKS's holistic and experiential approaches to education alongside ML's

data-driven insights and adaptive learning capabilities. The synergy between these two domains offers benefits such as cultural relevance, personalized learning, enhanced accessibility, and community engagement, contributing to a more inclusive, equitable, and sustainable educational landscape.

For stakeholders in the education sector, including policymakers, educators, technologists, and researchers, the integration of IKS and ML necessitates a collaborative approach that honors both traditional knowledge and technological innovation. By doing so, they can create a more dynamic and inclusive learning environment that fosters the growth and empowerment of learners from diverse backgrounds, ultimately paving the way for socio-economic development and the preservation of cultural heritage.

As this thematic exploration demonstrates, bridging IKS and ML for inclusive education requires a commitment to addressing challenges such as language diversity, cultural nuances, and socio-economic disparities. By investing in inclusive policies, developing culturally sensitive ML models, and promoting equitable access to technology, stakeholders can unlock the full potential of this integration and empower learners to thrive in an ever-evolving world.

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The Role of Indian Knowledge System (IKS) and the importance of human values in the evolution of Indian Architecture

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Abstract:

Indian architecture is a manifestation of cultural, societal, and philosophical principles deeply embedded within the Indian Knowledge System (IKS). This paper explores the integral role of IKS and the significance of human values in shaping the evolution of Indian architecture throughout history. Drawing upon a multidisciplinary approach, this research delves into the philosophical underpinnings of IKS, including concepts such as Vastu Shastra, which prescribe principles of design, space, and form. Furthermore, the study investigates how human values such as sustainability, community harmony, and spiritual well-being have been interwoven into the architectural fabric of India.

Through a comprehensive analysis of historical monuments, traditional dwellings, and contemporary architectural trends, this paper reveals the enduring influence of IKS on architectural design and planning. It examines the symbiotic relationship between architecture and societal values, highlighting how Indian architecture serves as a reflection of cultural ethos and societal aspirations. Moreover, the research explores the adaptive resilience of Indian architecture, which has seamlessly integrated modern innovations while preserving its cultural identity and human-centric values.

Additionally, the paper discusses the contemporary relevance of IKS in the context of sustainable architecture and urban planning. It underscores the need for a holistic approach that harmonizes technological advancements with traditional wisdom, fostering sustainable built environments that prioritize human well-being and environmental stewardship. By elucidating the intricate interplay between IKS, human values, and architectural evolution, this research contributes to a deeper understanding of the enduring legacy and relevance of Indian architecture in the modern world.

Keywords: Indian Knowledge System (IKS), Indian architecture, Vastu Shastra, human values, sustainability, cultural heritage, community harmony, architectural evolution.

The Integral Role of Indian Knowledge Systems (IKS) and Human Values in Shaping Indian Architecture

Throughout history, Indian architecture has been deeply intertwined with Indian Knowledge Systems (IKS) and human values, playing a vital role in shaping its evolution. IKS encompasses a rich tapestry of ancient wisdom, philosophies, sciences, and cultural practices that have been passed down through generations. Human values, deeply rooted in Indian ethos, have also played a significant role in influencing architectural design, construction techniques, and the overall built environment. Let's delve into the integral role of IKS and human values in shaping the evolution of Indian architecture.

1. **Philosophical Foundations:** Indian architecture is deeply influenced by the philosophical underpinnings of Hinduism, Buddhism, Jainism, and other indigenous belief systems. Concepts such as dharma (duty/righteousness), karma (action), and moksha (liberation) are reflected in architectural designs that aim to create harmony between individuals, society, and the cosmos. For example, the concept of vastu Shastra, an ancient architectural science, emphasizes the harmonious relationship between the built environment and natural elements, promoting balance, health, and prosperity.
2. **Spiritual Significance:** Indian architecture often serves as a physical manifestation of spiritual beliefs and practices. Temples, stupas, mosques, and other sacred structures are designed to facilitate rituals, meditation, and communion with the divine. The intricate carvings, symbolic motifs, and spatial layouts convey profound spiritual messages and invoke a sense of reverence among devotees.
3. **Cultural Diversity:** India's vast cultural diversity is reflected in its architecture, which varies significantly across regions, climates, and historical periods. From the majestic temples of Khajuraho and Hampi to the elegant Mughal monuments of Agra and Delhi, each architectural style embodies unique regional traditions, craftsmanship, and cultural expressions.
4. **Sustainable Practices:** Traditional Indian architecture incorporates sustainable principles that are in harmony with the environment. Techniques such as passive cooling, natural ventilation, and use of locally sourced materials not only ensure thermal comfort but also minimize ecological impact. The vernacular architecture of rural India, with its mud houses, thatched roofs, and courtyard layouts, exemplifies the ingenuity of indigenous building practices that have stood the test of time.
5. **Social Cohesion:** Indian architecture has historically fostered social cohesion by providing communal spaces for gatherings, festivals, and cultural activities. Public structures such as stepwells, community halls, and marketplaces serve as hubs of social interaction, facilitating exchange and solidarity among diverse communities.
6. **Continuity and Adaptation:** Despite the passage of time and cultural transformations,

Indian architecture has demonstrated remarkable continuity and adaptability. Ancient design principles and construction techniques continue to influence contemporary architectural practices, albeit in modern contexts. Architects and urban planners are increasingly integrating traditional wisdom with innovative solutions to address present-day challenges of urbanization, sustainability, and social equity.

Indian architecture embodies the synergy between IKS and human values, reflecting a profound connection between the physical, spiritual, and cultural dimensions of human existence. By honouring this heritage and embracing its timeless wisdom, we can ensure that Indian architecture continues to inspire and enrich our lives for generations to come.

Drawing upon a multidisciplinary approach, this research delves into the philosophical underpinnings of Indian Knowledge Systems (IKS), exploring how they have influenced architectural design and urban planning throughout history. Specifically, the study focuses on concepts such as Vastu Shastra, which prescribe principles of design, space, and form in traditional Indian architecture. Furthermore, it investigates how human values such as sustainability, community harmony, and spiritual well-being have been interwoven into the architectural fabric of India, shaping the built environment and fostering a symbiotic relationship between humans and their surroundings.

Indian architecture is imbued with a rich tapestry of philosophical wisdom, cultural traditions, and human values that have shaped its evolution over millennia. This research seeks to unravel the philosophical underpinnings of Indian Knowledge Systems (IKS) and their profound influence on architectural practices, with a particular focus on Vastu Shastra and its principles of design. Additionally, it explores the integration of human values such as sustainability, community harmony, and spiritual well-being into the architectural fabric of India, highlighting the interconnectedness between philosophy, culture, and the built environment.

Philosophical Underpinnings of IKS: Indian Knowledge Systems (IKS) encompass a diverse array of philosophical traditions, including Vedanta, Nyaya-Vaisheshika, Samkhya-Yoga, Buddhism, and Jainism. These philosophical systems provide a conceptual framework for understanding the nature of reality, consciousness, and the human condition. Vastu Shastra, rooted in these philosophical traditions, offers guidelines for architectural design, spatial planning, and environmental harmony, emphasizing the interplay between cosmic energies (Panchabhutas) and built structures.

Vastu Shastra: Principles of Design and Space: Vastu Shastra, an ancient Indian architectural science, prescribes principles of design, space, and form based on cosmic harmony and natural laws. Central to Vastu Shastra is the concept of Vastu Purusha Mandala, a sacred diagram that maps the energies of the cosmos onto the architectural layout. Key principles include orientation (Dik), proportion (Ayadi), placement (Yoni), and materials (Vastu). Through these principles,

Vastu Shastra seeks to create environments that promote physical well-being, psychological harmony, and spiritual upliftment.

Integration of Human Values into Architecture: In addition to Vastu Shastra, Indian architecture reflects a deep reverence for human values such as sustainability, community harmony, and spiritual well-being. Traditional architectural forms, such as temples, stupas, and stepwells, serve as embodiments of these values, fostering a sense of belonging, social cohesion, and environmental stewardship. Moreover, vernacular architecture in rural India exemplifies sustainable practices that are in harmony with the local ecosystem, utilizing natural materials, passive cooling techniques, and community-oriented design principles.

The philosophical underpinnings of Indian Knowledge Systems (IKS) and the integration of human values into architecture have played a pivotal role in shaping the built environment of India. Through concepts such as Vastu Shastra and practices rooted in sustainability, community harmony, and spiritual well-being, Indian architecture embodies a holistic approach to design that transcends mere aesthetics and functionality. This research underscores the enduring relevance of IKS in contemporary architectural discourse and emphasizes the importance of preserving and revitalizing traditional wisdom in the pursuit of sustainable, inclusive, and culturally resonant built environments.

Indian architecture stands as a testament to the enduring legacy of Indian Knowledge Systems (IKS), which have guided architectural design and urban planning practices for centuries. Drawing upon a rich tapestry of philosophical insights, cultural norms, and environmental wisdom, IKS have infused Indian architecture with a distinctive character that reflects the nation's deep spiritual, social, and cultural heritage. This paper aims to elucidate the enduring influence of IKS on architectural design and planning, shedding light on the timeless principles and innovative approaches that continue to inform contemporary architectural practices.

Vastu Shastra: Harmonizing Built Environments with Cosmic Forces: At the heart of Indian architectural tradition lies Vastu Shastra, an ancient science that delineates principles for harmonizing built environments with cosmic energies. Derived from Vedic texts and philosophical teachings, Vastu Shastra emphasizes the interplay between human habitation, natural elements, and celestial forces. Key principles such as orientation (Dik), proportion (Ayadi), and energy flow (Prana) are meticulously applied to architectural design, ensuring the creation of spaces that nurture physical well-being, psychological balance, and spiritual harmony.

Sacred Geometry and Symbolism: Another enduring aspect of IKS in architectural design is the use of sacred geometry and symbolism to imbue built structures with profound meaning and significance. Mandalas, yantras, and sacred symbols are intricately integrated into architectural elements, serving as focal points for meditation, worship, and spiritual contemplation. By aligning architectural forms with cosmic patterns and universal principles, Indian architects create spaces

that resonate with a sense of transcendent beauty and sacredness.

Sustainable Living Principles: In addition to spiritual and metaphysical considerations, IKS also emphasize sustainable living principles that are deeply rooted in ecological balance and environmental stewardship. Traditional architectural forms, such as courtyard houses, stepwells, and earthen structures, are designed to optimize natural resources, mitigate climatic extremes, and foster a symbiotic relationship with the natural world. These time-tested techniques offer valuable insights for contemporary architects seeking to address the challenges of climate change, resource depletion, and urban sprawl.

The enduring influence of Indian Knowledge Systems on architectural design and planning underscores the holistic approach to build environments that is intrinsic to Indian culture. From the timeless wisdom of Vastu Shastra to the innovative use of sacred geometry and sustainable living principles, IKS continue to inspire architects and urban planners to create spaces that transcend mere functionality and aesthetics. By embracing the timeless principles of IKS and integrating them into contemporary architectural discourse, India can forge a path towards sustainable, resilient, and culturally resonant built environments that enrich the lives of present and future generations.

Architecture, as an expression of human creativity and ingenuity, is intrinsically intertwined with the values, beliefs, and aspirations of society. In India, where cultural diversity, spiritual heritage, and social cohesion converge, architecture serves as a powerful medium for articulating the collective identity and ethos of its people. This paper seeks to elucidate the symbiotic relationship between Indian architecture and societal values, shedding light on how architectural forms, spatial arrangements, and symbolic elements encode the cultural narrative and societal aspirations of the nation.

Cultural Ethos Embodied in Architectural Forms: Indian architecture encompasses a diverse array of styles, ranging from ancient temples and palaces to colonial-era monuments and contemporary skyscrapers. Each architectural form bears the imprint of cultural influences, historical contexts, and regional traditions, reflecting the multifaceted tapestry of Indian society. For example, the intricately carved temples of Khajuraho and Hampi exemplify the artistic excellence and spiritual devotion of ancient Indian civilization, while the colonial-era buildings in cities like Mumbai and Kolkata testify to the legacy of British colonial rule and modernization efforts.

Societal Aspirations Embedded in Spatial Configurations: Beyond mere aesthetics, Indian architecture is characterized by thoughtful spatial configurations that cater to the needs, rituals, and social dynamics of communities. Traditional courtyard houses, for instance, facilitate intergenerational interaction, privacy, and communal living, embodying the values of familial bonds and social harmony. Similarly, sacred sites such as temples, mosques, and gurudwaras are

designed to foster spiritual contemplation, collective worship, and cultural exchange, serving as nodes of social cohesion and spiritual upliftment.

Symbolic Motifs Communicating Collective Consciousness: Symbolism plays a crucial role in Indian architecture, with architectural elements, decorative motifs, and sacred symbols serving as carriers of cultural meaning and collective consciousness. For instance, the lotus motif, representing purity and enlightenment, adorns the domes of many Indian temples and monuments, symbolizing the spiritual aspirations of the nation. Similarly, the use of sacred geometry, mandalas, and yantras imbues architectural spaces with cosmic harmony and metaphysical significance, resonating with the spiritual sensibilities of the people.

Indian architecture stands as a living testament to the symbiotic relationship between architecture and societal values, wherein the built environment serves as a mirror reflecting the cultural ethos, societal aspirations, and collective consciousness of the nation. By understanding and preserving this intricate relationship, India can continue to nurture its architectural heritage as a source of inspiration, identity, and cultural pride for generations to come.

The research delves into the adaptive resilience of Indian architecture, illuminating its remarkable ability to evolve and embrace modern innovations while steadfastly preserving its cultural identity and human-centric values. Through a nuanced examination of architectural practices spanning historical landmarks, contemporary structures, and vernacular dwellings, the study unveils a narrative of continuity and transformation. It illustrates how Indian architecture has seamlessly integrated modern technologies, materials, and design principles without sacrificing its intrinsic cultural ethos and humanistic values. This adaptive resilience is evident in the fusion of traditional craftsmanship with contemporary construction techniques, the incorporation of sustainable practices into urban planning, and the reinterpretation of sacred spaces to meet the needs of a rapidly changing society. By embracing innovation while honoring tradition, Indian architecture serves as a beacon of resilience, embodying the spirit of cultural preservation and creative adaptation in the face of modern challenges.

The contemporary relevance of Indian Knowledge Systems (IKS) in the context of sustainable architecture and urban planning is profound, offering valuable insights and principles that resonate with the global imperative for environmentally responsible design and development. IKS, rooted in ancient wisdom, philosophical traditions, and holistic approaches to living, provide a comprehensive framework for creating built environments that are not only ecologically sustainable but also socially inclusive and culturally resonant.

One key aspect of IKS that holds contemporary relevance is its emphasis on harmony with nature. Traditional Indian architecture, guided by principles such as Vastu Shastra, incorporates design elements and spatial arrangements that optimize natural resources, minimize environmental impact, and enhance human well-being. Concepts such as orientation, passive solar design, and use

of locally sourced materials align with principles of sustainable architecture, promoting energy efficiency, thermal comfort, and ecological resilience.

Furthermore, IKS underscore the importance of community participation and social cohesion in urban planning processes. Traditional Indian settlements, characterized by compact layouts, pedestrian-friendly streets, and shared public spaces, foster a sense of belonging, social interaction, and collective responsibility. By incorporating principles of community-based planning, participatory decision-making, and inclusive design, contemporary urban planners can create cities that are more resilient, equitable, and liveable for all inhabitants.

Moreover, IKS offer valuable lessons in resource management and resilience in the face of environmental challenges. Traditional water harvesting techniques, such as rainwater harvesting, stepwells, and tank systems, demonstrate innovative solutions for water scarcity and drought mitigation. Similarly, vernacular architecture in different regions of India showcases adaptive strategies for climate resilience, including natural ventilation, passive cooling, and earthquake-resistant construction techniques.

In addition to their practical applications, IKS also promote a holistic understanding of sustainability that encompasses spiritual, cultural, and social dimensions. Concepts such as "Sarvodaya" (the welfare of all) and "Vasudhaiva Kutumbakam" (the world is one family) underscore the interconnectedness of human beings with each other and with the natural world. By embracing these values and integrating them into contemporary architectural and urban planning practices, we can create environments that foster well-being, social justice, and environmental stewardship for present and future generations.

In the exploration of Indian Architecture, Brown's seminal work, "Indian Architecture: Buddhist and Hindu Period," offers profound insights into the intersection of the Indian Knowledge System (IKS) and the evolution of architectural marvels. Rooted in the rich tapestry of Indian history and culture, Brown's narrative delves deep into the significance of human values in shaping architectural paradigms.

Within the pages of this meticulously researched volume, Brown elucidates the intricate relationship between IKS and architectural developments during the Buddhist and Hindu periods. Central to this discourse is the acknowledgment of IKS as a holistic repository of wisdom encompassing philosophical tenets, scientific principles, and moral precepts.

Brown meticulously illustrates how Indian architecture, imbued with the ethos of IKS, transcended mere structural design to embody spiritual and philosophical ideologies. The sanctity of space, harmony with nature, and the pursuit of aesthetic perfection are depicted as manifestations of profound human values deeply ingrained in Indian architectural ethos.

Moreover, Brown's narrative underscores the symbiotic relationship between IKS and architectural innovation. The evolution of architectural styles, from the magnificent stupas of

Buddhism to the intricate temple complexes of Hinduism, reflects not only technological prowess but also a profound reverence for life and the cosmos.

By contextualizing architectural marvels within the framework of IKS, Brown underscores the enduring legacy of Indian civilization in fostering a harmonious coexistence between human values and architectural expression. This evocative exploration serves as a testament to the integral role of IKS in shaping not only physical edifices but also the collective consciousness of a civilization.

"Indian Architecture: Buddhist and Hindu Period" stands as a seminal work that illuminates the profound symbiosis between Indian Knowledge System and architectural evolution, underscoring the timeless relevance of human values in the creation of architectural masterpieces.

In Chakradeo Ujjwala insightful article, "Soft Power of Indian Architecture," published in the prestigious Journal of Indian Institute of Architecture in August 2021, the interplay between the Indian Knowledge System (IKS) and the evolution of Indian Architecture is vividly portrayed. Through a nuanced exploration of architectural heritage, Chakradeo underscores the pivotal role of IKS in imbuing Indian architecture with a unique soft power. By harnessing principles rooted in human values, such as spirituality, community, and sustainability, Indian architecture emerges not just as physical structures but as embodiments of cultural ethos and societal aspirations. Chakradeo's scholarly inquiry illuminates how the synthesis of IKS and human values has facilitated the transmission of India's cultural legacy across borders, thereby enhancing its soft power on the global stage. Through meticulous analysis, the article highlights the enduring relevance of IKS and human values in shaping the narrative of Indian architecture as a potent force of cultural diplomacy and influence.

In Mahulikar G.'s groundbreaking work, "Nurturing Human Values: The IKS Perspective," published by Oxford University Press in 2023, the intricate relationship between the Indian Knowledge System (IKS) and the evolution of Indian Architecture is explored with remarkable depth. Through a lens focused on nurturing human values, Mahulikar elucidates how IKS serves as the foundational bedrock upon which Indian architecture flourishes. By embracing principles deeply rooted in spirituality, community, and interconnectedness with nature, Indian architecture transcends mere structural design to become a manifestation of cultural ethos and societal aspirations. Mahulikar's scholarly inquiry underscores how the integration of IKS and human values not only shapes architectural aesthetics but also fosters a profound sense of harmony between individuals and their built environment. Through meticulous analysis, the work illuminates the enduring legacy of IKS in nurturing human values, thereby enriching the narrative of Indian architecture as a vibrant expression of cultural identity and collective wisdom.

In Sharma's seminal research, "Vastu Shastra and Temple Architecture: Study of Human Values in Hindu Temple," published in the Journal of South Asian Architecture in 2012, the

profound influence of Indian Knowledge System (IKS) on the evolution of architecture is meticulously examined. Through an in-depth analysis of Vastu Shastra, Sharma unveils how ancient architectural principles embedded in IKS serve as guiding lights in the construction of Hindu temples. Central to this discourse is the emphasis on human values such as devotion, harmony, and spiritual well-being, which are intricately woven into the fabric of temple architecture. Sharma's study elucidates how adherence to IKS principles not only dictates the spatial layout and design of temples but also fosters a deeper connection between individuals, communities, and divine realms. By unravelling the symbiotic relationship between IKS and human values in temple architecture, Sharma's work enriches our understanding of Indian architectural heritage as a testament to cultural continuity and spiritual expression.

In conclusion, the contemporary relevance of Indian Knowledge Systems in sustainable architecture and urban planning lies in their ability to offer holistic solutions that address the complex challenges of the modern world. By drawing inspiration from the timeless wisdom of IKS and adapting it to the needs of the present, we can build more resilient, equitable, and harmonious built environments that honor the past while shaping a sustainable future.

In conclusion, the role of Indian Knowledge Systems (IKS) and the importance of human values in the evolution of Indian architecture emerge as fundamental pillars that have shaped the rich tapestry of architectural heritage in India. Throughout history, IKS, rooted in ancient wisdom and philosophical traditions, have provided a conceptual framework for understanding the relationship between the built environment, society, and the cosmos. Concepts such as Vastu Shastra, Samkhya-Yoga, and Jain philosophy have guided architectural design, spatial planning, and construction practices, promoting principles of harmony, sustainability, and spiritual well-being.

Moreover, human values such as compassion, empathy, and social equity have infused Indian architecture with a sense of purpose and meaning, fostering inclusive and humane built environments. From the majestic temples of ancient India to the vernacular dwellings of rural communities, architecture has served as a reflection of cultural ethos, societal aspirations, and collective consciousness. The integration of human values into architectural design has facilitated social cohesion, community harmony, and environmental stewardship, nurturing a symbiotic relationship between humans and their surroundings.

As India continues to navigate the complexities of rapid urbanization, globalization, and environmental degradation, the enduring legacy of IKS and human values in Indian architecture offers valuable lessons and insights for addressing contemporary challenges. By drawing inspiration from traditional wisdom, fostering innovation, and embracing sustainable practices, India can chart a path towards architecture that not only celebrates its cultural heritage but also promotes resilience, inclusivity, and holistic well-being for all its inhabitants. In this way, Indian

architecture can continue to serve as a beacon of creativity, cultural pride, and social progress in the global landscape.

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Promoting Inclusion through the Indian Knowledge System.**Dr. Bhagirath S. Pande***Assistant Professor,**SSR College of Education, Saily, Silvassa,**U.T. of Dadra and Nagar Haveli.***Dr. Chetan Chavan***Associate Professor,**GES's College of Education & Research,**Parel (East) Mumbai.*

Abstract:

This paper delves into the nature and features of the Indian knowledge system and true perspectives on Indian education. It explores various facets of Indian education and its impact on the holistic development of individuals. Additionally, it examines the interplay between overall human development and the Indian knowledge system. The paper also analyzes inclusion and its significance in the context of Indian education, exploring its connection with various modes of inclusion. Furthermore, it discusses the implications of NEP-2020 on inclusive education across different levels and stages

Key words: Indian knowledge system, Holistic development, Inclusion, NEP-2020

Introduction:

As India has a great tradition of knowledge and education from ancient times, it is reflected from time to time in the Indian education system. A proper combination of theoretical and practical application of education in human life as well as its actual use in getting earning sources for life long journey is the main feature of Indian knowledge system but unfortunately with time of transaction of power, culture, policies and planning as well as the over effect of western culture its negligence and ignorance in contemporary education policies and planning, our generation to generation affects its bad impacts. These things cause contemporary social & cultural issues like unemployment, valueless education, social discrimination, exclusion, unawareness about life goals etc. which prevent children from holistic development and being a healthy society member as well as a good citizen of India. Through the inclusion of various components and aspects of the Indian knowledge system it is possible that the ultimate goal of holistic development can be achievable and also it will be helpful to resolve present societal issues such as unemployment, unskilled human resources, inclusion in education and overall all round development of children. In same direction NEP-2020 is the very effective tools for transforming Indian education system in to a fruitful productive way of directing new generation towards fulfilling the various goals and proper inclusion of excluded components of our society, which may be due to physical, mental difficulties or cast, creed, customs, socio-economic status of any type of disparities among the child.

Indian Knowledge System:

The Indian Knowledge System places a premium on practical application, emphasizing hands-on learning and honing problem-solving skills. By prioritizing the real-world application of knowledge, students are equipped with theoretical understanding and gain invaluable skills in adaptability and innovation. It includes dissemination and imparting of knowledge of various dimensions of learning in the spheres of Universal human values, Vedic Maths, Yoga, Ayurveda, Sanskrit, Indian Languages, sacrosanct religious regions located in the Indian subcontinent, Archaeological sites and monuments, Heritage of India, Indian ..

Bhartiya Gyan Parampara exists in Indian languages and not in languages like English. Which means several ways in which knowledge exists in India i.e., textual, oral (maukhik), kulachar paddhati (learning through everyday activity) since ancient times. The gaps in translation from Indian languages to English by quoting examples like there is no word for 'punya', 'prasad', 'teertha' etc in English depicting the quintessential need of Indian language understanding. IKS as a living body, which cannot exist lifelessly.

It stressed upon developing parameters of the system (vyavastha) from an Indian drishtikon (Vision). The ashram vyavastha (System) and how everyone can incorporate dharma and vyavastha in their lives with an essence of experience and experimentation. A section may be incorporated on the context in the textbooks as well. It also had components of tantra yukti (research methodology), gyan anveshan paddhati, and so on. We can assume how these tantra yukti (research methodology) were used in ayurveda, shastra grantha, etc. for seeking answers for the laid questions. The basic premise of his discussion boiled down to the practices that can be incorporated into the current learning system.

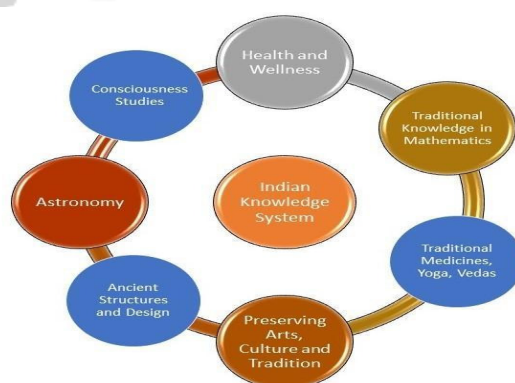


Figure 1: Aspects of Indian Knowledge System

Integration of IKS with contemporary knowledge systems and rootedness in India. It is also said that IKS is a plural idea as it is not just one but a system of many. It brought forth two methods of integration in the system i. e through integration of IKS in other disciplines and second identifying fresh scopes, locating the relevance of IKS in current problems & challenges. Prof. Danino mentioned the great encyclopedia of IKS, Prof. Kapil Kapoor, and his contribution in the

area of IKS. The challenges in bringing back IKS like maintaining the genuineness, quality of material and its relevance in the present times..

To initiatives for encouraging fundamental and interdisciplinary research in IKS by offering research funding and initiatives. The internships and experiential learning opportunities in the IKS division will provide practical exposure and inspire undergraduate students to become research enthusiasts. He laid stress upon the importance of multiple perspectives and diverse modalities to cultivate confident and well-rounded citizens of Bharat. The IKS is potentially relevant to address future challenges.

Inclusion:

The concept of inclusion is based on the idea that all persons are created equal and should be treated with respect and value as a matter of fundamental human rights. There is an unending set of processes that allows children and adults with disabilities to take part completely in all communal activities available to persons without disabilities. On October 6, 1997, in the Geneva Center for Human Rights, UNESCO presented before the UN Committee on the Rights of the Child. The practice of teaching students with Special Educational Needs alongside their classmates in conventional schools is known as inclusion, according to the International Encyclopedia of Inclusive Education.

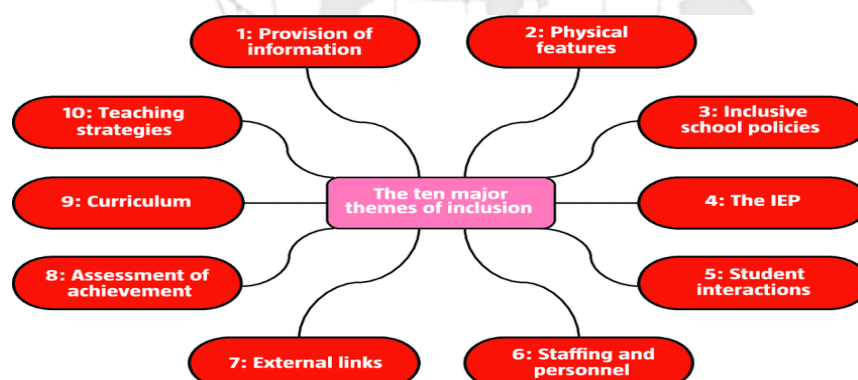


Figure 2: Major Themes of Inclusion

Inclusive education refers to the practice that identifies the responsibility of removing obstacles which limit and prohibit involvement and requirement to transform the policy, society, and act upon normal schools to enclose the requirements of all students, as well as those with disabilities (UN, 2013). O'Raw (2010) suggested that it is the method to eliminate obstacles from and within education through the placement and stipulation of suitable composition plus preparations to ensure every pupil attains the highest advantage of her or his presence.

To sum up, inclusive education means the provision of services to the students with special needs in their neighborhood schools with necessary support services and supplementary aids for both students and teachers. It means meeting the requirements of children with special needs for free and quality public education in the least restrictive and most effective environment.

NEP-2020:

The National Education Policy 2020 (NEP 2020), which was approved by the Union Cabinet of India on 29 July 2020, outlines the vision of India's new education system. The new policy replaces the previous National Policy on Education, 1986. The policy is a comprehensive framework for elementary education to higher education as well as vocational training in both rural and urban India. The policy aims to transform India's education system by 2040.

NEP 2020 emphasizes upon inculcating Inclusive educational structure and inclusive educational culture in our school education system through infrastructural support and by making corresponding changes in curriculum incorporating materials on human values such as respect for all persons, empathy, tolerance, human .

Recognizing their special needs, the NEP 2020 recommends a series of policies and schemes such as targeted scholarships, conditional cash transfers to incentivize parents to send their children to school, providing bicycles for transport that have worked in the past to increase enrolment, to create more representation.

Salient features of NEP-2020:

- i. Public and private higher education institutions will be governed by the same set of norms for regulation, accreditation and academic standards.
- ii. Affiliation of colleges is to be phased out in 15 years and a stage-wise mechanism is to be established for granting graded autonomy to colleges.

Over a period of time, it is envisaged that every college would develop into either an Autonomous degree granting College or a constituent college of a university.

- iii. New Policy aims for universalization of education from pre-school to secondary level with 100 % Gross Enrolment Ratio (GER) in school education by 2030.
- iv. NEP 2020 will bring 2 cr. out of school children back into the mainstream through the open schooling system.
- v. The current 10+2 system to be replaced by a new 5+3+3+4 curricular structure corresponding to ages 3-8, 8-11, 11-14, and 14-18 years respectively.
- vi. By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree.
- vii. Gross Enrolment Ratio in higher education to be raised to 50 % by 2035; 3.5 Crore seats to be added in higher education.
- viii. Academic Bank of Credits to be established to facilitate Transfer of Credits
- ix. Multidisciplinary Education and Research Universities (MERUs), at par with IITs, IIMs, to be set up as models of best multidisciplinary education of global standards in the country.
- x. The National Research Foundation will be created as an apex body for fostering a strong research culture and building research capacity across higher education.

The NEP, 2020 recognizes this rich heritage of ancient and eternal Indian knowledge and thought as a guiding principle. The Indian Knowledge Systems comprise of Jnan, Vignan, and Jeevan Darshan that have evolved out of experience, observation, experimentation, and rigorous analysis. This tradition of validating and putting into practice has impacted our education, arts, administration, law, justice, health, manufacturing, and commerce. This has influenced classical and other languages of Bharat, that were transmitted through textual, oral, and artistic traditions. “Knowledge of India” in this sense includes knowledge from ancient India and its successes and challenges, and a sense of India’s future aspirations specific to education, health, environment and indeed all aspects of life.

Holistic development:

Holistic development is a complete educational strategy that aims to develop physical, intellectual, emotional, cognitive, and social abilities in kids. It seeks to enhance these skills in the early stage of life, which will prepare them to meet the challenges and difficulties of daily life in the future.

Holistic approaches to child development and learning recognize the connectedness of mind, body and spirit. When early learning and childcare workers take a holistic approach, they pay attention to children's physical, personal, social, emotional and spiritual wellbeing, as well as cognitive aspects of learning.

With holistic learning, the spirit of the child is developed by exposure and focus on important values. As examples, they may learn how to share with others, wait for their turn or offer help to another child.

Aspects of Holistic Development:

While we typically think of health in relation to our physical health, a holistic medicine approach encourages us to be mindful of seven interconnected aspects that can affect our wellbeing: physical, mental, social, emotional, intellectual, vocational, and environmental health.



Figure 3: Aspects of Holistic Development:

The principle of holistic development refers to the need to view the different aspects of children's learning and development (cognitive, social, emotional, physical, cultural and spiritual)

as an integrated and interconnected whole.

Education with a holistic perspective is concerned with the development of every person's intellectual, emotional, social, physical, artistic, creative and spiritual potentials. It seeks to engage students in the teaching/learning process and encourages personal and collective responsibility.

The Processes & Periods of Holistic Development:

Holistic development encompasses three processes: biological, cognitive and social-emotional.

The **biological process** involves bodily changes, like brain development, physical growth and weight increases. It's how small people physically transform from children to adults.

The **cognitive process** includes thinking, intelligence and language skills. It's how the youngest members of society intellectually graduate from simple to complex ways of thinking.

The **social-emotional process** comprises personality, emotions and interpersonal connections. It's how individuals' behaviors progress from childish to mature.

The three processes influence and impact each other and none are mutually exclusive. For example, a child responds to their parent's loving touch by feeling the sensation (biological), understanding the intention (cognitive) and reacting positively (social-emotional).

Conclusion:

In this way, the various aspects of the Indian knowledge system will be utilized through NEP-2020 for the proper inclusion of various stakeholders in mainstream education for holistic development.

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Harmonizing Indian Knowledge Systems with Artificial Intelligence: Shaping a Unified Paradigm

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Abstract:

The integration of Indian Knowledge Systems (IKS) with Artificial Intelligence (AI) presents a transformative initiative spearheaded by the Ministry of Education, India. This endeavour seeks to combine ancient wisdom with modern technology, fostering a holistic paradigm that addresses contemporary challenges in a comprehensive manner. Rooted in centuries of philosophical, scientific, and spiritual exploration, IKS offers profound insights into the interconnectedness of all phenomena, contrasting with the more reductionist approach of Western scientific traditions. Central to IKS are principles such as holistic thinking, spirituality, and indigenous science, which provide a rich tapestry of knowledge for AI integration.

In parallel, AI has emerged as a powerful tool with the potential to revolutionize various domains, from healthcare and finance to transportation and education. However, the predominant paradigms of AI often lack a holistic understanding of human consciousness, ethical decision-making, and sustainable development. The integration of IKS with AI aims to bridge this gap by incorporating philosophical concepts into AI decision-making frameworks, leveraging traditional ecological knowledge for sustainable resource management, and enhancing AI system robustness through contemplative practices.

This initiative recognizes the importance of supportive policy and regulatory frameworks in facilitating the integration of IKS with AI. It emphasizes the need for updating educational curricula, providing cross-disciplinary training opportunities, and fostering interdisciplinary collaboration to nurture a new generation of researchers and practitioners who can bridge the gap between ancient knowledge and cutting-edge technology. This paper discusses about the holistic paradigm that integrates diverse perspectives and knowledge systems, to create innovative solutions that promote sustainable development, social equity, and environmental stewardship. Ultimately, it seeks to realize a vision of a more harmonious and resilient future for generations to come under the auspices of the Ministry of Education, India.

Keywords: Indian Knowledge Systems (IKS), Artificial Intelligence (AI), holistic thinking, social equity, Indigenous Science and Technology

1. Introduction: The Indian subcontinent has been the cradle of diverse knowledge systems that have evolved over millennia, encompassing philosophy, science, spirituality, and technology. These knowledge systems, collectively referred to as Indian Knowledge Systems (IKS), are deeply rooted in the cultural and spiritual fabric of the region. Meanwhile, Artificial Intelligence (AI) has emerged as a transformative technology with the potential to revolutionize various domains, from healthcare and finance to transportation and education. However, the predominant paradigms of AI often lack a holistic understanding of human consciousness, ethical decision-making, and sustainable development. This paper explores the integration of IKS with AI to develop a more holistic paradigm that addresses contemporary challenges in a comprehensive manner.

2. Foundational Principles of Indian Knowledge Systems:

2.1. Holistic Thinking:

Holistic thinking, as embedded in Indian Knowledge Systems (IKS), offers a profound perspective on the interconnectedness and interdependence of all aspects of existence. In IKS, holistic thinking goes beyond reductionist approaches that compartmentalize knowledge and phenomena. Instead, it embraces a worldview where everything is perceived as interconnected and part of a larger whole. This holistic perspective is deeply ingrained in Indian philosophy, where concepts like 'Brahman' (the ultimate reality) and 'Dharma' (the underlying order of the universe) underscore the interconnectedness of all beings and phenomena.

In the context of Artificial Intelligence (AI), holistic thinking challenges the conventional paradigm that often focuses on narrow problem-solving and optimization within specific domains. Instead, integrating holistic thinking from IKS into AI involves considering the broader implications and interconnectedness of AI applications with human societies, ecosystems, and global systems. It encourages AI developers and researchers to view AI systems as integral parts of complex socio-ecological systems, rather than isolated entities with predefined objectives.

For example, in AI decision-making frameworks, holistic thinking inspired by IKS can lead to the incorporation of ethical and moral considerations beyond immediate task performance. AI algorithms can be designed to consider the broader societal and environmental impacts of their decisions, reflecting the interconnectedness of human actions with the natural world. This may involve integrating principles of 'Dharma' and 'Karma' into AI systems, where decisions are made not only based on immediate utility but also on their alignment with broader ethical principles and the well-being of all stakeholders.

Holistic thinking in AI development involves recognizing the limitations of purely data-driven approaches and acknowledging the importance of subjective, qualitative, and experiential aspects of human existence. While AI excels in processing vast amounts of quantitative data, it may struggle with understanding subjective experiences, emotions, and cultural nuances. Integrating holistic thinking from IKS into AI can lead to the development of more contextually

aware and empathetic AI systems that consider the diverse perspectives and values of human societies.

Incorporating holistic thinking from IKS into AI represents a shift towards more inclusive, ethical, and sustainable AI development practices. By embracing the interconnectedness of all phenomena and considering the broader implications of AI applications, this approach aims to create AI systems that contribute positively to the well-being of individuals, societies, and the planet.

2.2. Spirituality and Consciousness: IKS place a strong emphasis on spirituality and the exploration of human consciousness. Traditions such as Yoga, Vedanta, and Tantra delve into the depths of consciousness, offering insights into the nature of reality beyond material existence.

Spirituality in Indian Knowledge Systems (IKS):

In IKS, spirituality encompasses a broad spectrum of beliefs, practices, and experiences that seek to understand the nature of existence, consciousness, and the divine. Concepts such as Atman (the inner self), Brahman (the ultimate reality), and Maya (illusion) form the foundation of spiritual inquiry in Indian philosophy. Spiritual practices like Yoga, meditation, and contemplation are integral to many Indian spiritual traditions, aiming to cultivate self-awareness, inner peace, and connection with the divine.

Consciousness in Indian Knowledge Systems (IKS):

Consciousness holds a central place in IKS, where it is regarded as fundamental to understanding reality. Indian philosophies, such as Vedanta and Samkhya, propose different theories of consciousness, ranging from the individual self (Atman) to the universal consciousness (Brahman). These philosophies explore the nature of consciousness, its relationship to the material world, and its role in human experience.

Integration of Spirituality and Consciousness with AI:

In recent years, there has been growing interest in integrating concepts of spirituality and consciousness into AI research and development. This involves exploring how AI systems can emulate or engage with aspects of spirituality and consciousness to enhance their capabilities and align with human values.

Integrating Spiritual Practices into AI:

Researchers have investigated incorporating spiritual practices like meditation and mindfulness into AI systems, aiming to enhance their performance and adaptability. For instance, AI algorithms inspired by meditation techniques seek to augment self-learning and adaptation by simulating processes of introspection and self-awareness."

Understanding Human Consciousness:

AI research also seeks to deepen our understanding of human consciousness by simulating cognitive processes and exploring the emergence of consciousness in artificial systems. By

modelling aspects of human consciousness, AI systems may gain insights into subjective experiences, emotions, and states of awareness, contributing to the development of more empathetic and human-like AI.

Ethical Considerations:

The integration of spirituality and consciousness into AI raises ethical considerations regarding autonomy, privacy, and the nature of consciousness itself. As AI systems become more sophisticated, questions arise about the ethical implications of imbuing machines with spiritual or conscious attributes, as well as the potential impact on human-machine interactions and societal norms.

Exploring spirituality and consciousness within the context of IKS and AI offers a rich tapestry of philosophical inquiry and technological innovation. By integrating insights from ancient wisdom with modern AI techniques, we can deepen our understanding of human consciousness, enhance the capabilities of AI systems, and foster a more harmonious relationship between humans and machines. However, careful consideration of ethical implications and societal impacts is essential to ensure that these developments align with human values and aspirations.

2.3. Indigenous Science and Technology: India has a rich history of indigenous science and technology, with contributions ranging from mathematics and astronomy to medicine and engineering. The development of the decimal number system, zero, and Ayurveda exemplifies the sophisticated knowledge systems that have flourished in the region.

Integration of Indigenous Science and Technology with AI:

The integration of IST with AI presents opportunities to leverage traditional knowledge and practices for developing innovative solutions to contemporary challenges. By incorporating insights from IST into AI systems, we can enhance their adaptability, sustainability, and relevance to local contexts. Here are some ways in which IST can inform the development of AI:

Sustainable Resource Management:

Indigenous communities have developed sophisticated systems for managing natural resources, such as water, forests, and agricultural land, in harmony with the environment. AI technologies can be used to analyse and optimize these traditional practices, enhancing their efficiency and effectiveness while minimizing ecological impact.

Herbal Medicine and Healthcare:

Ayurveda and other traditional medicine systems offer holistic approaches to healthcare, focusing on the balance of mind, body, and spirit. AI can assist in analysing vast amounts of medical data, identifying patterns, and providing personalized treatment recommendations based on traditional healing practices.

Community-based Decision Making:

Indigenous societies often practice collective decision-making processes that prioritize

community well-being and consensus-building. AI algorithms inspired by these social dynamics can facilitate participatory decision-making in diverse contexts, from local governance to environmental conservation.

Cultural Preservation:

AI technologies, such as natural language processing and computer vision, can be used to preserve and disseminate indigenous languages, cultural practices, and traditional knowledge systems. By digitizing and archiving cultural artefacts, AI can contribute to the preservation of indigenous heritage for future generations.

Ethical Considerations and Challenges:

The integration of IST with AI raises ethical considerations regarding intellectual property rights, cultural appropriation, and the protection of indigenous rights and sovereignty. It is essential to engage indigenous communities as partners in AI development processes, ensuring that their knowledge and perspectives are respected, valued, and ethically utilized. Moreover, efforts should be made to address power imbalances, promote equitable collaborations, and foster mutual learning and reciprocity between indigenous knowledge holders and AI researchers.

The integration of Indigenous Science and Technology with AI offers promising opportunities to develop culturally sensitive, environmentally sustainable, and socially inclusive technologies. By embracing traditional knowledge systems and indigenous perspectives, we can create AI solutions that honour diverse ways of knowing and contribute to the well-being of both human societies and the natural world.

3. Synergies between Indian Knowledge Systems and Artificial Intelligence:

3.1. Incorporating Philosophical Concepts into AI:

Concepts such as 'Dharma' and 'Karma' can be integrated into AI decision-making frameworks to promote ethical and sustainable outcomes. By aligning AI algorithms with philosophical principles, we can develop systems that prioritize the well-being of individuals and society.

3.2. Leveraging Traditional Ecological Knowledge:

Indigenous communities in India have developed intricate systems of sustainable resource management over centuries. Integrating this traditional ecological knowledge with AI can lead to more effective and environmentally-friendly solutions for challenges like agriculture, water conservation, and forest management.

3.3. Enhancing AI System Robustness through Contemplative Practices:

Practices like Yoga, Meditation, and Pranayama offer techniques for enhancing mental clarity, focus, and emotional intelligence. By incorporating these contemplative practices into AI development, we can create systems that are more resilient, reliable, and aligned with human values.

4. Practical Implications and Roadmap for Integration:**4.1. Policy and Regulatory Frameworks:**

Developing supportive policy and regulatory frameworks is essential for facilitating the integration of IKS with AI. This includes establishing guidelines for ethical AI development, promoting interdisciplinary collaboration, and protecting indigenous knowledge and cultural heritage.

4.2. Education and Capacity Building:

Fostering a new generation of researchers and practitioners who can bridge the gap between IKS and AI is crucial. This involves updating educational curricula, providing cross-disciplinary training opportunities, and creating platforms for knowledge exchange and collaboration.

4.3. Interdisciplinary Collaboration and Co-creation:

Realizing the full potential of the integration between IKS and AI requires collaboration across diverse disciplines, including philosophy, science, technology, and social sciences. By fostering a collaborative research and development ecosystem, we can co-create innovative solutions that address pressing global challenges.

5. Conclusion:

The integration of Indian knowledge systems with Artificial Intelligence holds immense promise for addressing the complex challenges facing humanity in the 21st century. By combining ancient wisdom with cutting-edge technology, we can develop holistic solutions that promote sustainable development, social equity, and environmental stewardship. However, realizing this vision requires concerted efforts in policy formulation, education, and interdisciplinary collaboration. By embracing a holistic paradigm that integrates diverse perspectives and knowledge systems, we can create a more harmonious and resilient future for generations to come.

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**The study of awareness of Indian Knowledge System (IKS) among
female student – teachers**

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Abstract:

This study investigates the awareness of Indian Knowledge Systems (IKS) among Bachelor of Education (B.Ed.) students, focusing on 31 female teachers from P.V.D.T. College of Education for women in Mumbai. Utilizing a survey method, the research assesses respondents' understanding of various aspects of Indian knowledge systems. The study aims to provide insights into the current state of awareness of IKS among B.Ed. students and its implications for teacher education. The researcher used self-made questionnaire for collecting data. The data suggest varying levels of awareness and understanding of different aspects of Indian knowledge systems among the respondents. While some questions received relatively higher correct response rates, indicating a stronger awareness, others revealed potential gaps in knowledge that may require further exploration and education.

Key Words: IKS, Awareness, Student teachers, teacher education etc.

Introduction:

Indian Knowledge Systems (IKS) play a significant role in shaping cultural identity, fostering sustainability, and promoting holistic learning. Recognizing the importance of integrating IKS into education, this study examines the awareness of Indian knowledge systems among B.Ed. students at P.V.D.T. College of Education for women, SNDT women's University, Mumbai. Through a survey-based approach, the research aims to identify gaps in understanding and explore avenues for enhancing awareness and appreciation of Indian knowledge traditions among future educators.

Need of the study:

Studying awareness of the Indian knowledge system among B.Ed. female student-teachers could help in understanding how effectively traditional knowledge is being integrated into modern education. It can also shed light on the cultural relevance and preservation of indigenous knowledge systems, contributing to a more holistic approach to education.

Aim of the study:

To study the awareness of Indian Knowledge System (IKS) among female student – teachers.

Objectives of the study:

1. To evaluate the current level of awareness and understanding of the Indian knowledge system among B.Ed. student-teachers.
2. To identify any gaps or deficiencies in the awareness and understanding of the Indian knowledge system among B.Ed. student-teachers.
3. To investigate the perceptions, attitudes, and beliefs of B.Ed. student-teachers towards the Indian knowledge system.
4. To examine how the awareness of the Indian knowledge system influences the teaching practices and methodologies employed by B.Ed. student-teachers.
5. To empower B.Ed. student-teachers with the knowledge, skills, and confidence to effectively incorporate Indian cultural elements and perspectives into their teaching practice.

Scope & limitation:

The research is related to awareness regarding Indian Knowledge system amongst B.Ed. student teachers. The research is related only student teacher of PVDT College of education for women, SNDT Women's University, Mumbai.

Sample: 31 B.Ed students selected by using incidental sampling technique.

Significance of the study:

1. **Preservation of Cultural Heritage:** Understanding and preserving the Indian knowledge system is crucial for safeguarding the country's rich cultural heritage. By studying awareness levels among B.Ed. students, educators can gauge how effectively this heritage is being transmitted to future generations.
2. **Relevance in Education:** Integrating Indian knowledge systems into education can make the curriculum more relevant and engaging for students. This can foster a deeper connection to their roots and enhance their overall learning experience.
3. **Promotion of Diversity and Inclusivity:** India is a diverse country with a plethora of knowledge systems originating from various regions and communities. Studying awareness levels among B.Ed. students can help ensure that these diverse perspectives are acknowledged and integrated into the educational framework.
4. **Enhancing Teaching Pedagogy:** Educators who are aware of the Indian knowledge system can incorporate relevant concepts, teachings, and methodologies into their teaching practices. This can lead to more effective pedagogy and better learning outcomes for students.
5. **Empowerment of Women:** Focusing on female B.Ed. students specifically can be empowering, as it provides them with a platform to explore and contribute to traditional knowledge systems, which have often been overlooked or marginalized. This can help in

promoting gender equality and empowerment in education.

Overall, studying the awareness of the Indian knowledge system among B.Ed. students-teacher in Education colleges holds immense value in promoting cultural preservation, educational relevance, diversity, inclusivity, effective teaching practices, global perspective, women's empowerment, and research advancement in the field of education.

Research Methodology:

A survey method was employed to gather data from 31 female B.Ed. students enrolled as teachers at P.V.D.T. College of Education for women in Mumbai. The survey consisted of questions designed to assess respondents' awareness of various aspects of Indian knowledge systems, including philosophical concepts, mathematical principles, and cultural traditions. Correct responses were analyzed to gauge the level of awareness and identify areas for further exploration.

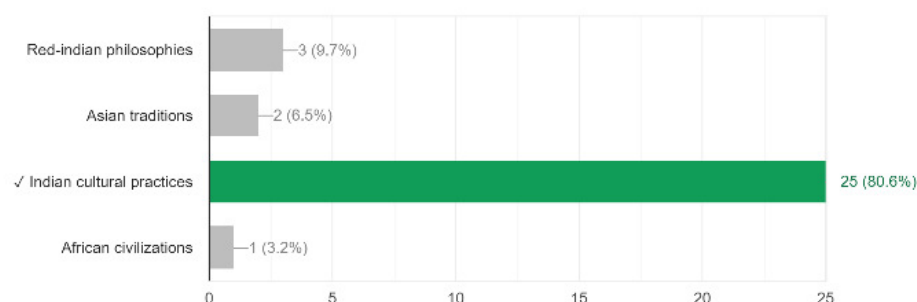
Data Analysis:

Descriptive statistics were used to analyze survey responses, including the percentage of correct answers for each question. The data provided insights into participants' knowledge of Indian knowledge systems and revealed patterns of understanding across different domains.

Q. 1. Which one of the following depicts correctly as the main focus of the Introduction to Indian Knowledge System (IKS)?

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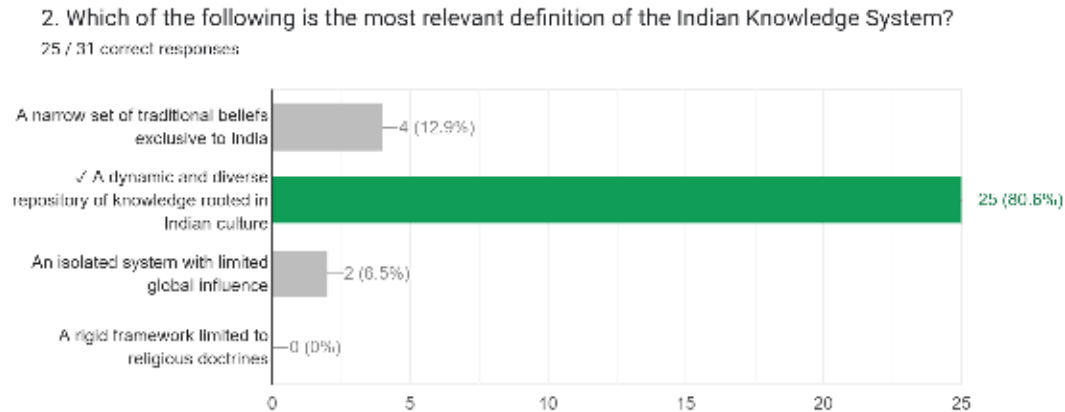
25 / 31 correct responses



25 out of 31 respondents answered this question correctly. This indicates that approximately 80.6 % of the participants correctly identified the depicts correctly as the main focus of the Introduction to Indian Knowledge System (IKS).

The relatively lower correct response rate suggests that there may be some gaps in understanding among the respondents regarding this aspect of the main focus of the Introduction to Indian Knowledge System (IKS).

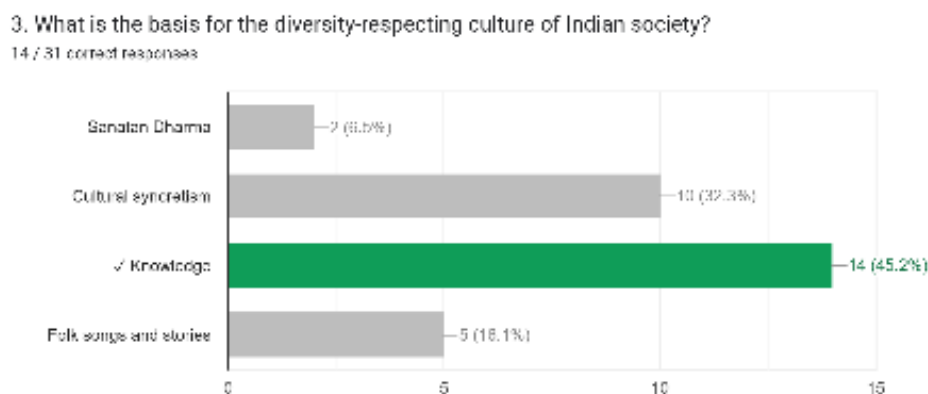
Q. 2. Which of the following is the most relevant definition of the Indian Knowledge System?



25 out of 31 respondents answered this question correctly. This indicates that approximately 80.6 % of the participants correctly identified the most relevant definition of the Indian Knowledge System.

The relatively lower correct response rate suggests that there may be some gaps in understanding among the respondents regarding the most relevant definition of the Indian Knowledge System.

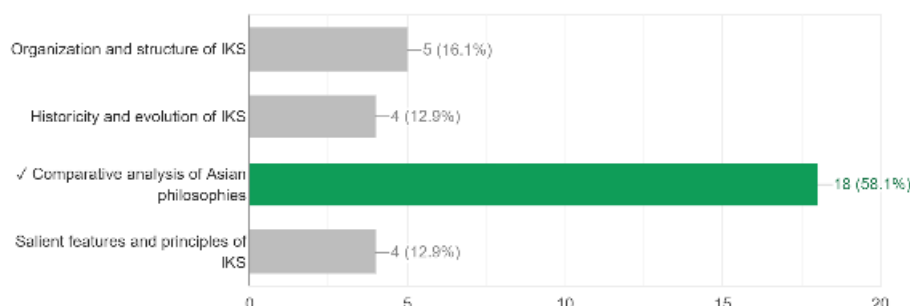
Question 3: What is the basis for the diversity-respecting culture of Indian society?



14 out of 31 respondents answered this question correctly. This indicates that approximately 45% of the participants correctly identified the basis for the diversity-respecting culture of Indian society. The relatively lower correct response rate suggests that there may be some gaps in understanding among the respondents regarding this aspect of Indian culture.

Q.4 Which aspect is NOT explicitly covered in the syllabus of Indian Knowledge System (IKS)?

4. Which aspect is NOT explicitly covered in the syllabus of Indian Knowledge System (IKS)?
18 / 31 correct responses

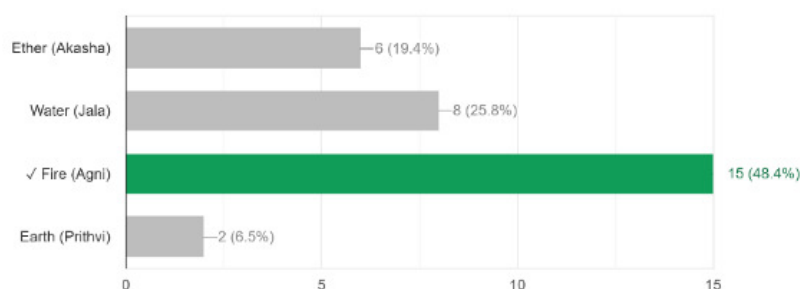


18 out of 31 respondents answered this question correctly. This indicates that approximately 58.1 % of the participants correctly identified the aspect is NOT explicitly covered in the syllabus of Indian Knowledge System (IKS).

The relatively lower correct response rate suggests that there may be some gaps in understanding among the respondents regarding the aspect is NOT explicitly covered in the syllabus of Indian Knowledge System (IKS).

Question 5: In the framework of "PanchMahabhuta," which is associated with transformation, energy, and the catalytic processes inherent in the natural world?

5. In the framework of "Panch Mahabhuta," which is associated with transformation, energy, and the catalytic processes inherent in the natural world?
15 / 31 correct responses



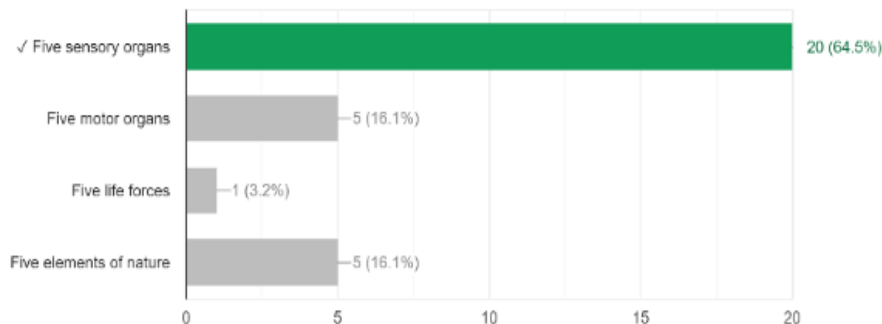
15 out of 31 respondents answered this question correctly. This indicates that roughly 48% of the participants have a good understanding of the concept of "PanchMahabhuta" and its association with transformation and energy in the natural world.

The higher correct response rate suggests a relatively stronger awareness of this aspect of Indian philosophical thought among the respondents.

Q. 6. What are "Jnanendria" in the context of Indian philosophy?

6. What are "Jnanendria" in the context of Indian philosophy?

20 / 31 correct responses



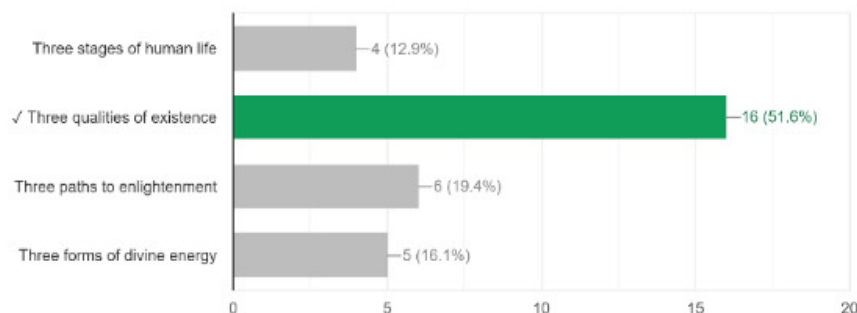
20 out of 31 respondents answered this question correctly. This indicates that approximately 64.5 % of the participants correctly identified the "Jnanendria" in the context of Indian philosophy.

The relatively lower correct response rate suggests that there may be some gaps in understanding among the respondents regarding the "Jnanendria" in the context of Indian philosophy.

Q. 7. In Indian philosophy, what do "Sattva," "Tamas," and "Rajas" collectively represent?

7. In Indian philosophy, what do "Sattva," "Tamas," and "Rajas" collectively represent?

16 / 31 correct responses



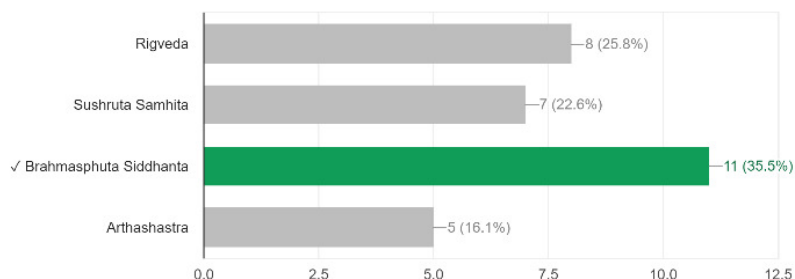
16 out of 31 respondents answered this question correctly. This indicates that approximately 51.6 % of the participants correctly identified, "Sattva," "Tamas," and "Rajas" collectively represent in Indian philosophy.

The relatively lower correct response rate suggests that there may be some gaps in understanding among the respondents regarding the "Sattva," "Tamas," and "Rajas" collectively represent in Indian philosophy.

Question 8: What ancient Indian mathematical treatise introduced the concept of arithmetic manipulations that apply to zero for the first time?

8. What ancient Indian mathematical treatise introduced the concept of arithmetic manipulations that apply to zero for the first time?

11 / 31 correct responses



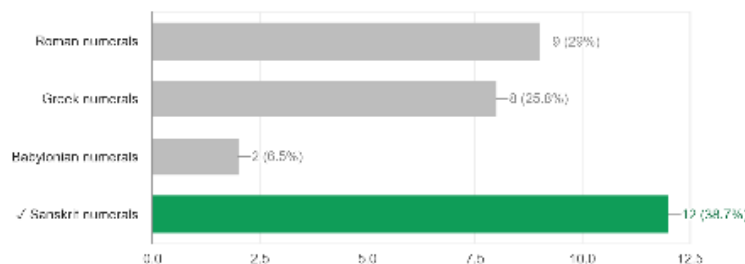
11 out of 31 respondents provided the correct answer to this question. This indicates that approximately 35% of the participants correctly identified the ancient Indian mathematical treatise that introduced the concept of zero.

The lower correct response rate suggests a potential lack of familiarity with this fundamental aspect of Indian mathematics among the respondents.

Question 9: What numeral system, with foundational significance in contemporary mathematics, traces its origins to ancient India and notably includes the revolutionary concept of zero?

9. What numeral system, with foundational significance in contemporary mathematics, traces its origins to ancient India and notably includes the revolutionary concept of zero?

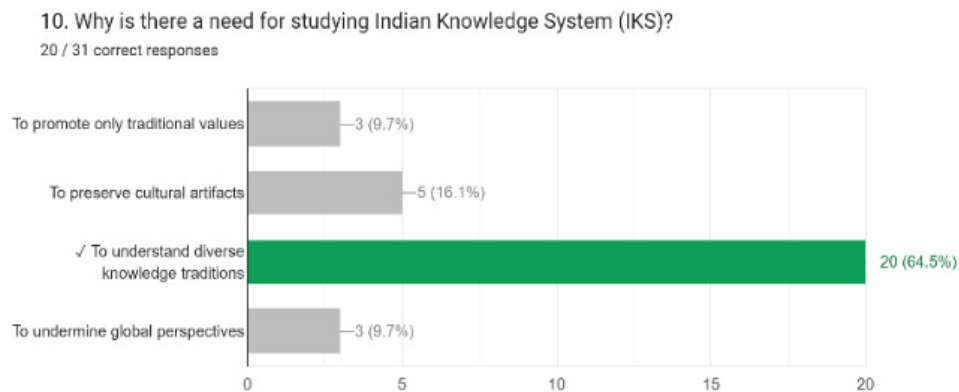
12 / 31 correct responses



12 out of 31 respondents answered this question correctly. This indicates that roughly 39% of the participants correctly identified the numeral system originating from ancient India, which includes the concept of zero.

While slightly higher than the previous question, the correct response rate still suggests some level of unfamiliarity with this aspect of Indian mathematics among the respondents.

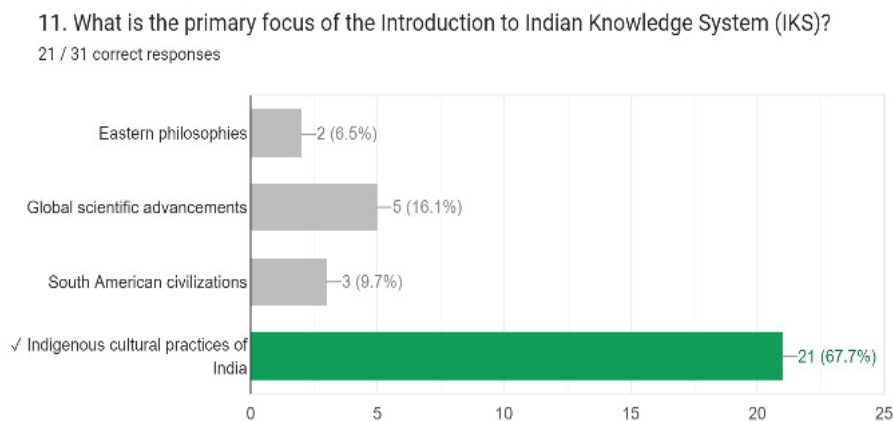
Q. 10. Why is there a need for studying Indian Knowledge System (IKS)?



20 out of 31 respondents answered this question correctly. This indicates that roughly 64.5% of the participants correctly identified there is a need for studying Indian Knowledge System (IKS).

The higher correct response rate suggests a relatively stronger understanding of this aspect among the respondents, that there is a need for studying Indian Knowledge System (IKS).

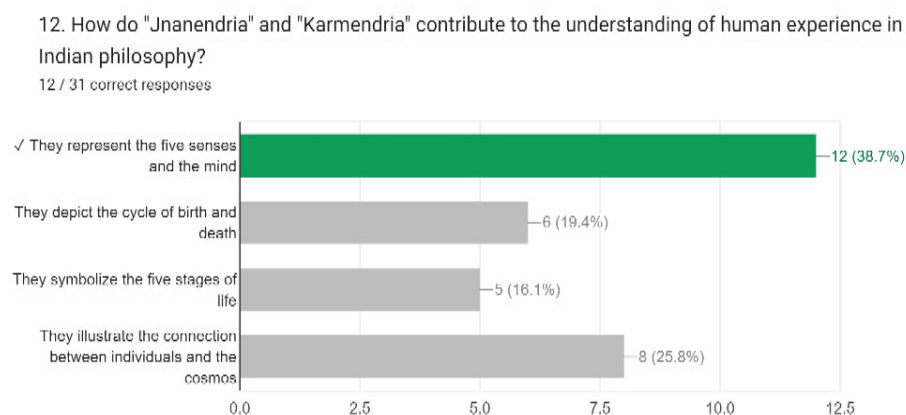
11. What is the primary focus of the Introduction to Indian Knowledge System (IKS)?



21 out of 31 respondents answered this question correctly. This indicates that roughly 67.7% of the participants correctly identified there is the primary focus of the Introduction to Indian Knowledge System (IKS).

The higher correct response rate suggests a relatively stronger understanding of the primary focus of the Introduction to Indian Knowledge System (IKS).

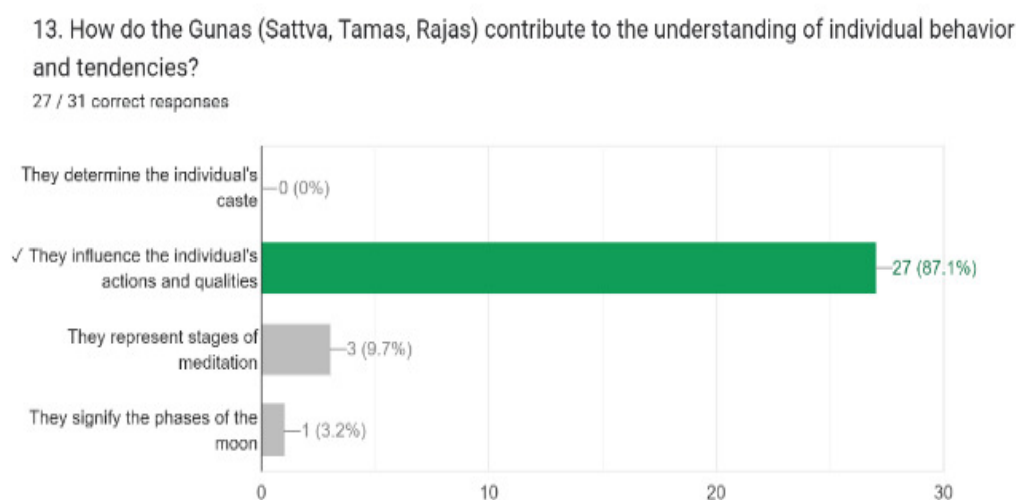
Question 12: How do "Jnanendria" and "Karmendria" contribute to the understanding of human experience in Indian philosophy?



12 out of 31 respondents provided the correct response to this question. This indicates that approximately 39% of the participants correctly identified the contribution of "Jnanendria" and "Karmendria" to the understanding of human experience in Indian philosophy.

The moderate correct response rate suggests a mixed level of understanding among the respondents regarding this aspect of Indian philosophical concepts.

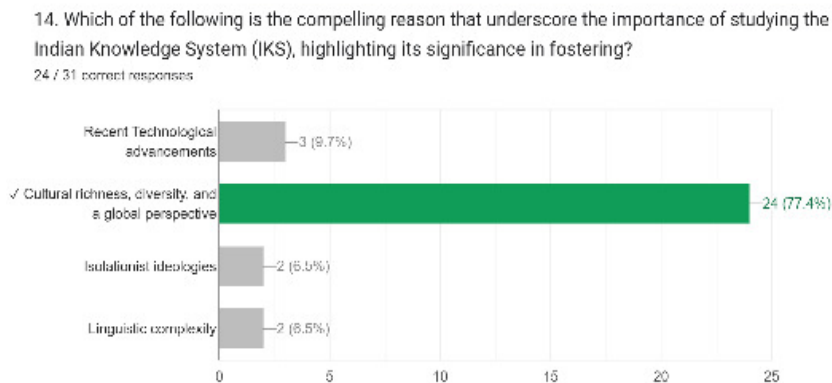
Q. 13. How do the Gunas (Sattva, Tamas, Rajas) contribute to the understanding of individual behavior and tendencies?



27 out of 31 respondents answered this question correctly. This indicates that roughly 87.1% of the participants correctly identified how the Gunas (Sattva, Tamas, Rajas) contribute to the understanding of individual behaviour and tendencies.

The higher correct response rate suggests a relatively stronger understanding of the Gunas (Sattva, Tamas, Rajas) contribute to the understanding of individual behaviour and tendencies.

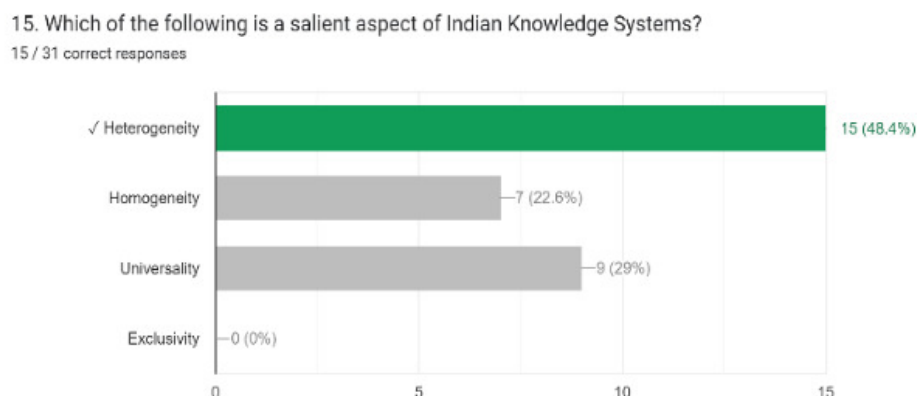
Q. 14. Which of the following is the compelling reason that underscore the importance of studying the Indian Knowledge System (IKS), highlighting its significance in fostering?



24 out of 31 respondents answered this question correctly. This indicates that roughly 77.4 % of the participants correctly identified Cultural richness, diversity, and a global perspective with respect to the importance of studying the Indian Knowledge System (IKS).

The higher correct response rate suggests a relatively stronger understanding of the Cultural richness, diversity, and a global perspective with respect to the importance of studying the Indian Knowledge System (IKS).

Question 15: Which of the following is a salient aspect of Indian Knowledge Systems?



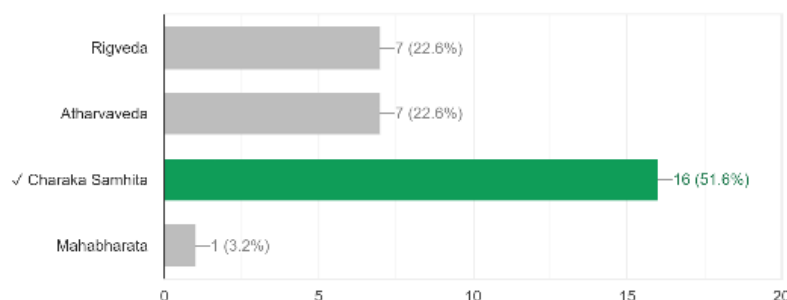
15 out of 31 respondents answered this question correctly. This indicates that roughly 48% of the participants correctly identified a salient aspect of Indian Knowledge Systems.

The higher correct response rate suggests a relatively stronger awareness of this aspect among the respondents.

Q. 16. Which ancient Indian text provides detailed knowledge about medical and surgical techniques, showcasing advancements in healthcare?

16. Which ancient Indian text provides detailed knowledge about medical and surgical techniques, showcasing advancements in healthcare?

16 / 31 correct responses



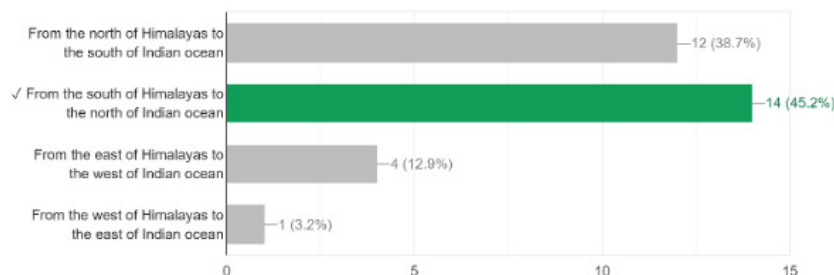
16 out of 31 respondents provided the correct answer to this question. This indicates that approximately 51.6 % of the participants correctly identified the ancient Indian text provides detailed knowledge about medical and surgical techniques, showcasing advancements in healthcare.

The relatively lower correct response rate suggests that there may be some gaps in understanding among the ancient Indian text provides detailed knowledge about medical and surgical techniques, showcasing advancements in healthcare.

Question 17: According to the Vishnu Purana as mentioned in "उत्तरं यत्समद्रुस्य हिमाद्रश्चेव दहिणम्। वर्षतद्भारतं नाम भारतीयत्रसन्तहति:", how is Bharat varsha defined geographically?

17. According to the Vishnu Purana as mentioned in "उत्तरं यत्समद्रुस्य हिमाद्रश्चेव दहिणम्। वर्षतद्भारतं नाम भारतीयत्रसन्तहति:", how is Bharat varsha defined geographically?

14 / 31 correct responses



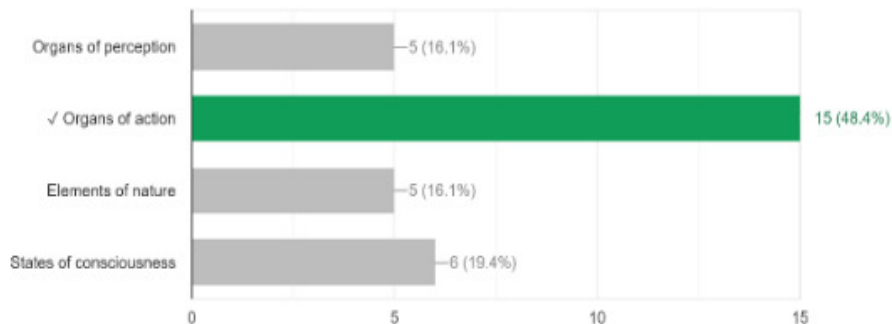
14 out of 31 respondents provided the correct answer to this question. This indicates that approximately 45% of the participants correctly identified the geographical definition of Bharat Varsha according to the Vishnu Purana.

The relatively lower correct response rate suggests a potential gap in knowledge regarding this aspect of Indian cultural and historical geography.

Question 18: What is the term "Karmendria" commonly associated with in Hindu hilosophy?

18. What is the term "Karmendria" commonly associated with in Hindu philosophy?

15 / 31 correct responses



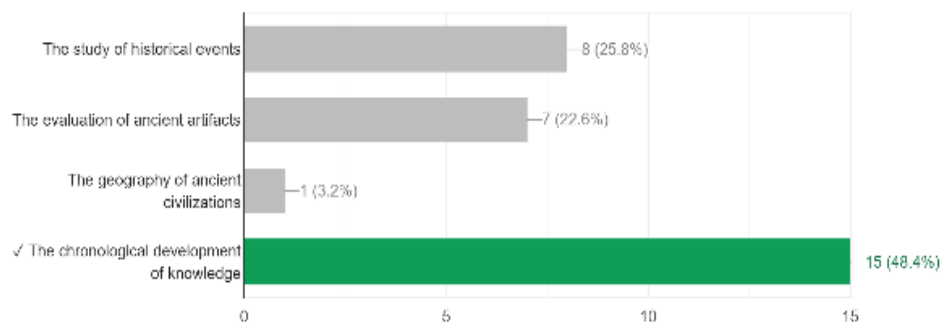
15 out of 31 respondents answered this question correctly. This indicates that roughly 48% of the participants correctly identified the association of the term "Karmendria" in Hindu philosophy.

The higher correct response rate suggests a relatively stronger understanding of this aspect among the respondents.

Question 19: What does "Historicity" refer to in the context of Indian Knowledge Systems?

19. What does "Historicity" refer to in the context of Indian Knowledge Systems?

15 / 31 correct responses



15 out of 31 respondents provided the correct response to this question. This indicates that approximately 48% of the participants correctly identified the concept of "Historicity" in the context of Indian Knowledge Systems.

The higher correct response rate suggests a relatively stronger awareness of this aspect among the respondents.

Overall, the data suggest varying levels of awareness and understanding of different aspects of Indian knowledge systems among the respondents. While some questions received relatively higher correct response rates, indicating a stronger awareness, others revealed potential gaps in

knowledge that may require further exploration and education.

Results and Discussion:

The results indicate varying levels of awareness of Indian knowledge systems among B.Ed. students, with higher accuracy observed in certain areas such as cultural aspects and philosophical concepts.

However, gaps in understanding were identified in domains such as mathematics and historical perspectives. The discussion explores the implications of these findings for teacher education and suggests strategies for enhancing awareness and integration of Indian knowledge systems into pedagogical practices.

Conclusion:

In conclusion, this study highlights the importance of fostering awareness and appreciation of Indian knowledge systems among B.Ed. students. By recognizing the rich diversity of Indian knowledge traditions and addressing gaps in understanding, educators can promote cultural sensitivity, ethical values, and sustainable practices in education. Moving forward, efforts to integrate Indian knowledge systems into teacher education curricula and pedagogical practices are essential for creating inclusive and equitable learning environments.

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Indian Knowledge System and NEP 2020: Concept, Inclusion, and Challenges

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Abstract

Realizing one's full potential, creating a just and equitable society, and advancing national progress all depend on education. NEP is a thorough foundation for the nation's educational growth. After a long ten years, the new NEP 2020 arrived; but, India has already seen three NEPs. The NEP of 1986 was modified in 1992, having been first implemented in 1968 and then again in 1986. The third is the NEP, which was launched in 2021 while Narendra Modi was prime minister. The NEP curriculum highlights the importance of the Indian Knowledge System (IKS). One of the most effective means of transforming the entire country into a society empowered by technology involves education. IKS includes a wide range of topics related to India's rich and varied historical history, including science and technology, literature, philosophy, culture, ayurvedic medicine, and yoga. To meet present and upcoming difficulties, NEP has concentrated on interdisciplinary and transdisciplinary knowledge. It may merge the modern knowledge imbued with IKS. The knowledge assets from the prehistoric era to the present are covered by the IKS. NEP 2020 acknowledges the value of IKS in spreading indigenous knowledge, hence it promotes the development of linguistic resources and technological tools to support it. The Indian education system could undergo major changes if the National Education Policy of 2020 is implemented correctly. The National Education Policy - 2020's primary goal is to bridge the gaps in the current educational system and provide timely delivery of quality education.

Kew words: NEP 2020, Indian Knowledge System (IKS), Challenges.

Introduction

The Indian knowledge system is the diverse ways of knowing nature, human and cosmic, the subsequent revising of what is known, and the diverse skill sets to spread across the different domains of everyday life transmitted across generations through centuries in the Akhand Bharat region and its expansion across the world. The rich heritage of ancient and eternal Indian knowledge and thought has been a guiding light for this Policy. The pursuit of knowledge (Jnan), wisdom (Pragyaa), and truth (Satya) was always considered in Indian thought and philosophy as the highest human goal. The aim of education in ancient India was not just the acquisition of knowledge as preparation for life in this world, or life beyond schooling, but for the complete

realization and liberation of the self. World-class institutions of ancient India such as Takshashila, Nalanda, Vikramshila, and Vallabhi, set the highest standards of multidisciplinary teaching and research and hosted scholars and students from across backgrounds and countries. The Indian education system produced great scholars such as Charaka, Susruta, Aryabhata, Varahamihira, Bhaskaracharya, Brahmagupta, Chanakya, Chakrapani Datta, Madhava, Panini, Patanjali, Nagarjuna, Gautama, Pingala, Sankardev, Maitreyi, Gargi and Thiruvalluvar, among numerous others, who made seminal contributions to world knowledge in diverse fields such as mathematics, astronomy, metallurgy, medical science and surgery, civil engineering, architecture, shipbuilding and navigation, yoga, fine arts, chess, and more. Indian culture and philosophy have had a strong influence on the world. These rich legacies to world heritage must not only be nurtured and preserved for posterity but also researched, enhanced, and put to new uses through our education system (NEP 2020).

IKS was introduced through the National Education Policy (NEP) 2020.

Main Objectives were

- To promote interdisciplinary research on all aspects of IKS,
- Preserve and disseminate IKS for further research and societal applications,
- Actively engage in spreading the rich heritage of our country and traditional knowledge in the fields of Arts and literature, Agriculture, Basic Sciences, Engineering & Technology, Architecture, Management, Economics, etc.

Functions of IKS Division:

- Facilitate and coordinate IKS based/related inter and trans-disciplinary work done by various institutions in Indian Knowledge system and NEP-2020
- Scope, Challenges and Opportunity including universities, institutions of national importance, R&D laboratories, and different ministries, and inspire private sector organizations to engage with it.
- Establish, guide, and monitor subject-wise interdisciplinary research groups of researchers from institutes, centers, and individuals.
- Create and promote popularization schemes.
- Facilitate funding of various projects and develop mechanisms to undertake research.
- Make Policy recommendations wherever required for the promotion of IKS.

Activities under IKS Division:

- Considering the need to establish IKS centers in traditional schools and STEM educational institutes, the division will provide funding support to the institute that establishes the IKS center and conducts related activities.
- Under the IKS Internship Programme, selected students will be paired with IKS experts to work on short research projects, activities/workshops, etc., and earn a stipend (of about Rs.

25,000) for the duration of two months as per AICTE norms.

- To further formalize IKS education, the technical education regulator has commissioned a textbook titled ‘Introduction to Indian Knowledge System, Concepts and Applications’ by B Mahadevan.
- The IITs also have a keen interest in IKS.
- IIT Guwahati has started a PhD program and short-duration course on ‘Spoken Sanskrit’ and ‘Spoken Assamese’ since its inception in November 2021.
- At IIT Gandhinagar, however, the IKS elective course dates to 2016, long before NEP 2020 gained prominence.

All of the IKS disciplines need to eventually find a place in the traditional disciplines. For example, it would be simple to incorporate the history of Indian mathematics into a conventional math curriculum. The same might be said for architecture, philosophy, or Ayurveda. This is another goal of the NEP, but it will take time to implement because decades of neglect cannot be undone in a short period.

Challenges of the Indian Knowledge System:

With the start of globalization, there is a rush to modernize and change the traditional educational system to make it a worldwide standard. The curriculum, the medium of instruction, and pedagogy have all experienced significant change. This has greatly influenced social processes (Joshi, 2018). Cultural and social imperialism are the results of this. Cultural imperialism is the practice of high social rank countries controlling the cultures and societies of low social status countries (Coleman, 2010). We continue to use the Macaulay Origins of the Indian educational system. We have lost our culturally based knowledge and legacy in the era of extensive information technology and education. Food security, nutrition, and general agricultural growth are under threat as a result of the loss of our agricultural biodiversity. Intellectual capital is being lost at an enormous rate. Over 7000 species of medicinal plants and over 15,000 herbal preparations are available in our IKS. It has not only increased its popularity but also brought attention to biopiracy and the patenting of them both domestically and abroad. The incorrect ownership is accentuated by this (Ghosh, 2015). People are divided on whether to adopt the indigenous way of life or blend in with society

NEP and IKS Inclusion:

IKS will be taught as part of the curriculum and will be integrated scientifically, as the NEP 2020 has stressed. Mathematics, engineering, philosophy, yoga, medicine, athletics, games, literature, languages, and a host of other fields will all use IKS in addition to tribal wisdom. NEP has concentrated on offering particular courses in organic and natural farming, forest management, and tribal ethnomedical techniques. IKS will be taught to secondary school students as an elective under NEP. These inputs will be distributed via cutting-edge technology, entertaining games, and

initiatives that promote cultural interchange between various states. NEP emphasizes multilingualism, and there are numerous languages in the IKS repository. Under NEP, all children will receive education in Sanskrit, the oldest language, in addition to receiving curricula in their mother tongues. They will gain knowledge of the rich and varied culture of the country by studying multiple languages. The multilingual formula will foster unity and integrity throughout the country while addressing the provisions of the Constitution ("National Education Policy 2020," n.d.). It would be simple to incorporate Indian mathematics' history into regular math classes. Ayurveda, philosophy, and architecture might all be treated similarly.

The Policy recognizes that the knowledge of the rich diversity of India should be imbibed first hand by learners. Towards this direction under 'Ek Bharat Shrestha Bharat', 100 tourist destinations in the country will be identified where educational institutions will send students to study these destinations and their history, scientific contributions, traditions, indigenous literature and knowledge, etc., as a part of augmenting their knowledge about these areas.

NEP aims to do this, but it will take time.

Challenges of Implementation:

1. **Lack of Awareness.** Many people, including college administrators and faculty, are not aware of IKS or its importance. This lack of awareness and understanding can make it difficult to implement IKS in colleges.
2. **Lack of resources:** IKS is often undocumented and passed down orally from generation to generation. This makes it difficult to develop and implement IKS-based courses and programs in education institutions. Additionally, there is a lack of funding for IKS research and education.
3. **The colonial legacy:** The British colonial education system in India was designed to replace Indian knowledge systems with Western knowledge systems. This legacy has created a bias against IKS in the Indian education system.
4. **Focus on Western knowledge systems:** The Indian education system is still largely focused on Western knowledge systems. This can make it difficult to accommodate the curriculum
5. **No clear-cut curriculum** about IKS and it is leaving educationists perplexed ("Autonomous colleges in state face challenges in implementing", n.d.). Many stakeholders may see it as irrelevant or outdated.
6. **Language Barriers.** As IKS is available in different languages it may create barriers to those who are not well-versed with these languages. Moreover, the colonial system of education has created a bias against the IKS in the Indian Education system. The Indian education system is largely focused on the Western knowledge system and it can create difficulty in accommodating this system.

7. **Shortage of well-qualified teachers** There is also a shortage of well-qualified teachers to teach the IKS because it is not widely adopted yet.

Conclusion:

The incorporation of IKS into India might aid in the development of a thorough awareness of the environment and a sense of cultural heritage among the stakeholders. Since IKS is founded on implicit knowledge, it can assist students in facing and resolving issues that they face in the real world, such as those related to food security and climate change. However, there are significant obstacles to this IKS inclusion, and these obstacles must be overcome before inclusion. A step has been taken by the Indian government under NEP to incorporate IKS into the curriculum. For teachers to effectively teach IKS and possess the necessary expertise, they must receive enough training. Information technology must be used to streamline the IKS data that is already accessible and make it available in a way that best serves the requirements and capabilities of the many stakeholders. Given that India's Indigenous Knowledge Systems have developed over thousands of years, this cannot be completed in a single day. Over time, it will be gradually replaced.

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Integrating Indian Knowledge System for Sustainable Development

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Abstract:

The National Education Policy (NEP) 2020 in India marks a transformative shift towards a holistic and inclusive education system. This paper explores the potential of leveraging the NEP 2020 framework to integrate Indian Knowledge Systems (IKS) into the educational curriculum for promoting sustainable development. Through a comprehensive review of the NEP 2020 guidelines and sustainable development principles, this paper delineates strategic opportunities and implementation strategies for mainstreaming IKS in education.

The paper advocates for curriculum reform that incorporates modules on IKS across disciplines such as sciences, health, and environmental studies. It emphasizes the importance of promoting multilingualism to preserve and transmit indigenous knowledge, along with skill development and vocational training aligned with sustainable livelihoods. Furthermore, the paper underscores the significance of teacher training, research, community engagement, digital platforms, and policy support in fostering the integration of IKS into education for sustainable development.

Drawing on examples from best practices and global initiatives, this paper offers a conceptual framework that underscores the role of NEP 2020 in catalysing a shift towards education that nurtures a deep understanding of traditional wisdom, environmental stewardship, and social responsibility. The proposed strategies aim to empower learners with the knowledge, skills, and values necessary to address complex sustainability challenges and contribute meaningfully to inclusive and resilient societies. Through collaborative efforts between educational institutions, policy makers, communities and stakeholders. India can harness its rich heritage of IKS to pave the way for a sustainable future rooted in indigenous wisdom and contemporary innovation.

Keywords: Indian Education System, Sustainable Development, NEP 2020.

Introduction:

India's rich heritage of traditional ecological knowledge and indigenous practices offer immense potential to address global sustainability challenges. Aligning this wisdom with the National Education Policy 2020 can foster holistic development and environmental stewardship. Integrating Indian knowledge systems for holistic development involves recognising and incorporating traditional Indian wisdom and practices into various aspects of modern life.

Aspects of the NEP 2020 reflecting on Holistic and Inclusive education:

1. Early Childhood Care and Education (ECCE)
2. Foundational Literacy and Numeracy.
3. Curriculum Reforms.
4. Multilingualism and Cultural Diversity.
5. Inclusive Education and Equity.
6. Teacher Empowerment and Professional Development.
7. Technology Integration and Digital Learning.

The National Education Policy 2020 reflects a holistic and inclusive vision for education that prioritizes not only academic excellence but also the overall well-being, creativity, critical thinking, and socio emotional development of learners to prepare them for the challenges of the 21st century.

Indian Knowledge System (IKS) in promoting holistic learning, sustainable practices, and cultural preservation:**1. Holistic Learning:**

IKS encompasses a vast repository of knowledge spanning various domains such as Ayurveda, Yoga, Vedas, Philosophy, Arts and Traditional sciences. It promotes a holistic approach to learning by integrating physical, mental, emotional, and spiritual aspects of human existence. Students exposed to IKS gain a deeper understanding of interconnectedness, balance and harmony with nature leading to holistic development of mind, body, and soul.

2. Sustainable Practices:

IKS offers time-tested wisdom and sustainable practices that are rooted in harmony with nature and ecosystem preservation. Traditional knowledge in areas such as agriculture, herbal medicine, water management, and energy conservation provides sustainable alternatives to modern practices. By incorporating IKS principles into education and daily life, communities can reduce environmental impact, promote biodiversity conservation, and adopt eco-friendly lifestyles.

3. Cultural Preservation:

IKS is deeply intertwined with India's cultural heritage, oral traditions, languages, rituals, arts, and indigenous knowledge systems. It serves as a repository of cultural wisdom, values, customs, and beliefs passed down through generations. By promoting IKS in education and society, there is a preservation of cultural diversity, identity, and heritage, fostering pride and respect for indigenous traditions.

Opportunities for integrating IKS under NEP 2020:**1. Curriculum Reforms:**

Incorporating Indian Knowledge Systems (IKS) modules across disciplines and educational

levels requires a thoughtful and systematic approach to ensure comprehensive integration. Here are several ways to achieve this:

1. Curriculum Integration:

Identify key concepts and principles from IKS that align with various subjects such as science, social sciences, health, environmental studies, literature, and arts.

Integrate IKS modules seamlessly into existing curricula, ensuring that they complement and enhance learning objectives rather than being seen as separate entities.

Develop interdisciplinary modules that demonstrate the interconnectedness of IKS with other subjects, fostering a holistic understanding of diverse topics.

2. Subject-specific Modules:

Design subject-specific modules that highlight the relevance of IKS in different academic disciplines. For example:

In science, incorporate modules on traditional ecological knowledge, herbal medicine, and sustainable agriculture practices.

In social sciences, explore the philosophical, cultural, and historical dimensions of IKS, including ancient texts, rituals, and societal norms.

In health education, integrate modules on Ayurveda, Yoga, meditation, and holistic wellness practices. In environmental studies, focus on traditional conservation practices, biodiversity management, and indigenous wisdom related to natural resource management.

3. Project-based Learning:

Promote project-based learning for students to delve into Indigenous Knowledge Systems (IKS) through research and practical application. Encourage interdisciplinary projects that blend IKS with modern science to analyze real-world issues. Facilitate collaborations with traditional knowledge holders and local communities for enriched cultural insights.

4. Experiential Learning:

Offer experiential learning through field trips, workshops, and interactive sessions to engage students in Indigenous Knowledge Systems (IKS) practices. Visit cultural sites and festivals, and facilitate hands-on experiences like herbal medicine preparation and traditional art workshops.

5. Multimedia Resources:

Develop multimedia resources with experts to enrich learning, including videos and interactive modules. Use digital platforms for widespread accessibility of Indigenous Knowledge Systems (IKS) materials, catering to diverse learners.

6. Teacher Training and Capacity Building:

Provide teacher training on IKS concepts and integration strategies. Offer workshops and seminars for effective implementation. Foster collaboration among educators and traditional

knowledge holders to enrich teaching practices. Enhance learning experiences and cultural diversity appreciation through IKS integration.

2. Vocational Training and Skill

Integrating Indigenous Knowledge Systems (IKS) into vocational courses promotes sustainable livelihoods by incorporating traditional practices such as sustainable farming, herbal medicine, environmental management, and craftsmanship. Benefits include:

1. Cultural Preservation
2. Sustainable Practices
3. Local Relevance
4. Economic Opportunities
5. Innovation and Problem-Solving
6. Community Empowerment
7. Global Impact

3. Multilingualism and Cultural Preservation:

Using regional languages to preserve and transmit Indigenous Knowledge Systems (IKS) is crucial for several compelling reasons:

1. Language as a Carrier of Culture:

Language is not merely a tool for communication but a carrier of culture, traditions, and identity. Indigenous languages encapsulate concepts, practices, and knowledge unique to their culture that cannot be directly translated into other languages without losing some of their nuances and meanings.

2. Ensuring Accuracy:

Indigenous knowledge, especially related to medicinal plants, agricultural practices, and environmental management, is often precise and context-specific. Transmitting this knowledge in its original language helps ensure that the information remains accurate and that vital details are not lost in translation.

3. Cultural Preservation:

By using regional languages to transmit indigenous knowledge, communities reinforce their cultural identity and heritage. This preservation is essential in the face of globalization and cultural homogenization, which often prioritize dominant languages and cultures at the expense of indigenous ones.

4. Intergenerational Transmission:

Language is a key medium through which knowledge is passed down from one generation to the next. Using indigenous languages facilitates this transmission process, ensuring that young members of the community can learn and carry forward their ancestral knowledge and practices.

5. Community Empowerment:

Empowering indigenous communities to use their languages in education and knowledge transmission fosters a sense of pride, identity, and autonomy. It allows communities to take control of their educational systems and the preservation of their knowledge, which can be crucial for their development and sustainability.

6. Enhancing Learning:

Research has shown that people learn best in their first language. Indigenous students are more likely to engage with and understand content that is taught in their native languages, making the education process more effective and meaningful.

7. Contribution to Global Knowledge:

Indigenous languages and the knowledge they carry are not only of value to the communities that hold them but also contribute to the global pool of knowledge, offering insights into sustainable living, biodiversity, and human-nature relationships. Preserving these languages helps ensure that this knowledge remains accessible to the world.

8. Linguistic Diversity:

Lastly, efforts to preserve and use indigenous languages in transmitting knowledge contribute to the protection of linguistic diversity, which is under threat globally. Each language lost is not just a loss for the community it belonged to but a loss for humanity's rich tapestry of knowledge and culture.

4. Teacher training and Capacity Building:

Integrating Indigenous Knowledge Systems (IKS) into education enriches curricula by incorporating holistic and diverse perspectives on understanding the world, especially in the context of sustainable development. Professional development programs for teachers are pivotal for several reasons:

1. Bridging Knowledge Gaps:

Many educators come from backgrounds where the educational system prioritizes Western epistemologies and methodologies. Professional development in IKS can bridge this gap, enriching teachers' knowledge bases and enabling them to integrate these valuable perspectives into their teaching.

2. Cultural Sensitivity and Relevance:

Understanding and appreciating IKS fosters a culturally sensitive learning environment. This is crucial in diverse classrooms where students come from various cultural backgrounds. Teachers skilled in IKS can create more inclusive, respectful, and engaging learning experiences that validate and celebrate indigenous cultures.

3. Enhancing Sustainability Education:

IKS often encompasses sustainable practices that have been developed and refined over generations. As the world grapples with sustainability challenges, incorporating IKS into education can provide students with practical, time-tested solutions and a deeper understanding of sustainability that complements scientific knowledge.

4. Promoting Interdisciplinary Learning:

IKS is inherently interdisciplinary, blending science, social studies, ethics, and more. Professional development that enhances teachers' understanding of IKS can help them create interdisciplinary learning experiences that are more engaging and relevant to students, preparing them for the complex, interconnected world they inhabit.

5. Empowering Indigenous Voices:

Incorporating IKS in education not only educates non-indigenous students about these knowledge systems but also validates and empowers indigenous students. It supports the preservation and transmission of indigenous knowledge, promoting equity and respect for indigenous cultures.

6. Adapting to Local Contexts:

IKS is deeply rooted in local environments and contexts. Teachers equipped with an understanding of local indigenous knowledge can tailor their teaching to reflect the local environment, making learning more relevant and impactful for students.

7. Building Community Relationships:

Engaging with IKS often requires collaboration with indigenous communities and elders. This can build bridges between schools and local communities, fostering mutual respect and collaboration and providing students with authentic learning experiences.

Strategies for Implementation:**1. Research and Innovation:**

Research initiatives aimed at validating and integrating Indigenous Knowledge Systems (IKS) with scientific knowledge are increasingly recognized as crucial for several reasons. These initiatives not only honor and preserve the rich cultural heritage and wisdom of Indigenous communities but also open up new avenues for innovation in science and technology, environmental conservation, healthcare, and social development.

Firstly, integrating IKS with scientific research enhances biodiversity conservation and sustainable resource management. Indigenous peoples have managed their environments sustainably for centuries through deep understanding and respect for nature. By validating and integrating these practices, we can develop more effective conservation strategies that are both scientifically sound and culturally sensitive.

Secondly, IKS offers valuable insights into health and medicinal practices derived from generations of experience with natural remedies. Scientific validation of these practices can lead to the discovery of new medicines and health interventions, bridging the gap between traditional and modern healthcare systems.

Moreover, such research initiatives promote a more inclusive and multidisciplinary approach to knowledge production, acknowledging that Western scientific methods are not the only way to understand the world. This inclusivity can lead to more comprehensive and holistic approaches to solving complex global challenges, such as climate change, where IKS can offer unique perspectives and solutions.

Furthermore, these initiatives foster respect, understanding, and collaboration between Indigenous communities and the scientific community, ensuring that the benefits of research are shared equitably. This collaborative approach can help protect Indigenous rights and ensure that their knowledge is not exploited but rather preserved and appreciated.

Lastly, the integration of IKS with scientific knowledge contributes to the global knowledge pool, enriching our understanding of the natural world and human society. It challenges the scientific community to think beyond traditional paradigms and to innovate in ways that are sustainable, equitable, and respectful of cultural diversity.

Community Engagement and Partnerships:

Involving local communities, traditional practitioners, and NGOs in the integration of Indigenous Knowledge Systems (IKS) into broader societal, environmental, and developmental frameworks is crucial for several reasons:

1. Preservation of Knowledge:

Local communities and traditional practitioners are the custodians of indigenous knowledge, which has been passed down through generations. Their involvement ensures the accurate preservation and transmission of knowledge that might otherwise be lost in the face of globalization and modernization.

2. Sustainability:

Indigenous knowledge often includes sustainable practices for farming, fishing, forestry, and resource management. Incorporating this knowledge can lead to more sustainable environmental management practices that are adapted to local ecosystems.

3. Cultural Integrity and Empowerment:

Engaging with local communities and practitioners' respects and acknowledges the value of their knowledge and traditions, empowering them and fostering a sense of pride in their cultural heritage. This can be crucial for their social cohesion and identity.

4. Enhanced Outcomes through Local Relevance: Solutions and practices developed with

the active participation of those who will implement and live with them are more likely to be relevant, culturally appropriate, and effective. This local relevance is crucial for the success and sustainability of development projects.

5. Bridging Knowledge Gaps:

NGOs and local communities can act as bridges between traditional knowledge and modern scientific understandings. They can facilitate dialogues that integrate different types of knowledge, leading to innovative solutions to contemporary challenges.

6. Policy and Advocacy:

NGOs, in particular, can play a significant role in advocating for the recognition and protection of indigenous knowledge at the policy level. They can help ensure that laws and regulations are in place to protect indigenous knowledge from exploitation and to promote its integration into national and international development agendas.

7. Capacity Building and Education:

Involving these groups in IKS efforts can lead to the development of educational programs that aim to both preserve indigenous knowledge and integrate it with formal education systems, ensuring its continuity and relevance for future generations.

Overall, the involvement of local communities, traditional practitioners, and NGOs in IKS integration efforts is essential for the respectful, ethical, and effective preservation and utilization of indigenous knowledge. It ensures that such efforts are grounded in the realities of those who hold this knowledge, leading to more sustainable, inclusive, and culturally sensitive outcomes.

Digital Platforms and Technology:

The use of digital platforms, e-learning tools, and virtual labs offers innovative ways to promote Indigenous Knowledge Systems (IKS) education and knowledge sharing, harnessing technology to bridge traditional wisdom with modern learning methodologies. Here is how these tools can be effectively utilized:

1. Digital Platforms for Community Engagement:

Digital platforms can facilitate the sharing of Indigenous knowledge by creating online communities where Indigenous and non-Indigenous people can collaborate. These platforms can host discussions, share stories, and disseminate knowledge about traditional practices, languages, and cultural heritage, making IKS accessible to a global audience.

2. E-Learning Tools for Education:

E-learning tools can offer structured courses on IKS subjects, incorporating multimedia elements like videos, interactive simulations, and quizzes to engage learners. They can cover a wide range of topics, from traditional ecological knowledge and medicinal plants to Indigenous languages and arts. These courses can be designed to cater to different age groups and learning

levels, providing a flexible learning path that respects the pace and space of each learner.

3. Virtual Labs for Experiential Learning:

Virtual labs can simulate real-world environments where learners can interact with elements of Indigenous knowledge in a controlled setting. For instance, virtual reality (VR) simulations can immerse learners in traditional agricultural practices, wildlife management, or even cultural ceremonies. Such experiential learning helps in understanding the practical applications of Indigenous knowledge and its relevance to solving contemporary issues like climate change and biodiversity conservation.

4. Digital Archives and Libraries:

Creating digital archives and libraries of Indigenous knowledge helps in its preservation and dissemination. These resources can include digitized texts, audio recordings of traditional songs and stories, and video documentation of practices. They serve as a repository for future generations and a research resource for scholars, facilitating cross-disciplinary studies that can contribute to the global knowledge pool.

5. Collaborative Platforms for Co-creation and Innovation:

Digital platforms can also be used to foster co-creation and innovation by blending Indigenous knowledge with scientific research. Platforms that facilitate collaboration between Indigenous communities, researchers, and innovators can lead to sustainable solutions in areas such as agriculture, healthcare, and environmental management.

6. Ensuring Ethical Considerations:

It is crucial to navigate the digital promotion of IKS with sensitivity towards intellectual property rights, consent, and the risk of cultural appropriation. Digital initiatives should be led or co-managed by Indigenous communities, ensuring that they have control over how their knowledge is shared and used.

Promoting IKS through digital and virtual means not only helps in preserving this invaluable knowledge for future generations but also enhances its application in addressing modern-world challenges. It's a way to honour and integrate the wisdom of Indigenous peoples into the global consciousness, fostering a more inclusive, informed, and respectful world.

Conclusion:

An integrated approach, merging indigenous wisdom with modern education, is vital for a sustainable future. Collaboration among stakeholders is essential, including policymakers, educators, and communities. Indigenous knowledge emphasizes harmony with nature, while modern education provides tools to address global challenges. Policymakers should integrate indigenous practices into environmental policies. Educators need to develop curricula reflecting both knowledge systems. Communities should be engaged in sustainability initiatives for culturally

appropriate solutions. Collaboration can blend wisdom with innovation, fostering a holistic approach to sustainability.

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Role of Higher Education regarding Indian Knowledge System

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Abstract

In each and every society and nation education is always considered as the most important and valuable medium in many respects. Education is a very wide concept and it covers education of different stages and different branches too. Among all such varieties Higher Education is also one of the very important stages of education. Higher education can play its very important role regarding the Indian knowledge System (IKS). Some important points regarding the role of Higher education in the perseverance of the IKS are discussed in this paper. Higher education system can disseminate the true information and knowledge about the role regarding the IKS, it can make future generations aware of it, and courses and programs can be framed considering the basis of the role regarding the IKS. The faculty members can create a positive attitude towards it and organize various activities etc.

Key Words: Higher Education, Indian Knowledge system (IKS)

Background

In each and every society and Nation education is always considered as the most important and valuable medium in many respects. Many authors and thinkers have highlighted the importance of education in their own style. Abdulghani (2014) observed that, “The importance of Education is an important issue in one’s life. It is the key to success in the future and to have many opportunities in our life.” While Rathore (2024) noted that “The history of education tells us that it was started at some places to let children have a better childhood while to bring change in society to others”. Education is a very wide concept and it covers education of different stages and different branches too. Among all such varieties Higher Education is also one of the very important stages of education. Many authors have highlighted the importance of Higher Education. Mangalam (2024) observed that, “Higher education has profound social and cultural benefits. It fosters critical thinking, encourages the exchange of diverse ideas, and promotes an understanding and appreciation of different cultures. This is particularly important in a country as diverse as India, where higher education can play a role in promoting social cohesion and national unity”. This background itself highlights the role of Higher education regarding the IKS. The below paragraphs discuss the same.

Role of Higher Education regarding Indian Knowledge System

The background of this paper itself explains the role of the IKS in wider perspectives. Some specific points are as follows:

1. Higher education serves as a vital platform for imparting comprehensive knowledge about the IKS to the next generation of the country. Through a variety of courses offered at the higher education level, students gain profound insights into various aspects of IKS.
2. Many times it is observed that the young generation is not aware about IKS. Hence creating awareness about the IKS is an important aspect of higher education. Higher education system acts as a gateway to create awareness among the young generation.
3. Throughout history, the world has witnessed the downfall of various great cultures, a painful part of the history of mankind. Despite this, it brings pride and satisfaction to acknowledge that Indian culture persists. However, mere survival is insufficient. It becomes our great responsibility to make it alive. In this respect, the higher education system can play a crucial role in revitalizing the Indian knowledge system.
4. Higher education offers a diverse array of courses and programs, including medical, engineering, history, economics, architecture, philosophy, psychology, and more. These courses and programs are crafted by expert committees. It is expected that these experts conscientiously integrate IKS principles into course development. By ensuring that all courses are rooted in IKS, higher education can significantly contribute to the preservation of Indian knowledge.
5. All faculty members in higher education have the potential to contribute to preserving the IKS. It is essential for them to foster a positive attitude towards it. They should strive to familiarize themselves with IKS by reading about its various aspects and gaining awareness of our rich culture and heritage. Visiting cultural sites associated with the IKS whenever feasible is also encouraged, allowing them to actively engage with and contribute to its preservation.
6. A significant UNESCO report highlighted four fundamental pillars of education: learning to know, learning to do, learning to be, and learning to live together. By integrating these pillars into the higher education system, it can effectively contribute to revitalizing the IKS.
7. A range of activities focusing on the IKS can be organized, aligning with the principle of learning by doing. These include field trips, exhibitions, and expert talks, among others. Such initiatives aim to raise awareness among higher education students about it, thereby making a meaningful difference in their understanding and appreciation of it.
8. In today's Information and Communication Age, the Higher education system holds a crucial role in raising awareness about the IKS among the general population through various social media platforms. Education is not confined to isolated processes; it should

extend its reach to society at large. In alignment with the goals outlined in the NEP 2020, the higher education system can leverage social media to disseminate information and insights about the Indian Knowledge System

Epilogue

The Indian Knowledge system is like a great treasure not only for the Indian people but for the whole world. It is the great responsibility of the Higher education system to preserve the Indian Knowledge system as well as to disseminate the knowledge related with it and make future generations aware of it. The National Education Policy has rightly emphasized on the IKS. Indeed, it is hoped that the aspirations embedded within the NEP 2020 will be realized through the dedicated efforts of all individuals associated with the education system, both in general and particularly within higher education.

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**Indian Knowledge System for learning language and holistic development
with reference to NEP – 2020**

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Abstract:-

The National Education Policy (NEP) 2020 in India emphasizes the integration of Indian knowledge systems (IKS) into the education system for holistic development. In the context of language learning, this involves incorporating traditional Indian languages and their associated knowledge systems into the curriculum alongside modern languages. For instance, Sanskrit, Tamil, Urdu, and other regional languages hold rich repositories of knowledge in various fields like literature, philosophy, science, and medicine, which can enrich students' understanding and appreciation of their cultural heritage. Holistic development under NEP 2020 encompasses not only cognitive but also social, emotional, and physical aspects of learning. Indian knowledge systems, with their emphasis on interconnectedness and holistic understanding of the universe, offer valuable insights into achieving such holistic development. Through the integration of IKS into the curriculum, students can develop critical thinking, creativity, empathy, and a sense of interconnectedness with nature and society. The inclusion of Indian knowledge systems in language learning and holistic development as per NEP 2020 aims to foster a more comprehensive and culturally rooted educational experience for students, nurturing well-rounded individuals capable of thriving in diverse global contexts while also preserving and promoting India's rich cultural heritage.

Keywords: NEP-2020, IKS, Language learning, Holistic Development

Introduction:-

The National Education Policy (NEP) 2020 in India has introduced significant reforms aimed at promoting holistic development and integrating the country's rich knowledge systems into the education framework. One of the key aspects of NEP 2020 is the emphasis on incorporating Indian knowledge systems (IKS) into the curriculum, especially in the context of language learning and holistic development.

The Indian Education System is currently facing challenges due to westernization, excessive privatization and a lack of cultural support. To address these issues, there is a need to incorporate Indian Knowledge and Tradition into education, making it a way of life for students.

Understanding Indian Knowledge Systems (IKS):-

“The Indian Knowledge Systems comprise of Jnan, Vignan and Jeevan Darshan that have evolved out of experience, observation, experimentation and rigorous analysis.”

India is a land of diversity. Preserving Indian art and culture is imperative for safeguarding the rich heritage that embodies the true essence of the Bharatiya / Indian traditions. IKS acknowledges the importance of preserving and promoting India’s art and culture as it plays a crucial role in shaping the country's identity. IKS advocates for the integration of the Bharatiya perspective into mainstream discourse.

IKS are complex knowledge systems that have accumulated over generations by ancestral communities as a result of their interaction with the environment. Due to the oppression, IKS have been close to oblivion but the Ministry of Education (MoE) to promote interdisciplinary research on all aspects of IKS and preserve and promote the theories for further research and societal applications.

IKS encompasses a wide array of traditional knowledge systems, including Ayurveda, Yoga, Vedas, Jyotish, Sankhya, Nyaya, Vaisheshika, Mimamsa, and Vedanta. These systems have been developed over thousands of years and have contributed significantly to various fields such as philosophy, science, mathematics, medicine, linguistics, and literature. Understanding the past is crucial for illuminating the future generation and making them more promising.

Relevance of Indian Knowledge Systems in Present scenario:

- The policy emphasizes the integration of Indian knowledge systems across subjects to promote holistic development.

For example, concepts from Ayurveda can be integrated into biology lessons, while principles of Vedic mathematics can be incorporated into mathematics curriculum. This interdisciplinary approach fosters a holistic understanding of various subjects and encourages critical thinking.

- NEP 2020 advocates for experiential learning methodologies, such as project-based learning, hands-on activities, and field trips, to complement theoretical knowledge. By engaging students in practical experiences related to Indian knowledge systems, they can develop a deeper appreciation and understanding of their cultural heritage while sharpening critical thinking and problem-solving skills.
- The policy underscores the importance of imparting value education rooted in Indian ethos and traditions. By integrating moral and ethical teachings from Indian knowledge systems into the curriculum, students can develop a strong sense of cultural identity, empathy, and social responsibility.
- NEP 2020 emphasizes the development of 21st-century skills such as creativity, communication, collaboration, and critical thinking. By integrating elements of Indian

knowledge systems into skill development programs, students can acquire both traditional and contemporary skills necessary for personal and professional success in a globalized world.

Language learning:

Language is a fascinating tool for communication and expression. It is a primary means by which humans convey meaning both in spoken and written forms. Mankind is blessed with a wonderful instrument of language to convey and understand different individuals' emotions, thoughts and opinions. A child imbibes language from his or her parents and family members to utter and hear some words and sentences. As one grows up in different cultures and environments, one's language is shaped and refined because of the interaction with different environmental forces.

Indian languages offer a rich tapestry of cultures, histories, and traditions. From Hindi, Sanskrit, Urdu, Bengali, Tamil, there's a diverse array to explore. The regional languages hold a rich repository of knowledge which can enrich students' understanding and appreciation of their cultural heritage.

Indian languages incorporated in curriculum:

NEP 2020 recognizes the importance of multilingualism in a diverse country like India. It emphasizes the use of the mother tongue as the medium of instruction in early childhood education. Research suggests that children learn better and faster when taught in their mother tongue. By promoting mother tongue based education, the policy aims to preserve linguistic diversity and ensure inclusive education.

The NEP encourages the incorporation of cultural elements, including those from Indian knowledge systems, into language learning materials. This includes folk tales, legends, proverbs, and idioms from diverse Indian cultures. By contextualizing language learning within the rich tapestry of Indian culture, students develop a deeper understanding of their heritage while enhancing language proficiency.

NEP 2020 aims to promote classical languages such as Sanskrit, Tamil, Telugu, Kannada, Malayalam, and Odia. These languages are not only repositories of rich literature but also storehouses of traditional knowledge. By encouraging the study of classical languages, the policy seeks to preserve and revitalize these linguistic and cultural treasures.

Need to learn Indian languages:

Indian Knowledge Systems (IKS) are important for language education, as the understanding of fundamental categories is necessary to comprehend IKS. Terms from the Indian languages are used to express these fundamental theories or concepts. Translating the core ideas and theories into the English language would deplete the crux of it. Therefore, Indian education

should carefully balance IKS and Indian languages education to encourage high quality research that promotes harmonious economic growth.

Learning Indian languages holds immense importance for individuals, communities, and society as a whole due to several compelling reasons:

- **Preservation of Cultural Heritage:-**

Indian languages are deeply intertwined with the country's rich cultural heritage. Each language carries with it a unique history, literature, traditions, and customs. By learning Indian languages, individuals contribute to the preservation and promotion of this cultural diversity, safeguarding invaluable linguistic and cultural treasures for future generations.

- **Enhanced Communication and Connection:-**

India is a multilingual and multicultural country with over 1,600 languages and dialect spoken across its diverse regions. Proficiency in Indian languages facilitates effective communication and fosters a sense of connection with people from different linguistic backgrounds. It enables individuals to engage more deeply with local communities, forge meaningful relationships, and bridge cultural divides.

- **Access to Knowledge and Information:-**

Indian languages serve as gateways to vast repositories of knowledge, literature, and traditional wisdom. Many classical texts, scientific discoveries, philosophical treatises, and artistic masterpieces are written in Indian languages. By learning these languages, individuals gain access to a wealth of indigenous knowledge systems, ancient scriptures, and literary works, enriching their intellectual horizons.

- **Empowerment and Inclusivity:-**

Proficiency in Indian languages empowers individuals to participate more fully in social, economic, and political spheres. It enables them to access education, employment opportunities, government services, and legal rights in their native languages. Language plays a pivotal role in fostering inclusivity and ensuring that all members of society, regardless of linguistic background, have equal access to resources and opportunities.

- **Cognitive Benefits:-**

Research suggests that bilingualism and multilingualism have cognitive benefits, such as improved cognitive flexibility, problem-solving skills, and memory retention. Learning Indian languages exercises the brain, enhances linguistic dexterity, and strengthens cognitive abilities, contributing to overall cognitive development and mental agility.

- **Promotion of National Unity and Integration:**

Indian languages are integral to the country's identity and serve as symbols of unity in diversity. Proficiency in multiple Indian languages fosters a sense of national pride and solidarity, transcending regional, linguistic, and cultural barriers. It promotes mutual respect, understanding,

and harmony among people belonging to different linguistic communities, reinforcing the fabric of national unity.

- **Economic Opportunities:**

In a globalized world, proficiency in Indian languages can open up new economic opportunities and enhance employability. India's linguistic diversity presents a significant advantage in sectors such as tourism, hospitality, media, entertainment, translation, and localization. Multinational companies, government agencies, and international organizations increasingly value employees with language skills, especially those proficient in Indian languages, to cater to diverse markets and audiences.

Learning Indian languages is not only a means of communication but also a gateway to cultural enrichment, social inclusion, cognitive development, and economic advancement. Embracing linguistic diversity and nurturing linguistic heritage are essential for fostering a vibrant, inclusive, and harmonious society that celebrates the richness of India's linguistic tapestry.

IKS for holistic development:

National Education Policy 2020 emphasizes holistic development by focusing on various aspects to foster a well-rounded educational experience for learners. IKS can contribute to the holistic development of students and improved wellness of the community. IKS offer a holistic approach to development, encompassing a vast array of disciplines, including philosophy, science, mathematics, astronomy, medicine and spirituality. The IKS emphasizes the development of the right understanding and clarity of living in harmony at all levels of human existence. It is a knowledge system that ensures right understanding and clarity of living in harmony at all levels of human existence.

Indian culture and civilization have been able to evolve such a knowledge system over thousands of years, testing it through practice, verifying and improving it. IKS is founded on the well-being of all and seems to satisfy the requirement of a holistic and humane knowledge system. IKS can be integrated into different subjects in the education system in a culturally sensitive and respectful manner by acknowledging diverse sources of Indian knowledge, which can enrich the curriculum.

For example,

- **Arts and humanities:**

IKS can offer a deeper understanding of Indian literature, music, dance and visual arts. In language education, IKS can help students learn Indian languages and appreciate the rich cultural heritage associated with them.

- **Commerce and Management:**

IKS can be integrated with commerce and management which can help students understand

traditional Indian business practices, ethics, and values.

- **Science and Technology:**

IKS can provide insights into ancient Indian scientific discoveries and technological innovations.

- **Philosophy and Spirituality:**

IKS helps delve into the teachings of Indian philosophers and spiritual leaders.

By incorporating IKS into various subjects, students can develop a holistic understanding of India's cultural heritage, traditional wisdom, and contributions to various fields of knowledge. This can foster a sense of national pride and identity, promote ethical decision-making, and contribute to the preservation and promotion of India's rich cultural heritage.

Conclusion:

The Indian government has taken several steps to integrate IKS into the education system, and it is expected that these efforts will help to restore and re-evolve Indian Knowledge systems while inspiring learners and restoring the legacy of India's greatness. The integration of Indian knowledge systems into language learning and holistic development as outlined in NEP 2020 represents a transformative shift towards a culturally rooted, inclusive, and holistic education system in India. By doing so, students can learn the importance of "doing what's right" with a logical framework for making ethical decisions. This is especially important for the young population. By focusing on quality and equitable education for all, stakeholders in the Indian educational system can strive to create a more inclusive and culturally-rich educational framework.

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Sustainable Development and Indian Knowledge System

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Abstract

The Indian Knowledge System is a transmission of knowledge from one generation to the next. It is a well-structured system and process of knowledge transfer, rather than just a tradition. Upanishads, Vedas, and Upvedas are all part of the Indian Knowledge System. India talks about Vasudhaiva Kutumbakam-which is a phrase from the Hindu text the Maha Upanishad. The NEP, 2020 recognizes this rich heritage of ancient and eternal Indian knowledge and thought as a guiding principle.

India has a very glorious past where we were rich in all aspects whether it's art and culture, science or medicine, astrology or mathematics. IKS contribution is immense in almost all fields of intellectual inquiry and focused on sustainable development. Our Vedas treated nature as God where even plants like Neem, Tulsi, Peepel, and so on are worshiped and promoted on plantations. India has always been a hub of knowledge where the world's top universities like Nalanda, Takshashila and Magadh University were set up and all the disciplines were taught here. The Indian Knowledge Systems comprising Jnan, Vignan, and Jeevan Darshan have evolved out of experience, observation, experimentation, and rigorous analysis. The Indian Knowledge system is a generic phase that includes everything like archeology, ayurveda and medicine, medicine, astrology, astronomy, public administration economics and so on.

In this paper I attempt to explore the notion set up by the Indian education system for sustainable development through avoiding over exploitation of natural resources and working for the welfare of earth. This paper talks about the Indian knowledge system and how it focuses on sustainable development so that we can serve the purpose of one earth, one family and one future.

Key words: Indian Knowledge System (IKS), Sustainable Development

Introduction

The Bhartiya way is sustainable and strives for the welfare of all. It is important that we regain the comprehensive knowledge system of our heritage and demonstrate the 'Indian way' of doing things to the world. This requires training generations of scholars who will demonstrate and exemplify to the world a way of life so unique and peculiar to our great civilization.

The NEP, 2020 recognizes this rich heritage of ancient and eternal Indian knowledge and

thought as a guiding principle. This tradition of validating and putting into practice has impacted our education, arts, administration, law, justice, health, manufacturing, and commerce. This has influenced classical and other languages of Bharat, that were transmitted through textual, oral, and artistic traditions. “Knowledge of India” in this sense includes knowledge from ancient India and its successes and challenges, and a sense of India’s future aspirations specific to education, health, environment and indeed all aspects of life.

The national Education Policy strictly etches out its goal to restore the image of Indian being the viswa Guru. For the same, the policy document sheds light on the proud examples of Nalanda and Takshashil and the diverse range of subjects that were taught there under the supervision of gate mentors. The revised policy hints at great mentors. The revised policy hints at establishing Multidisciplinary Education and Research Universities (MERU) for holistic education across the country, Banabhatta, in his epic work Kadambari identifies knowledge of 64 kalas/arts as a good education. This Knowledge of many arts should be the focus of education as per NEP-2020. It naturally adds the element of quality to the education sector of the country.

Human beings are inherently knowledge generating in nature with unique capabilities. The Indian Knowledge system is a generic phase that includes everything like archeology, ayurveda and medicine, astrology, astronomy, public administration, economics and so on. IKS is not all about knowing ancestral knowledge only but also identifying the uniqueness of the IKS by utilizing it for economic, social and global development. The Terms “Indian Knowledge” and “sustainable development” are correlated terms, with widely varying definitions and interpretations. till now we are following the macaulay’s English education system. we have alienated ourselves from our roots that become very problematic. In this paper I attempt to explore the notion set up by the Indian education system for sustainable development through avoiding over exploitation of natural resources and working for the welfare of earth.

Operational Definition

1. Indian Knowledge system

The NEP 2020 recognizes India's rich and eternal knowledge of history. The Indian Knowledge Systems (IKS) is considered to be scientific including tribal knowledge and indigenous & traditional modes of learning. It intends to encompass topics such as mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, and so on. Other key areas of focus include tribal ethno-medical practices, forest management, natural farming, etc. Tradition mentions 18 major vidyas, or theoretical disciplines; and 64 kalas, applied or vocational disciplines, crafts. The 18 vidyas are: the four Vedas, the four subsidiary Vedas (Ayurveda –Dhanurveda – weaponry, Gandharvaveda – music and Silpa – architecture), Purana, Nyaya, Mimamsa, Dharmasastra and Vedanga, the six auxiliary sciences, phonetics, grammar, astronomy, ritual, and philology — these formed the basis of the 18 sciences in ancient India.

2. Sustainable development

Sustainable development can be defined as an approach to the economic development of a country without compromising with the quality of the environment for future generations.

Research objective

To review the role of Indian knowledge system in sustainable development

To find out the role of integrating Indian knowledge system in our education system

Delimitation

The researcher has used secondary data because of the limited time zone

Results and Discussion

India is a country with a long civilization history where all the world was uncivilized. Sustainability is not a new term in the context of India. We discuss four pillars of sustainability that are human, social, economic, and environmental.

Indian Knowledge System [IKS] and Human Sustainability

Human sustainability aims to maintain and improve the human capital in society. IKS emphasizes the investment in education and health. The aim of education is not to share information but to develop rationalism and skill development. Our Vedas say “Arth kari sa Vidya” means education aims to develop the earning skills of humans for the sustainable development of society. our education policy has talked about vocational education for generating the employability of the people so that society could be more coherent. Ancient Indians considered the body to be the first instrument for leading a satisfactory life by performing the right duties for the attainment of Purushartha. Therefore, health was considered an important aspect of life and according to Charaka, Ayurveda must be studied and practiced by every individual in the society. We give more importance to the health and wellness of our mind, body, and soul. Now we are celebrating World Yoga Day on 21 June. When the pandemic affected a major part of the world, we were the least affected because of our food habits which we got from the indigenous tradition. We use different spices in our daily food like Tulsi, Neem Turmeric, cumin, black pepper and so on which also work as medicine. We are including millet in our food habits and promoting yoga and meditation to be psychologically fit. With a long civilizational history, India has a rich body of knowledge and experience that has developed within the society from time to time, captured through a variety of literary works. On account of the diversity of people and issues discussed in the Puranic Repositories. Various stories like Panchatantra Ki Katha, Upanishad and Different epics like Ramayana and Mahabharata Were the source of knowledge about one’s responsibility toward one’s family, society and dharma that is Relevant to all the ages in the Indian tradition, these are especially taught to the children so that they can imbibe these ideas, values, and notions, while they are young, and they can make use of this wisdom all through their life. In the present scenario. Geeta is a Source of knowledge that enriches us with life, skill, and knowledge.

IKS and Social Sustainability

Social sustainability occurs when the formal and informal processes; systems; structures; and relationships actively support the capacity of current and future generations to create healthy and liveable communities. An ideal society is based on values and inclusivity irrespective of caste colour and gender. our ancient society was occupation-based. In Ramayana, we come to know about how King Rama gave regard to Shabri. Our Indian knowledge system includes all the Vedas Vedangas upanishad, Puranas and so on from the various resources we find that our society was based on gender equality and inclusive setup. Gargi Vachaknav Maitreyi, Nalayani, Savitri, Kaikeyi, Sita, Mandodari, and Ahalya, were the greatest women scholars who kindled the light of knowledge.

According to Manu, where women are honored, there the gods are pleased; but where they are not honored, no sacred rite yields rewards.’’ Our philosopher and education policy maker has emphasized inclusive education at various stages to reduce inequalities by promoting international and domestic support for decent work and job creation, quality education, and universal social protection.

IKS and Economic Sustainability

Economic sustainability is the approach whereby economic activities are conducted in such a way as to preserve and promote long-term economic well-being. In practice, it aims to create a balance between economic growth, resource efficiency, social equity and financial stability. In practice, it aims to create a balance between economic growth, resource efficiency, social equity and financial stability.

India is a country of economic richness in technology and arts and crafts. Ancient India's contribution to metalworking and in more general terms to metallurgy and material science are noteworthy. Ancient India has been extracting iron and gold. Jink and copper from their ores. Town planning and architecture are very significant in India. We have a very rich cultural heritage that is still reflected in the present time. The Arthasatra is one of the world's oldest treatises on the economic administration of the state, using detailed financial planning, the three main types of economic activity, agriculture, cattle rearing, and trade, which is still significant in the present time, the main source of our income based on these three aspects. The healthy reserve in the treasury and a strong army are the two pillars that the king can bring under his control both his people and the enemy. That is still reflected in the present scenario of our country. Our strong army protects us from our neighboring countries. and Terrorism which is the greatest concern on the global front. The Treasury helps the government for the betterment of the people and the development of the country.

Indian Knowledge Systems in Conserving the Nature

The practical practicality of where they live proposed a model that was economically and

ecologically viable and socially sustainable. The Vedic people recognize the importance of mutual dependence and coexistence with nature and other living beings. This is well documented and articulated in the numerous Headwinds in Rigveda on several aspects of nature. Man, and Nature. Have a strong relationship of mutual dependence. Living entities and nonliving entities also are mutually dependent. Our ancestral wisdom and practices in everyday living seem to have understood this aspect and respected it. Numerous references convey the idea. For example, as we already saw in Shanti Sukta, the well-being of not just the living entities but also the natural system is sought through prayer. The Vedas gave reverence to the Sun, the Moon, the stars, planets, comets, etc, to flora and fauna around, to the forests, deserts, rivers, seas, and oceans, to the mountains, and so on. The Vedic people recognize the importance of mutual dependence and coexistence with nature and other living beings but today the world is facing the problem of natural calamity, famine, floods, mass migration, etc. because of the overexploitation of resources. The world has understood the need to preserve nature. The Government is implementing the National Action Plan on Climate Change (NAPCC) which provides an overarching policy framework for all climate actions. It comprises eight core Missions in specific areas of solar energy, enhanced energy efficiency, sustainable habitat, water, sustaining Himalayan ecosystems, Green India, sustainable agriculture, and strategic knowledge for climate change. The National Clean Air Programme (NCAP) is a national-level strategy to reduce air pollution levels across the country. These action plans focus on city specific short/ medium/long-term actions to control air pollution from sources such as vehicular emission, road dust, burning of biomass/ crop/ garbage/ Municipal Solid waste, landfills, construction activities, and industrial emissions. Now environmental studies became part of curriculum to sensitize the students toward nature. now we realizing “Living in harmony with Nature”

Indian Knowledge Systems and Disaster Risk Reduction

Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.

The town planning practice of ancient India was very systematic, having a community hall and sufficient water reservoir within the city. In Jaipur Bikaner and Kuch, we can see the systematic approaches of town planning where the people do rain harvesting. Today we are also promoting and teaching the people to do water harvesting to avoid water scarcity and making dams for irrigation purposes. The Manusmriti, where Chapter 7 dealt with statecraft, organization, and function of the army, description of forts, and firearms in the Shukraniti, authored by sage Shukracharya; and the Puranas like Agni Purana, Brahma Purana, and Brahmanda Purana which deal with diplomacy and warfare. There has been a push towards “Indianisation” of the Indian military and at the Combined Commanders Conference held in Kevadia, Gujarat, in March 2021,

Prime Minister Narendra Modi stressed greater indigenization in the national security apparatus, including in the doctrines and customs of the Armed Forces. Chanakya has initiated to unite the country.

Conclusion: -

Indian knowledge is the accrued knowledge over several generations and preserved in formal and informal means. Sadly, ancient Indian knowledge has been relegated to millions of palm manuscripts lying scattered all over the country, and it is gathering dust. While several scholars are engaged in the process of bringing the hidden knowledge out of these manuscripts by researching and republishing such works, it does not match the scale required to make a meaningful impact. Other hand, the oral tradition. In some, rural pockets are at threat of becoming extinct for want of patronage.

The question in front of us is, “Does any society need to preserve, protect, and pass on the Indian knowledge to the future generation”? the thinking pattern and the repository of knowledge created by the forefathers in any society enabled the current generation to understand the thought process and framework of the previous generation. It will allow them to analyze the received wisdom in a contemporary context and identify new opportunities to assimilate the accrued wisdom and synthesize new knowledge.

Therefore, keeping the current generation in the dark about the contribution of the ancestor is an inefficient and assorted Cited. Option for society. Ancient knowledge serves multiple roles in society. The ancient knowledge brought to society is the identity it provides to fellow members of the society. The social practices and norms have continuity as most of them are transmitted from one generation. Relation through practices and supporting knowledge.

Culture has several dimensions. In a direct sense, it is the manifestation of human intellectual achievement, regarded collectively by society over time. Knowledge and innovation are on a continuum. If the underlying knowledge system is abruptly withdrawn from society, the culture will be jolted. New knowledge creation in any society is path-dependent. When the benefit of prior knowledge and the thought process is lost by society, it will lead to reinventing the wheel, making innovation and new knowledge creation efficient. In this contest, ancient knowledge plays a valuable role in received wisdom and provides a head start to a society to March on the highway of innovation and new knowledge creation. On the compelling argument in support of the ancient knowledge system has a huge potential to offer from an economic value standpoint, the emerging world order puts greater emphasis on knowledge society.

The prevailing military power will give way to knowledge. Power and such notions that demonstrate the superiority of knowledge tradition are bound to lead the rest of the world. Transforming knowledge into economic value has been fully formalized with the global

intellectual property rights regulation and patent law. Therefore, the Indian knowledge system will be beneficial to a country like India and lead to the sustainable development of the nation.

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Medicine in Buddhist Literature: A case study of Milindpanho**Dr. Meherjyoti Sangle***Professor, Department of History,**S. N. D. T. Women's University, Mumbai.*

Abstract

In ancient Indian history, medical science was at the pinnacle. There was a physician, and the texts had also been written. We obtained medical references from the Rigveda and Atharvaveda periods. Later Vedic times produced several medical writings devoted solely to medical science, such as Charak Samhita, Susrut Samhita, Astangahrdaya-Samhita, and so on. It demonstrates that medical science was very old and existed before human civilization began, relying on observation and experimentation. It also refers to not only physical lifestyles, but also the psychological well-being of people over time. The causes of illness are not always the same. It has evolved over time based on human conduct. Generally, ancient religious texts related the causes of sickness. Diseases do not usually have the same causes. Due to changes in human conduct, it has evolved over time

This paper examines where religious texts throw the light on medical science, especially focused on the diverse aspects of the causes of diseases. This paper analyzes the Buddhist's literature to learn how the ancient monks used various medical procedures, treatments and how spiritual philosophy kept them healthy. This paper is based on original Buddhist texts as Milindpanho and Abhidhamma. It also compares to Burmese Buddhist literature.

Key Words: Medicine, Buddhist Literature, Milindpanho, Abhidhamma, causes of Sickness

Introduction

In ancient Indian history, medical science was at the pinnacle. There was a physician, and the texts had also been written. We obtained medical references from the Rigveda and Atharvaveda periods. Later Vedic times produced several medical writings devoted solely to medical science, such as Charak Samhita, Susrut Samhita, Astangahrdaya-Samhita, and so on. It demonstrates that medical science was very old and existed before human civilization began, relying on observation and experimentation. It also refers to not only physical lifestyles, but also the psychological well-being of people over time. The causes of illness are not always the same. It has evolved over time based on human conduct. Generally, ancient religious texts related the causes of sickness. Diseases do not usually have the same causes. Due to changes in human conduct, it has evolved over time

This paper examines where religious texts throw the light on medical science, especially focused on the diverse aspects of the causes of diseases. This paper analyzes the Buddhist's

literature to learn how the ancient monks used various medical procedures, treatments and how spiritual philosophy kept them healthy. This paper is based on original Buddhist texts as Milindpanho and Abhidhamma. The messages of Buddha spread not only in India, but also in Sri Lanka, Burma, Thailand, Cambodia, Laos, China, Japan, and Nepal. It also compares to Burmese Buddhist literature.

Milindapanho

An important Buddhist literature written in Pali between 100 BC and 200 AD is called Milindapanho. It is a transcript of a conversation between the Indo-Greek King Mandar I of Bactria and the Indian Buddhist philosopher Nagasena. The textual exchange took place at Sala, a location in Sialkot. This text is essentially a series of questions and answers. Nagasena responds to Milind's queries in a highly critical manner. There are two volumes to it. This text has six Adhyas. It has been translated into many languages of the world. It is translated into Sanskrit and Chinni Sri Lankan. In 1890, T. W. Rhys Davids translated the Pali text Milindapanha (both volumes) into English. (Davids, 1890).

The Milindpanho literature contains several dimensions of spirituality, philosophy, life cycles, soul journeys, behavior patterns, and rules and regulations governing various virtues and evil acts. It provides us with an overview of religious faith, reincarnation, for Arya, Satya, karma, philosophy, health, stage of hell, stage of heaven, disputes on religion, philosophy of phases of Nirvana, and who has accomplished this level. (Davids, 1890. p.107).

This publication provides glimpses of religion, philosophy, literature, history, and geography in Pali language. It also examines social life in terms of four varnas, businesses, women's position and women's conditions, lifestyles, diets, and industries, as well as numerous vocations and medical practices. It provides information about punishment, several forms of marriages, education, literature, and the numerous artistic and architectural endeavors of the Stupa throughout history.

It also looks at the economic situation in terms of internal and foreign trade, especially milk production, jewelry manufacture, and other forest products. It also discusses historical geography in terms of mountains, villages, cities, and rivers, using question-and-answer format. In short, Buddhist literature generally provided insights into the physical, material, spiritual, and daily activities of Bhiku and common people. Medical science advanced significantly during this time period.

Health in Buddhist Literature:

Buddha described himself as a vaid and surgeon.

अनुत्तरो भिसक्को संलक्कतोभत (Kashyap, 1972, p. 21).

Nagsen informed King Milind about sick people, illnesses, and their treatments. He also learned about the various diagnostic techniques. In the second volume, we received questions on a

range of health-related subjects. Is it true that Bakula was in greater health than the Buddha, as some have speculated? (Davids, 1894, p. 8). It was analyzed in such a way that everyone has the right to good health, and even Buddha acknowledges this. It explains the do's and don'ts of maintaining a healthy lifestyle. For example, it indicated being restrained in the stomach (Davids, 1894, p. 107). This has demonstrated that greediness of the stomach is the cause of many physical health problems, and it should be avoided.

Mental Health

It talks about how the mind and soul affect one's mental health. Here, personality development techniques and modern - contemporary science have been combined in an unorthodox way to demonstrate the need for mental control over bodily discomfort. It is related in that physical pain would not be experienced if mental training was applied to the mind. When pain occurs and the mind is untrained, it gets agitated and bends the body in different directions. (Davids, 1894, p. 76).

Causes of Diseases

The causes of diseases are covered in other Buddhist literature such as the Tripitaka and the Abhidhamma, albeit there are notable variances. The second volume of the Milindpanha framework focused on disease causes. According to philosophical and spiritual perspectives, the causes of diseases include not only grief, but also the fact that some of the sorrow was caused by disease, hence the list of diseases includes the causes of disease. Nagasen addressed the sources of happiness and misery. However, Nagasen has also indicated that there are bodily causes that are related to the state of grief and happiness. It demonstrates that the Ayurvedic idea of tridosha has been included in the list of causes of sickness. It has added the diet, seasons, and surrounding circumstances. Nagasen identified eight types of ailments in the Milindpanho book. (Davids, 1894, p. 76, 137).

1. Disturbances in Vat or wind
2. Disturbance in acidity
3. Increases cough
4. Changes of season
5. Changes of Diet
6. Influence of outside of physical and natural resources
7. Because of typhus, it means infection
8. because of fruit of our Karma

Girianaanda Sutta, a Buddhist literature also focused on the causes of illness. The monk Girimananda discussed "The Perception of Danger" while Buddha instructed the monk, mentioning the forty-eight types of illness or hazards that the human body faces. (Pierce, 2019, p. 580).

Ritual Therapy

People and practitioners pursued various forms of medical therapies based on the references they received. Mantra recitation was utilized and performed to cure illness during the Rigvedic period. It has extensive roots in some indigenous cultures dating back to ancient times. It was also seen in folk medicines especially among tribal communities. (Jaggi, 1974). The mantra treatments or ritual therapy is also used in a number of ancient religious practices. This sort of therapy is commonly used in religious scripts and monographs. For example, it appears in Avesta, the holy literature of the Parsi community.

In Paritrana Deshana, the monk binds Rakshabandhan to the worshippers' right wrists and recites the mantra below, which means that all of your impediments will be removed, all of your sicknesses will be dissolved, you will not have any difficulties, you will be joyful, and you will live a long life. (Kashyap, 1972, p.27).

सब्वी भिज्जन्तुसब्बरोगो भिनसतु
मात्तितुअंतरायो, सुखी दीघायुको हि ॥

Many researchers believe it did not exist during the Buddha's time, but it is described in the Milindapanha Text. The goal is that this ceremony will release one from sickness. (Kashyap, 1972, p. 27). We learn about reciting mantras after snake bites to remove the toxin from the human body. The power of mantras compelled the snake to consume poison from human bodies. Treatments using voids helped patients recover from their illnesses. This book also discusses the manufacture of five types of herbal medicines and their applications to various ailments. But we can't get the names of the herbs.

Abhidhamma

According to scholars, one of the Buddhist texts, the Abhidhamma, originated around the third century B.C.E., following the Buddha period. Thus, the words come from the post-Buddha period rather than the Buddha. The Buddhist Abhidhamma text discusses cosmology, psychology, and ethics and is truly considered a work of philosophy. Abhidhamma Taungtha asserts that the only foundation for medical knowledge is the philosophy and precepts of the Buddha. However, the Abhidhamma has been translated into numerous Asian languages. Burmese translations of it are also available. However, Burma put a lot of effort and thorough research into this text from a medical and health standpoint.

Abhidhamma Taungtha : Burmese Buddhist Text

The Light of Abhidhamma Taungtha Medical Knowledge on Elements is a Burmese Buddhist book. Hsaya Kyi, a doctor affiliated with the Abhidhamma Taungtha Medical Association, penned it in 1977. King Mindon's (1853–1878) royal physician was Kyi (1811–1877). There is a brief chapter titled "The Cause of Illness" in this book.

Kyi listed the 96 different forms of sickness and their corresponding physical and psychological causes. For this chapter, Kyi has referred to the Abhidhamma text. He has spoken about the cosmological illnesses and how they are treated. Even though Kyi is also covered in terms of the fundamental four to five body parts and how illnesses are sometimes caused by a combination of material and spiritual factors, such as

Karma,

Consciousness,

Temperature

Nutrients, (Pierce, 2019, p. 577).

He included fire as an additional element. He said that one of the primary causes of disease in the human body is fire elements. Additionally, Kyi talked about psychiatric problems and how excessive greed, anger, and delusions are their causes.

Temperature:

The greatest influence is temperature, which can be felt as either hot or cold. (Davids, 1894, p. 577). All four of the elements are impacted by temperature. The four elements are Earth, Water, Fire, and Wind. There are four ways that it can happen.

1. Predominant 2. Latent. 3. Weak 4. Strong

These four elemental imbalances give rise to the ninety-six distinct types of illness. Abhidhamma Taungtha claims that the foundation of medical knowledge is the teachings of the Buddha such as,

Materiality is afflicted with cold,

Materiality is afflicted with heat.

These two elements are under the element of Fire. The two forms of fire elements, according to Kyi's diagram, are hot and cold. (Pierce, 2019, p. 577). Buddhist literature explains that excessive greed, excessive anger, and excessive illusion are the root causes of ninety-six different sorts of illness. However, these traits provide the justification for the excess.

Kyi has provided explanations such as, "There is an interval of famine" because of the inordinate greed of all beings. There is a "interval of sword or war" since all beings have extreme enmity for one another. All beings have a "interval of disease," or an epidemic breakout, as a result of their overwhelming illusion, which shortens their life span. (Davids, 1894, p.578). To put it briefly, greed, hatred, and illusion are the main causes of illness and lower life spans.

The illnesses do not usually have the same causes. There wasn't as much of it in the past as people lived by virtue. Because they didn't consume beef, humans in ancient times or during the Buddha's time had lovely bodies, and as a result, the causes of disease are hunger, desire, and aging. Burmese mythology states that

"Wealth is guarded by Karma, life is guarded by wisdom." (Davids, 1894, p.578).

Medical Abhidharma Taungtha Burmese tradition places a strong focus on moral behavior because it leads to a prosperous and healthy life. The causes of some aspects are interrelated with one another; for example, excessive greed grows and has an impact on the environment. The climate deteriorates. The quality of nutrients and food flavour are lost when the climate deteriorates, as are their consequences on the planet.

“The Blessed one of Medicine Bazar”

In the Medicine Bazar chapter, Nagasena explains how drugs can take on moral shapes and how they are related to both good and bad behaviours.

He stated, “Of all the drugs, in all the world,

The antidotes of the poison of the dire,

Not one equals that Doctrine sweets,

Drink that, O brethren, Drink and live!” (Davids, 1894, p. 217).

Nagasena described some medications that are known as blessed drugs because they have the power to heal both God and the entire earth. The Noble Eightfold Path, the seven Forms of the Wisdom of the Arahats, the five Organs of the moral sense, the five moral Powers, the fourfold Great Struggle, the four Steps to Iddhi, and the four Means of maintaining readiness and mindfulness.

Medicines are prescribed based on spiritual philosophy. He further discussed that, by these medicines the blessed man frees him from wrong thoughts, rids him of base passions, purifies him of evil speech, purifies him of evil deeds, frees him of evil means of livelihood, frees him of wrong endeavors, purifies him of evil thoughts, frees him of wrong meditation. does; And he vomits up lust, hatred, slowness, and suspicion, and self-righteousness, and slothfulness of the body, and heaviness of the mind, and impudence, and hardness of heart, and all things. This is what is called the "blessed drug market".

"Of all the medicines found in all the world,

Many in number, various in their powers,

Not one equals this medicine of the Truth.

Drink that, O brethren. Drink, and drinking, live !

For having drunk that medicine of the Truth,

Ye shall have past beyond old age and death,

And — evil, lusts, and Karma rooted out —

Thoughtful and seeing, ye shall be at rest !" (Davids, 1894, pp. 218, 230)

Conclusion

All Buddhist literature in India, including Milindpanha, has medical advice based on spiritual philosophy. It talks about how the subtle and mental phases of the physical body are

related to excellent values that give the mind and soul freedom from fear. Nagsen connected wicked things to a person's illness. He went on to stress the importance of mental and psychological well-being based on "Real Truth," which guides moral decisions, behaviours, and thoughts. It gets rid of lust, jealousy, and animosity, which benefits positive karma. Positive deeds lead to good karma and have an impact on the body, mind, and soul, which improves health for the duration of life. Burmese Buddhist literature, on the other hand, emphasizes medical science over spiritual perspectives.

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Notes:

Ambrosia = Amrut, God's drink.

An antidote is a medicine taken to counteract a poison. Some of the examples are 'atropine' used in organophosphorus poisoning and anti-snake venom which is used in snakebite.

Arahat : In Buddhism, an arhat (Sanskrit: अर्हत्) or arahant (Pali) is one who has gained insight into the true nature of existence and has achieved Nirvana and liberated from the endless cycle of rebirth.

The Avesta is the primary collection of religious texts of Zoroastrianism, composed in the Avestan language.

An Article on Indian Knowledge System (IKS) And Management Education**Dr. Rajesh Kumar Pandey***Associate Professor,**SSR IMR, Silvassa**Permanently Affiliated to Savitribai Phule Pune University, Pune*

Abstract:

Education leads to the Holistic Development of individuals. Individuals sum up to be the group & groups lead to formation of the Society. A developed individual eventually becomes the base for a developed society. Education and Business have been knitted together. The Indian Knowledge System (IKS) enhances the level of education and has a strategic impact on Businesses. IKS, enables a holistic approach to education. it finds its roots in India's ancient wisdom; it integrates traditional values with contemporary knowledge. IKS has a notable influence on Management Education as well. Businesses do get influenced by the Knowledge system. The Indian Management model preaches holistic Education & business development through non violent competition, ethics through Indian ethos, inclusive workforce & social communities. This article attempts to understand the essence of IKS and study the connection between IKS & Management Education. The Author has connected the learning from Mahabharata and Ramayana, the ancient scriptures. The article encompasses the theoretical understanding on IKS, the same would turn up as literature for further studies. IKS can be witnessed and probably has the scope in the Educational environment and business domain.

Key Words: Education, Educational Environment, IKS, Management Education

Introduction:

“We owe a lot to India and the Indians, who taught us how to count, without which no worthwhile scientific discovery could have been made.”

-Albert Einstein

IKS is the source of building the base for the education system. The NEP 2020 recognizes this rich heritage of ancient and eternal Indian knowledge. The ancient scriptures state that the IKS comprises Jnan, Vignan, and Jeevan Darshan that have evolved out of experience, observation, and experimentation. IKS has influenced languages of the Nation and has had an impact on textual, oral, and artistic traditions. IKS hence includes knowledge from ancient India and its progress. Indian civilization is one of the most ancient civilizations in the world with a very rich history. The Vedas, Arthshastras and various philosophical texts provide a vast reservoir of knowledge on life, business and society. Certainly adopting the western principles blindly is not the solution. As we understand that the companies certainly would not like to adopt a process without examining,

hence a knowledge system which is beyond the boundaries may not get accepted, hence indigenous is key to success. It holds true for management models also. Choose the best of both worlds and devise a new management model suitable to the motherland. Indian companies largely adopt principles formulated by Peter Drucker, Henry Fayol, Fredrick Taylor, Philip Kotler etc. Regarding the contribution of Late C K Prahlad is more important. The IKS, through its emphasis on cultural enrichment, profoundly influences students by exposing them to India's rich heritage. This exposure cultivates a deep sense of identity and pride, instilling in students a connection to their roots. Delving into ancient texts and philosophies within the curriculum offers a unique lens through which students can explore profound values and ethical principles.

Objectives Of The Study:

The Author has considered the following objectives for the study:

- i. To understand the essence of IKS).
- ii. To study the connection between IKS & Management Education.

Research Methodology & Process:

The article on **IKS & Management Education** is a descriptive article attempted by collecting data through the Secondary sources. The Author through the article aims to understand the essence of IKS and further study the connection between IKS & Management Education. This literary effort encapsulates the generation of further literature pertaining to the IKS domain and links the same with Management Education. The author has discussed the IKS & Management Education in general rather than any specific course or programme of Management which may turn up as a limitation of the study. The inferences drawn from the study may be indicative in nature rather than exhaustive.

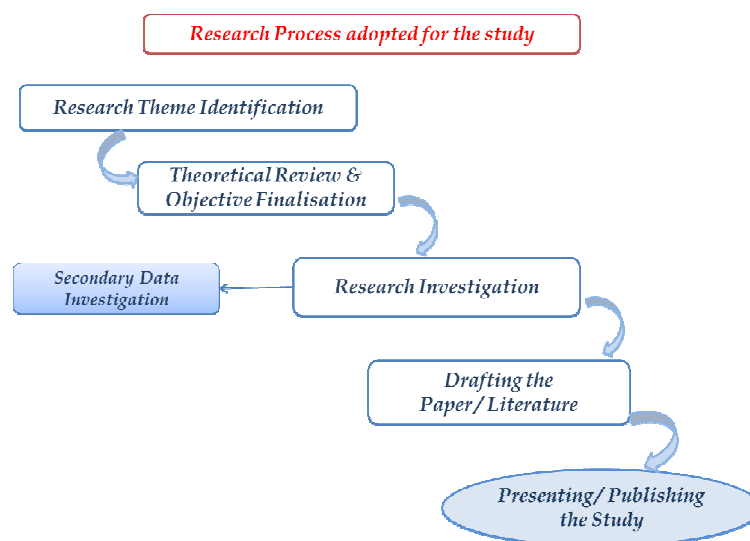


Fig. 1: Research Process adopted for the study

Source: Author's Study

Indian Knowledge System (IKS): Perspective and Agenda

The perspective of IKS is visible through the benefits that IKS contains. The robust knowledge system of India enables the learners to engage in constructive avenues leading to productive results. The IKS is today well coordinated by the government and it enables a holistic education. India's ancient wisdom integrates traditional values with contemporary knowledge. IKS emphasizes holistic development through various forms of education & activities. IKS offers a vast repository of wisdom. It stands as a great repository of wisdom collected over the period in the fields of Science, Health, Agriculture, social well-being, general commerce and overall education sphere. Key obstacles include the lack of awareness and understanding of IKS among educators and administrators, recording of IKS knowledge, resistance to change within educational institutions, and an inclination towards western knowledge systems. The globalized approach gave new perspectives to the institutions in terms of curriculum development & delivery. Professional development of the teachers has become the need for the institutions in order to cope up with the advancement in education & adopting IKS. As one refers to the fact that Higher Education attracts higher responsibility at the end of both teachers and students, so understanding the multifaceted Education system is essential. Education does lead to the holistic development of individuals. A developed individual eventually becomes the base for a developed society.

Iks & National Education Policy (Nep):

The New National Education Policy (NEP) 2020 advocates the fundamentals of IKS. The National Education Policy (NEP) 2020 aims to address the growing development educational needs of the Nation. The Policy proposes the revision and revamping of all aspects of the education structure, NEP 2020 promotes active pedagogy, development of core capacities and life skills, including 21st century skills, experiential learning at all stages, low stake board exams, holistic progress card, transformation in assessment to promote critical and higher order thinking among students, mainstreaming of vocational education and reforms in teacher education. The National Education Policy is the improvised way of structuring the education system leading to nurturing the talent in the nation. It is an initiative that gives importance not only to the weak students but also to the creative minds of this new generation. The NEP 2020 is a wonderful opportunity to revamp the education system and progress further with affordable and quality Education for All.

Table No. 1: Highlights of the Education Policy over the Years

Sr. No.	NEP / NPE	Key Highlights of the Policy
1	NPE 1968	<ul style="list-style-type: none"> 1st National Policy on Education - recommendations of Kothari Commission Free & Compulsory Education 10+2+3 Pattern of Education Focused on multiple languages for education
2	NPE 1986	<ul style="list-style-type: none"> Further Equalize educational opportunities especially for Women & different castes +2 encouraged to be part of Schools Primary, Secondary sections & Higher Secondary establishment Open Education and Distance Education Jawahar Navodaya Vidyalayas
3	Rev. 1992	<ul style="list-style-type: none"> Review of 1986 Policy by the Ramamurti committee 1986 policy was updated in 1992 during P V Narsimha Rao Government Special Schools with hostels, arrangement for vocational training, Education for Specially abled
4	NEP 2020	<ul style="list-style-type: none"> FOUR sections for focus: School Education, Higher Education, Other key areas & implementation 5+3+3+4 school system, with board exams in 12th Multidisciplinary Education Multiple exits at graduation level, potential of 4 years graduation with 1 Year PG after graduation. early PhD enrolment with no scope of M Phil Promotion of Indian Languages, Arts, and Culture

Management Education:

“An investment in knowledge pays the best interest.”

- Benjamin Franklin

Education has travelled through the path of Vedas Gyan, Gurukuls, to the class rooms and now to the Virtual medium. Motto remains the same i.e., equip the individual with the purpose of existence. Education & Learning has been a never ending process. A person learns the best of the possible experiences in life. The experiences consist of personal life, professional life, environmental exposure, socio – cultural learning, civic sense, political know-how etc. The

Management Education is a special wing of education with a career centric approach. It is referred to as a professional education specialising in specific areas of finance & accountancy, human resources, marketing or many other specialized fields. Management education increases business etiquette knowledge. Management education is one discipline of higher education by which students are taught to be business leaders, managers and administrators. It focuses on personality development and Career enhancement.

Management Education: Lessons From Ancient Scriptures – Mahabharata & Ramayana

The ancient scriptures have the potential to nurture the knowledge system. Mahabharata and Ramayana are such scriptures that create domain advantage in management education. Both ancient scriptures have effective management lessons, stated below:

Management Lessons from Mahabharata

- Right Leadership
- Mentorship
- Target and Smart Strategy
- Learning and Development
- Commitment and Common Goal
- Participation of Women
- Team Spirit
- Sense of Responsibility
- Self Determination

Management Lessons from Ramayana

- Perceptual significance
- Employee Value
- Create a Vision
- Ethics
- Faith in the Team
- Planning and Analysis
- Treat Your Rivals With Respect
- Not be Impulsive or Egotistic
- Do Not Make Blind Promises
- Manage Stakeholders
- Creating the Right Alliances
- Don't be a Supremacist
- Constant Communication
- Coolness In Adversity
- Advise of the Wise

Ancient Scriptures do have a strong sense of relatedness. Leadership Lessons from ancient scriptures includes being active, consultation & advise, power (Intellectual, Military, Morale), being well informed, having a sense of accountability, understanding accounting system and competition & strategy. Such management lessons support Industrial growth and set the right momentum.

Conclusion:

IKS holds a strong base in the education system. In the contemporary world, education is key to human development leading to societal development. IKS does face its share of challenges in implementation. Key obstacles in the implementation of the IKS include the lack of awareness and understanding of IKS among educators, resistance to change within educational institutions, and the inclination towards western knowledge systems. IKS advocates the fact that education & learning has been a never ending process. A person learns the best of the possible experiences in life. The experiences consist of personal life, professional life, environmental exposure, socio – cultural learning, civic sense, political know-how etc. All such avenues contribute to the true education in life. It is important that we regain the comprehensive knowledge system of our heritage and demonstrate our way of doing things. This certainly attracts more training & developments of citizens at large, who will demonstrate the performance and prove to the world a way of life that goes beyond just materialistic way out and aims to eternal success.

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नालंदा विश्वविद्यापीठ आणि भारतीय ज्ञान प्रणाली

प्रा. डॉ. नीलिमा अरविंद मोरे

सहयोगी प्राध्यापक,

शासकीय अध्यापक महाविद्यालय,

पनवेल ४१० २०६, जिल्हा : रायगड,

सारांश :

संपूर्ण जगामध्ये नैसर्गिक आपत्ती कोणत्याही प्रकारची आणि कधीही येऊ शकते. नैसर्गिक आपत्ती मधील एक आपत्ती म्हणजे भूकंप. या भूकंपामुळे क्षणार्धात होत्याचे नव्हते होऊन जाते. कदाचित अशाच प्रकारचा भूकंप बिहारमध्ये आला असावा आणि या भूकंपामुळे आशिया खंडातील जागतिक स्तरावरील एक नंबरचे विद्यापीठ जमिनीखाली दबून गेले असावे. उत्तखनानंतर आपल्या लक्षात आले की, हे तर नालंदा विश्वविद्यापीठ होते. तसेच भारत हा देश नर-नारी रत्नांच्या खाणीचा देश आहे. या देशातील शास्त्रज्ञांनी, सामान्य व्यक्तींनी असे काही शोध लावलेले होते की ते शोध जगातील लोकांना माहितीसुद्धा नव्हते. परंतु कागदाचा शोध लिहून ठेवण्यासाठी न लागल्यामुळे लागलेले शोध, संशोधने तेवढ्या काळापुरते मर्यादित राहिले. कालांतराने ते मागे पडले. आता आपण जेव्हा शोध घेत आहोत तेव्हा आपल्या असे लक्षात येत आहे की, अरे अमुक अमुक शोध या या देशातील या या व्यक्तीच्या नावावर आहे परंतु याचा शोध तर आपल्या देशातील अमुक अमुक व्यक्तींनी अगोदरच लावलेला होता. या सर्व बाबींचा समावेश भारतीय ज्ञान प्रणालीमध्ये होतो. या पेपरमध्ये नालंदा विश्वविद्यापीठ जुने, नवे, भारतीय ज्ञान प्रणाली, नालंदा विश्वविद्यापीठाची आणि भारतीय ज्ञान प्रणालीची तुलना करण्यात आलेली आहे.

नालंदा विश्वविद्यापीठ जुने/(महाविहार) :-

Dalai Lama once said, 'The source of all the (Buddhist) knowledge we have, has come from Nalanda'. नालंदा शब्द उच्चारल्याबरोबर आपल्या डोळ्यासमोर १५,००० वर्षांपूर्वीची, जगातली /आशिया खंडातील सर्वात जुने विद्यापीठ डोळ्यासमोर उभे राहते. नालंदा हे असे एकमेव विद्यापीठ होते की ज्या विद्यापीठामध्ये एका वेळेस १०,००० विद्यार्थ्यांची आणि १६०० शिक्षकांची राहण्याची व्यवस्था होती. १० किलोमीटर लांब आणि ५ किलोमीटर रुंद अशाप्रकारचा भव्य असा परिसर या विश्वविद्यालयास लाभलेला होता. अशी आख्याईका आहे की, ५०० व्यापाऱ्यांनी आपली स्वतःची २७ एकर जमीन भगवान बुद्ध यांना अर्पण केली होती. त्याच जमिनीवर हे विश्वविद्यापीठ उभे होते. इथे नागार्जुन, बुद्ध पाहिना, शिलनद्र, धर्मपाल, चंद्रपाल, इत्तिस्मानी, शांतरक्षता आणि आर्यदेव असे एकापेक्षा एक सरस शिक्षक ज्ञानार्जनासाठी होते. असे म्हणतात की भारतामध्ये ज्यांनी शून्याचा शोध लावला ते आर्यभट्ट येथील एका विभागाचे प्रमुख होते. नालंदा शब्दाची फोड खालील प्रमाणे केलेली आहे ; NA+ALAN+DA म्हणजे असे ज्ञान की ज्या ज्ञानाची सीमाच नाही. ज्ञानाचे भांडार म्हणजे नालंदा. दुसरा अर्थ कमळ + कुंड असा होतो. कमळ म्हणजे ज्ञानाचे प्रतीक आहे. असे सर्वप्रकारचे ज्ञान की जे एका मोठ्या कुंड्यामध्ये सामावलेले आहे. नालंदा विश्वविद्यापीठाची रचना ही प्रत्यक्षात आणण्याचे सर्वात प्रथम कुमार गुप्त राजाने केली. त्यानंतर कनोजचा राजा हर्षवर्धन यांनी ३ मजले बांधले. त्यानंतर बंगालचा राजा देवपाल यांनी

त्याचा ९ मजले बांधून शेवट केला.

या विश्वविद्यापीठातील वाचनालयाचे नाव 'धर्मगंज' असे होते. हे वाचनालय ३ भागांमध्ये विभागलेले होते. रत्नदिली, रत्नसागर आणि रत्नरंजक. हे वाचनालय म्हणजे भारताचा आत्मा होता. यामध्ये थिऑलॉजी, तत्वज्ञान, तर्क, सांख्यशास्त्र, शल्यचिकित्साशास्त्र इत्यादी विषयांवरील पुस्तके, शोध, संशोधने, पांडू लिपी तसेच दैनंदिन जीवनामध्ये जीवन जगण्यासाठी लागणारे सर्वप्रकारचे भंडार होते. जसे ग्रंथालयामध्ये ३ स्तर होते तसेच शिक्षकांची विभागणी सुद्धा ३ स्तरांवर केलेली होती.

विद्यार्थ्यांची प्रवेश प्रक्रिया खूप जहाल स्वरूपाची होती. सहा गेट पार केल्यानंतरच विद्यार्थ्यांना प्रवेश प्राप्त होत असे. या प्रत्येक गेट वर चौकीदार असे. हे चौकीदार विद्यार्थ्यांच्या शारीरिक, भाषेवरून, त्यांच्या चाल चलनावरून ओळखत असत. शेवटच्या गेट मधून आत प्रवेश प्राप्त करण्यासाठी शुद्ध वर्तन, संघाने ठरवून दिलेले नियम, वेद, वेदांत, सांख्य, व्याकरण, दर्शन आणि योग शास्त्रावर आधारित विशिष्ट प्रकारची परीक्षा घेण्यात येत असे.

या सर्व परीक्षा पास झाल्यानंतरच विद्यार्थ्याला प्रवेश प्राप्त होत असे. जर १० विद्यार्थी प्रवेश घ्यायला आले असतील तर फक्त ३ विद्यार्थ्यांना प्रवेश प्राप्त होत असे. प्रवेश झालेल्या विद्यार्थ्यांना फी भरावी लागत नसे. त्यांच्या खाण्याची, राहण्याची, तब्येतीची सर्वप्रकारची काळजी येथे घेण्यात येत असे. सर्व जगातील म्हणजे जवळपास ३८ देशांतील विद्यार्थी इथे शिकण्यासाठी येत असत. प्रत्येक विद्यार्थ्याला, शिक्षकाला १० बाय १० ची खोली राहण्यासाठी मिळत असे. कस्टर्ड ऑइलचे दिवे प्रत्येक खोलीमध्ये लावलेले असत. पुस्तके ठेवण्यासाठी शेल्फ प्रत्येक खोलीमध्ये असे. ड्रेनेजची व्यवस्था हडप्पा मोहंजोदडो येथील व्यवस्थेनुसार करण्यात आलेले होते. बाहेर चबुतऱ्यावर शिक्षकांची बसण्याची व्यवस्था होती. पुढे विद्यार्थी उघड्यावर बसत असत. पावसाळ्यामध्ये मात्र मोठ्या हॉलमध्ये विद्यार्थी बसत असत. तिथे भगवान बुद्धांची मूर्ती असायची. या व्यतिरिक्त मध्यभागी भगवान बुद्धाचे मोठे मंदिर एक बाजूने असायचे. त्याच्या चार बाजूनीही बुद्धाच्या छोटी मूर्ती होत्या. चबुतऱ्याच्या बाजूनेच विहीर असायची. विहीर गोल स्वरूपामध्ये पण असायची तसेच अष्टकृती सुद्धा असायची. समोरच जेवण बनविण्याची सोय केलेली असायची. त्याचा उपयोग प्रयोशाळेसाठी सुद्धा करण्यात येत असे. उत्खननात ११ वसतिगृहे मिळाली होती. असे एकूण १०८ वसतिगृहे होते. प्रत्येक वसतिगृहामध्ये भगवान बुद्धांची मूर्ती होती. या सर्व मूर्त्या कुमार गुप्त राजाने बनविल्या होत्या.

सर्वप्रथम ४५५-४६७ हुनास याने चवथ्या आणि सहाव्या सेन्चुरीमध्ये या विश्वविद्यापीठावर हल्ला केला. त्यानंतर दुसऱ्यांदा सातव्या सेन्चुरीमध्ये बंगालमधील राजवेश याने हल्ला केला. या दोन्हीही हल्ल्यांमधून विश्वविद्यापीठाने स्वतःला सांभाळले. परंतु तिसऱ्यांदा वर्ष ११९३ शतक १२वे मध्ये बख्तियार खिलजीने या विश्वविद्यापीठाला/महास्तुपाला आग लावली. या आगीमध्ये भारतातील सर्व ज्ञान भसम झाले. जवळ-जवळ ६ महिने ही आग सुरूच होती. त्याने नुसती आगच लावली नाही तर तेथील शिक्षक, विद्यार्थी, चौकीदार यांना तलवारीने मारून टाकले. त्या ठिकाणी नुसता रक्ताचा सडा पडलेला होता. यातूनही काही धर्मगुरू पांडुलिपी घेऊन पळण्यात यशस्वी झाले. काही तिबेटमध्ये गेले, काही थायलंड मध्ये गेले आणि म्हणून तिथे बौद्ध धर्माचा प्रसार आणि प्रचार मोठ्या प्रमाणामध्ये झाला.

आता आपल्याला प्रश्न पडला असेल की हे विश्वविद्यापीठ खिलजीने का बर उद्धवस्त केले असावे? तर त्यापाठीमागे फक्त इर्षा होती. एकदा खिलजी आजारी पडला. त्याच्यावर त्यांच्या लोकांमार्फत उपचार

केले गेले. मोठे-मोठे वैद्यांनी त्याच्यावर उपचार केले. परंतु त्याची तब्येत अधिकच बिघडत चालली होती. एक दिवस कोणी तरी त्याच्याजवळ आले आणि त्याला राहुल श्री बट्टी तुला ठणठणीत बरे करू शकतात असे सांगितले. झाले! खिलजी राहुल श्री बट्टी यांना भेटायला नालंदा विश्वविद्यापीठामध्ये आला. परंतु त्याने अट घातली की मी तुमचे झाडा-पालाचे औषध घेणार नाही. बट्टी म्हणाले ठीक आहे. त्यांनी खिलजीला कुराणाच्या काही प्रती दिल्या आणि सांगितले की यातील रोज ५ ते ६ पाने वाचायची आहेत. त्याने कुराण वाचायला सुरुवात केली आणि काय आश्चर्य? तो एकदम बरा झाला. पुढे त्याने चौकशी केली की, मी औषध न घेता कसा काय बरा झालो? त्यावर बट्टी नी सांगितले की, औषधाचा लेप कुराणावरील अक्षरांवर लावलेला होता आणि मला माहित होते की, खिलजी पान वाचून संपल्यानंतर तोंडामध्ये बोट टाकून नंतर पान पलटवितो. खरं तर खिलजीला या गोष्टीचा आनंद व्हायला पाहिजे होता. परंतु झाले उलटच. त्याला वाटले जे माझे लोक करू शकले नाही ते यांनी केलं. म्हणजे यांना जिवंत राहण्याचा काही अधिकार नाही. म्हणून त्याने सर्व बेचिराख केले. भगवान बुद्धांच्या पाषाणाच्या मूर्त्या त्याने विद्रुप केल्या. बुद्धांचे नाक, कान, पायाची बोटे, हाताची बोटे असे अवयव तोडून फोडून टाकले. चांगल्या गोष्टीची किती मोठी किंमत चुकवावी लागली. आणखी एक कारण होते ते म्हणजे नालंदा विश्वविश्वविद्यापीठतील सर्व शिक्षक, सर्व विद्यार्थी आणि सर्व लोक हे भगवान बुद्धांच्या मूर्तीचे पूजक होते.

वरील सर्व बाबींचा शोध एका चिनी इसमाच्या Hieun Tsang डायरीमुळे लागला. त्याने त्याच्या डायरीमध्ये नालंदा विश्वविद्यापीठाची इतंभूत माहिती लिहिलेली होती. ती डायरी एका इंग्रज अधिकाऱ्याच्या हाती लागली. तो डायरीतील माहितीनुसार बिहार मधील नालंदा येथे गेला. तिथे त्याला एक उंच टेकडी दिसली. त्याने तिथे जाऊन तिथली जमीन हाताने उखरली तेव्हा त्याला हा खजिना सापडला. नाही तर हे संपूर्णतः नष्ट झालेले होते. आताही तिथे जळाल्याच्या खुणा आहेत. विटा काळ्या झालेल्या आहेत. तांदळाचे दाणे जळालेल्या अवस्थेमध्ये आहेत.

नवीन नालंदा विश्वविद्यापीठ :-

आता आपण बघूयात नवीन नालंदा विद्यापीठ. माजी राष्ट्रपती मा. अब्दुल कलाम आज्ञाद यांनी बिहार मध्ये येऊन सांगितले होते की, नालंदा विश्वविद्यापीठाला पुन्हा एकदा जिवंत केले पाहिजे. शैक्षणिक वर्ष २०१७ मध्ये नालंदा विद्यापीठाच्या प्रो. कुलगुरु डॉ. सुनयना सिंग ह्या दक्षिण आशिया मधून येऊन त्यांनी मा. नितीशकुमार यांच्याकडून ४५० एकर जमीन मिळविली आणि त्यांच्याच हस्ते त्याचे उद्घाटनही केले. एकूण ११६.६५ करोड रुपये खर्च करून नवीन नालंदा विद्यापीठ बनविण्यात आलेले आहे. येथील जमीन खोदल्यानंतर जी माती बाहेर पडते त्याच मातीच्या विटा बनविल्या. १७ महिने पुरेल इतके पाणी साठविले. यासाठी त्यांनी रेन हार्वेस्टिंग वॉटर, पाणी आडवा, पाणी जिरवा या युक्तीचा वापर केला. इथे प्रत्येक गोष्ट रियुज म्हणून वापरली जाते. टाकाऊ पासून टिकाऊ या युक्तीच्या वापरावर हे विद्यापीठ उभे आहे. सुरुवातीला इथे प्रवेश घेणाऱ्या विद्यार्थ्यांची संख्या कमी होती तसेच प्राध्यापकांचीही संख्या कमी होती. परंतु आता इथे एकूण ३८ देशातील विद्यार्थी शिक्षण घेत आहेत. इथे कायमस्वरूपी प्राध्यापक कमी प्रमाणात कार्यरत आहेत. म्हणून इथे भेट देणाऱ्या प्राध्यापकांची नियुक्ती करण्यात आलेली आहे. इथे २ स्टेडियम तयार करण्यात आलेले आहेत. प्रोफेसरांनाही राहण्याची व्यवस्था केलेली आहे. त्यांच्यासाठी २ सेंटर बनविण्यात आली आहेत. यामध्ये २४ थ्री-बिचके आणि २४ टु-बिचके फ्लॅट्स आहेत. स्टाफ बिल्डिंगमध्ये

जी प्लस फाईव्ह अशाप्रकारे दोन भवन आहेत. यामध्ये सुद्धा २४-२४ फ्लॅट्स आहेत. १०० मुलींना आणि १४० मुलांना प्रशासकीय भवन जुन्या नालंदा/महाविहारच्या सारखेच सुंदर बनविण्यात आलेले आहे. इथे शिक्षण घेणाऱ्या विद्यार्थ्यांना राहण्याची व्यवस्था करण्यात आलेली आहे. डायनिंग हॉल मध्ये विविध देशांच्या झेंड्याच्या प्रतिकृती लावलेल्या आहेत. जगाचा नकाशा लावण्यात आलेला आहे. इथे विद्यार्थ्यांना शाकाहारी-मांसाहारी जेवणाची व्यवस्था करण्यात आलेली आहे. एखाद्या विद्यार्थ्याला जेवण आवडले नसेल तर तो विद्यार्थी स्वतः जेवण बनवून खाऊ शकतो. तशी परवानगी देण्यात आलेली आहे.

या विद्यापीठामध्ये प्रवेश घेणाऱ्या विद्यार्थ्याला वयाची अट नाही. ७२ वर्षांचा किंवा त्याहून अधिक वर्षांचा विद्यार्थी इथे प्रवेश घेऊन शकतो. इथे ३ महिन्यांपासून ते ४-५ वर्षपर्यंतचे कोर्सेस शिकविण्यात येतात. काही सर्टिफिकेट कोर्सेस सुद्धा इथे राबविण्यात येतात. चिनी युवक युआन झिंग यांच्या नावाचे एक स्मारक इथे बांधण्यात आलेले आहे. तिथे भगवान बुद्धांच्या कथांचा संग्रह ठेवण्यात आलेला आहे. भगवान गौतम बुद्धांची मोठीच्या मोठी मूर्ती काळ्या पाषाणातील इथे ठेवण्यात आलेली आहे. या मूर्तीला खिलजीने विद्रुप केलेले आहे. तरी सुद्धा छोट्या स्वरूपातील डागडुजी करून मूर्ती प्रवेशद्वाराजवळ ठेवण्यात आलेली आहे. असे म्हणतात की, बुद्धांच्या मानेला थोडेसे तेल लावले की आपल्या समस्या ह्या दूर होतात म्हणून ही मूर्ती फार प्रसिद्ध आहे. विशेष म्हणजे चिनी बौद्ध सुद्धा या मूर्तीची पूजा करायला विहारामध्ये नालंदा या ठिकाणी येतात.

अशाप्रकारे एका स्त्रीने हे विश्वविद्यालय पुढे कासे उभे राहू शकते यासाठी प्रयत्न केले आहेत.

भारतीय ज्ञान प्रणाली :-

भारतीय ज्ञान प्रणाली मध्ये अर्थशास्त्र, धर्मशास्त्र, बुद्ध आणि जैन राजकीय विचारांचा समावेश होता. अनेक प्राचीन भारतीय ऋषींनी आणि विद्वानांनी कित्येक शतकांपूर्वी प्रचंड प्रमाणात ज्ञाननिर्मिती करून ठेवली आहे. मौखिक परंपरा, हस्तलिखिते, पारंपरिक पद्धती, शिलालेख अशा विविध माध्यमांमध्ये ही निर्मिती करण्यात आली. मात्र, या परंपरेत खंड पडल्याने ती माहिती आजच्या पिढीपर्यंत पोहोचू शकली नाही. ते स्थापत्यशास्त्र, गणित, कृषी, पर्यावरण खगोलशास्त्र, भारतीय कला, भारतीय वस्त्र, भारतीय धातुकाम, भारतीय स्थापत्य आणि नगर नियोजन, भारतीय शिक्षण, संस्कृत आणि इतर भाषांतील अभिजात साहित्य इत्यादी विषयांमध्ये हे ज्ञान उपलब्ध आहे. उच्च शिक्षणात सुद्धा भारतीय ज्ञान प्रणालीचा समावेश करण्यासाठीच्या मार्गदर्शक सूचनांचा मसुदा विद्यापीठ अनुदान आयोगाने प्रसिद्ध केला आहे.

भारतीय ज्ञान प्रणाली मध्ये प्राचीन भारतातील ऐतिहासिक आणि सांस्कृतिक विकास, भारतीय आर्थिक, सांस्कृतिक परंपरा, आयुर्वेदिक आणि योगाचा आदींचा समावेश करण्यात आलेला आहे. इतकेच नव्हे तर भारतीय कृषी व अर्थशास्त्र, जुन्या काळातील व्यवसायाशी निगडित असणारी धोरणे, वाणिज्य तसेच प्राचीन भारतीय विचारवंत आणि समाजसुधारक या सर्वांचा समावेश भारतीय ज्ञान प्रणाली मध्ये करण्यात येतो.

नालंदा विश्वविद्यापीठ आणि भारतीय ज्ञान प्रणालीची तुलना : -

- * नालंदा विश्वविद्यापीठामध्ये आणि भारतीय ज्ञान प्रणालीतील अध्ययन-अध्यापन सारखे होते म्हणजे गुरुकुल पद्धती होती. अध्ययन-अध्यापनाचे विषय सुद्धा थोड्याफार फरकाने सारखेच होते.
- * नालंदा विश्वविद्यापीठ आणि भारतीय ज्ञान प्रणाली मध्ये फक्त पुरुषच विद्यार्थी म्हणून शिकत

- होते. (अर्थात फारच प्राचीन काळी गार्गी, आर्या, मैथिली वैगेरे सोडून)
- * नालंदा विश्वविद्यापीठामध्ये पाली आणि संस्कृत भाषेमध्ये शिक्षण देण्यात येत होते. तर भारतीय ज्ञान प्रणालीमध्ये संस्कृतमध्ये शिक्षण देण्यात येत होते. मातृभाषेतून शिक्षण देण्यात यावे.
 - * वरील दोन्ही ठिकाणाहून शिकलेला विद्यार्थी समाजाला दिशा देणारा असायचा. तसेच मूल्यांची रुजवणूक त्यांच्या मध्ये आपोआपच ठासून भरलेली असायची.
 - * नालंदा विश्वविद्यापीठामध्ये भगवान गौतम बुद्ध यांचे तत्वज्ञान फार मोठ्या प्रमाणामध्ये शिकविण्यात येत असे. परंतु भारतीय ज्ञान प्रणालीमध्ये हिंदू धर्म, बौद्ध धम्म तसेच जैन धर्माचा इत्यादी धर्माचा अभ्यास करण्यात आला आहे.
 - * शेवटी या भारतातील समाजाच्या उन्नतीचे या मातीचे ऋण फेडणे हे एकमेव उद्दिष्ट दोन्हीही ठिकाणाच्या विद्यार्थ्यांचे होते.

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सारांश (Abstract):-

स्वामी रामानंद तीर्थ यांनी शिक्षक, मुख्याध्यापक, संस्थाचालक आणि कर्मयोगी शिक्षणतज्ञ म्हणून महत्त्वाची भूमिका बजावली आहे. तत्कालीन शिक्षणव्यवस्थेला ज्या विविध मर्यादा घातल्या गेलेल्या होत्या, त्या मर्यादांमधून मुक्त करून शिक्षण संकल्पनेमध्ये महत्त्वाचे बदल करण्यामध्ये स्वामी रामानंद तीर्थ यांची महत्त्वाची भूमिका राहिलेली आहे. हैदराबाद संस्थान भारतीय संघराज्यामध्ये विलीन होण्यापूर्वी म्हणजेच स्वातंत्र्यपूर्व काळातील शिक्षणाचे प्रमाण अत्यंत कमी होते. त्याला निजाम सरकारचे प्रतिगामी आणि पक्षपाती स्वरूपाचे शैक्षणिक धोरण कारणीभूत होते. स्वामी रामानंद तीर्थ यांनी त्या क्षेत्रात केलेल्या कार्यामुळे तत्कालीन शिक्षणपद्धतीमधील दोष, उणिवांची जाणीव त्यांना झालेली होती. म्हणून स्वातंत्र्यपूर्व तसेच स्वातंत्र्योत्तर काळात स्वामीजींनी शिक्षणप्रसारावर भर देत शिक्षणप्रक्रियेमध्ये महत्त्वाचे बदल करण्यामध्ये मोलाची भूमिका बजावली. स्वातंत्र्योत्तर काळामध्ये भारतात जे विविध शिक्षण आयोग शिक्षण संरचना व प्रक्रियेमध्ये बदल करण्यासाठी नियुक्त करण्यात आलेले होते, त्या आयोगाच्या अहवालामधील शिफारशींमध्ये स्वामीजी यांच्या शैक्षणिक विचारांचे प्रतिबिंब उमटलेले स्पष्टपणे दिसून येते. 1948 मधील डॉ. राधाकृष्णन आयोग, 1952-53 मधील डॉ. लक्ष्मण स्वामी मुदलियार आयोग, 1966 मधील कोठारी आयोग, 1986 मधील राष्ट्रीय शैक्षणिक धोरण आणि 2020 मधील राष्ट्रीय शैक्षणिक धोरणातील तरतुदींमध्ये स्वामी रामानंद तीर्थ यांच्या शिक्षण संकल्पनेतील व विचारातील काही घटकांचा समावेश करण्यात आलेला आहे. या विविध शैक्षणिक आयोगांनी शिक्षणाची जी उद्दिष्टे निश्चित केली होती, त्या उद्दिष्टांमधील काही उद्दिष्टांची अंमलबजावणी स्वामीजींनी त्यांच्या शैक्षणिक विचार व कार्यामधून केलेली दिसून येते. डॉ. मुदलियार आयोगाच्या अहवालातील व्यक्तिमत्व विकास, नेतृत्वगुणांचा विकास, राष्ट्रप्रेम, तंत्रकौशल्य व जीवन जगण्याच्या कलेचे शिक्षण इ. शैक्षणिक उद्दिष्टांचा समावेश स्वामीजींच्या शैक्षणिक विचार व कार्यामध्ये झालेला दिसून येतो. त्याचप्रमाणे कोठारी आयोगाच्या अहवालामधील सामाजिक परिवर्तन व राष्ट्रीय विकास ही उद्दिष्टे स्वामीजींच्या शिक्षण विचारात अंमलात आलेली आहेत. त्याचप्रमाणे 1986 मधील राष्ट्रीय शैक्षणिक धोरणामधील 'सर्वासाठी शिक्षण' ही संकल्पना स्वामीजींनी स्वातंत्र्यपूर्व काळामध्ये अंमलात आणलेली होती. त्याचप्रमाणे 2020 मधील राष्ट्रीय शैक्षणिक धोरणामध्ये काही शैक्षणिक बाबी व तत्वांची अंमलबजावणीदेखील स्वामीजींनी केल्याचे स्पष्ट होते.

मूळशब्द (Keywords):- राष्ट्रीय शैक्षणिक धोरण 2020, स्वामी रामानंद तीर्थ, आंतरविद्याशाखीय शिक्षण, शालेय शिक्षण, व्यावसायिक शिक्षण, उच्च शिक्षण, मातृभाषेतून शिक्षण, विद्यार्थी केंद्रित शिक्षण, अध्यापन केंद्र शिक्षण इ.

संशोधनाची उद्दिष्टे (Objectives of the Research):-

- 1) राष्ट्रीय शैक्षणिक धोरण 2020 मुळे होणाऱ्या परिवर्तनाचे अवलोकन करणे.
- 2) राष्ट्रीय शैक्षणिक धोरण 2020 च्या संदर्भात स्वामी रामानंद तीर्थ यांच्या शैक्षणिक दृष्टिकोनाची प्रासंगिकता

अभ्यासणे.

संशोधन पद्धती (Research Methodology):-

प्रस्तुत विषयावर संशोधन करताना ग्रंथालयीन, विश्लेषणात्मक, वर्णनात्मक आणि तुलनात्मक संशोधन पद्धतींचा वापर करण्यात आलेला आहे. याशिवाय संदर्भग्रंथाचा आधार घेण्यात आलेला आहे.

स्वामी रामानंद तीर्थ यांचे शैक्षणिक विचार आणि राष्ट्रीय शैक्षणिक धोरण-2020:-

राष्ट्रीय शैक्षणिक धोरणामध्ये किमान इयत्ता 5 वी पर्यंत आणि प्राधान्याने 8 वी आणि त्यानंतरही मातृभाषा/स्थानिक भाषा/प्रादेशिक भाषा हे शिकवण्याचे माध्यम असावे, यावर भर देण्यात आलेला आहे. राष्ट्रीय शैक्षणिक धोरण:2020 नुसार शिक्षणाचे माध्यम म्हणून मातृभाषेचा स्विकार करण्यावर भर देण्यात आलेला आहे. तसेच शिक्षणामध्ये त्रिभाषा सूत्राचा वापर करण्यात आलेला आहे. विद्यार्थी ज्या प्रादेशिक विभागांमध्ये राहतो, त्या विभागाची भाषा म्हणजेच मातृभाषा, आपल्या देशात संपर्काचे माध्यम म्हणून देशातील संपर्कासाठीची प्रमुख भाषा म्हणून संस्कृत वा हिंदी भाषा आणि परदेशात गेल्यावर संवाद साधण्यासाठी एक परकीय भाषा म्हणून इंग्रजी भाषा अशा त्रिभाषा सूत्राचा स्विकार या धोरणानुसार करण्यात आलेला आहे. थोडक्यात या शैक्षणिक धोरणानुसार प्रादेशिक भाषेमधून अर्थात मातृभाषेतून शिक्षण देण्यावर भर देण्यात आलेला आहे. "शिक्षणामध्ये शिक्षक व विद्यार्थी हे दोघेही एकरूप व्हायला पाहिजे. 'ये हृदयीचे ते हृदयीचं' असे शिक्षण द्यायचे असेल तर शिक्षण हे मातृभाषेतूनच व्हायला पाहिजे, यावर स्वामीजींचा भर होता."⁰¹ शिक्षणप्रक्रियेमध्ये विद्यार्थी आणि शिक्षक हे महत्त्वपूर्ण घटक असतात. हे दोन्हीही घटक जोपर्यंत परस्परांशी एकरूप होत नाहीत, तोपर्यंत शिक्षणप्रक्रिया खऱ्या अर्थाने पूर्ण होऊ शकत नाही. म्हणून मातृभाषेतून आकलन चांगले होत असल्यामुळे मातृभाषेतूनच विद्यार्थ्यांना शिक्षण देण्याचा आग्रही विचार स्वामीजींनी प्रतिपादन केलेला आहे. तत्कालीन परिस्थितीत उर्दू भाषा हे शिक्षणाचे माध्यम असल्यामुळे म्हणजेच मातृभाषेतून शिक्षण मिळत नसल्यामुळे आकलनाअभावी शिक्षणाचे प्रमाण अत्यल्प होते. थोडक्यात राष्ट्रीय शैक्षणिक धोरण:2020 मधील मातृभाषेतूनच शिक्षण देण्याची अंमलबजावणी स्वामी रामानंद तीर्थ यांनी तत्कालीन व्यवस्थेमध्येच केलेली होती, हे स्पष्ट होते.

राष्ट्रीय शैक्षणिक धोरण:2020 नुसार, "शिक्षण अधिक अनुभवात्मक, सर्वसमावेशक, एकात्मिक, जिज्ञासू, संशोधन लवचिक आणि अर्थातच आनंददायक होण्यासाठी अध्यापनशास्त्र उत्क्रांत होण्याची गरज आहे. शिक्षण घेणाऱ्यांची क्षमता विकसित होण्यासाठी, आणि शिक्षण सर्व दिशांनी विकसित होण्यासाठी, शिकणाऱ्यांसाठी अधिक समाधानकारक होण्यासाठी, अभ्यासक्रमात विज्ञान आणि गणिताच्या बरोबरीनेच मूलभूत कला, हस्तकला, मानसशास्त्रे, खेळ, क्रीडा आणि स्वास्थ्य, भाषा, साहित्य, संस्कृती आणि मूल्ये यांचा समावेश असणे आवश्यक आहे. शिक्षणामुळे चारित्र्य घडले पाहिजे आणि ज्यायोगे शिकणारे नितिवान, तर्कशुद्ध, सहानुभूती सहृदयी बनतील, त्याचवेळी ते विद्यार्थी लाभदायी आणि समाधानकारक रोजगार मिळविण्यास तयार होतील."⁰² राष्ट्रीय शैक्षणिक धोरण:2020 मध्ये विद्यार्थ्यांना अनुभूतीद्वारे शिक्षण देण्याची तरतूद करण्यात आलेली आहे. याशिवाय वेगवेगळ्या कला विद्यार्थ्यांमध्ये विकसित करण्यावरदेखील हे धोरण भर देते. अशा शिक्षणामधून विद्यार्थ्यांना स्वावलंबी करण्याचा आग्रह राष्ट्रीय शैक्षणिक धोरण:2020 मध्ये करण्यात आलेला आहे. राष्ट्रीय शैक्षणिक धोरण: 2020 नुसार, "सर्व स्तरावर अनुभवात्मक शिक्षणाचा अवलंब केला जाईल, जात प्रत्येक विषयामध्ये मानक अध्यापन म्हणून प्रात्यक्षिक शिक्षण, कला आणि खेळ यांचा समावेश असलेल्या शिक्षण कथाकथन आधारित अध्यापक इ. सह

वेगवेगळ्या विषयांमधील संबंध शोधण्यासाठी समावेशक शैक्षणिक निष्पत्तीमध्ये आढळून येणारी तफावत दूर करण्यासाठी वर्गातील व्यवहार कार्यक्षमतेवर आधारित अध्ययनावर भर दिला जाईल.⁰³ अशाप्रकारे विद्यार्थ्यांना अनुभवजन्य पद्धतीद्वारे शिक्षण देऊन कृतीपर ज्ञानावर भर देण्यात आलेला आहे. कृतीद्वारे शिक्षण हे पुस्तकी शिक्षणापेक्षा अधिक प्रभावशाली असल्यामुळे अनुभवजन्य शिक्षणावर राष्ट्रीय शैक्षणिक धोरण: 2020 मध्ये भर देण्यात आलेला आहे. "स्वामीजी विविध प्रकारच्या उपक्रमांमधून गुरु-शिष्य संबंधांच्या पारंपारिक संकल्पनेला छेद देऊन समतेवर आधारित नवे संबंध निर्माण करण्याचा प्रयोग करीत होते. तर विद्यार्थ्यांवर स्वावलंबनाचे, श्रमप्रतिष्ठेचे संस्कार कृतीनिष्ठ उपक्रमांमधून करण्याचे प्रयोग करीत होते."⁰⁴ स्वामी रामानंद तीर्थ यांनी शिक्षक म्हणून हिप्परगा व अंबाजोगाई येथे भूमिका बजावत असताना विद्यार्थ्यांवर स्वावलंबन आणि श्रमप्रतिष्ठेचे संस्कार केलेले होते. हे संस्कार करीत असताना स्वामीजींनी विविध उपक्रम राबविले होते. राष्ट्रीय शैक्षणिक धोरण:2020 नुसार,"सौजन्य, लोकशाहीमूल्य, सेवाभाव, वैज्ञानिक दृष्टिकोन, स्वातंत्र्य, बहुलतावाद, समता, न्याय इ. नैतिक, मानवी, घटनात्मक मूल्य तसेच संवाद, सहकार्य, सामूहिक कार्य, लवचिकता या जीवन मूल्यांवर भर देण्यात आलेला आहे."⁰⁵ राष्ट्रीय शैक्षणिक धोरण:2020 मध्ये विद्यार्थ्यांच्या मनावर विविध प्रकारची मूल्य रुजवण्यासाठी भर देण्यात आलेला आहे. यामध्ये न्याय, स्वातंत्र्य, समता, वैज्ञानिक दृष्टिकोन, घटनात्मक मूल्य, सौजन्य, सेवाभाव, संवाद, सहकार्य, लवचिकता, सामूहिक कार्य इ. नैतिक व जीवनमूल्यांचा समावेश करण्यात आलेला आहे. स्वामी रामानंद तीर्थ यांनीदेखील विद्यार्थ्यांना चारित्र्यसंपन्न करणाऱ्या शिक्षणावर भर देण्यासंदर्भात म्हटलेले आहे की,"जर स्वराज्य प्राप्तीसाठी, देशोद्धारासाठी शिक्षणाचा उपयोग करावयाचा असेल तर व्यावहारिक, व्यावसायिक कौशल्यांबरोबरच चारित्र्यसंपन्न करणारे नितीशिक्षण दिले गेले पाहिजे."⁰⁶ स्वामी रामानंद तीर्थ यांच्या या मतावरून स्पष्ट होते की, त्यांनी विद्यार्थ्यांवर विविध मूल्यांची रुजवण करून त्यामाध्यमातून देशाच्या भावी पिढीला चारित्र्यसंपन्न करण्यावर भर दिला होता. या मूल्यांमध्ये स्वातंत्र्य, समता, न्याय, धर्मनिरपेक्षता, राष्ट्रीयत्व इ.चा समावेश होता. राष्ट्रीय शैक्षणिक धोरण: 2020 नुसार,"शालेय शिक्षणाच्या इयत्ता 6 वी ते 8 वी दरम्यान प्रत्येक विद्यार्थ्याला एक स्थानिक कौशल्य गरजांवर आधारित अभ्यासक्रम निवडावा लागेल. यामधून त्यांना सुतारकाम, इलेक्ट्रिकचे काम, धातूकाम, बागकाम, कुंभारकाम यासारख्या व्यवसायांची ओळख होईल."⁰⁷ प्रादेशिक विभागातील स्थानिक गरजेनुसार प्रत्येक विद्यार्थ्याला स्थानिक कौशल्य असणाऱ्या एखाद्या व्यवसायाचे प्रशिक्षण देण्यात येईल. त्यामुळे विद्यार्थ्याला संबंधित कौशल्याचे व्यावहारिक प्रशिक्षण मिळून तो सामाजिक गरजा भागवण्यास सज्ज होईल. "हिप्परगाच्या शाळेत दिल्या जाणाऱ्या शिक्षणाला कार्यानुभवाची जोड देण्यात आली होती. शिलाई, सुतकाताई, विणाई वगैरे व्यावसायिक विषयांचे प्रशिक्षणही येथे देण्यात येत होते."⁰⁸ स्वामी रामानंद तीर्थ यांनी ज्या हिप्परगा येथील राष्ट्रीय शाळेमध्ये शिक्षक म्हणून कार्य केले होते, त्या शाळेमध्ये शालेय अभ्यासक्रमाबरोबरच गरजेनुसार विद्यार्थ्यांना व्यावसायिक प्रशिक्षणही दिले जात होते. म्हणजेच तेथील शिक्षणाला कार्यानुभवाच्या माध्यमातून कृतीपर शिक्षणाची जोड देण्यात आलेली होती.

राष्ट्रीय शैक्षणिक धोरण:2020 नुसार, "विद्यार्थ्यांमध्ये सेवा, अहिंसा, स्वच्छता, सत्य, निष्काम कर्म, शांती, त्याग, सहिष्णुता, विविधता, बहुसत्तावाद, नैतिक आचरण, लैंगिक संवेदनशीलता, वडीलधाऱ्यांचा आदर करणे, पर्यावरणाचा आदर करणे, मदत करणे, शिष्टाचार, सहनशीलता, क्षमाशीलता, सहानुभूती, करुणा, देशभक्ती, लोकतांत्रिक दृष्टिकोन, अखंडता, जबाबदारी, न्याय, स्वातंत्र्य, समानता आणि बंधुता इ. मूल्ये विकसित केली जातील."⁰⁹ राष्ट्रीय शैक्षणिक धोरण:2020 मध्ये विद्यार्थ्यांचा सर्वांगीण विकास करून त्यांना चारित्र्यसंपन्न

बनविण्यासाठी घटनात्मक, मूलभूत मानवी आणि जीवन मूल्यांवर अधिक भर देण्यात आलेला आहे. कारण शिक्षणाद्वारे या मूल्यांच्या माध्यमातून विद्यार्थ्यांच्या मनाची जडणघडण होत असते. अशाप्रकारे राष्ट्रीय शैक्षणिक धोरण:2020 मध्ये मूल्य शिक्षणावर भर देऊन नैतिक दृष्टीने शिक्षण देण्याच्या दिशेने प्रयत्न करण्यात आलेले आहेत. "स्वामी रामानंद तीर्थ यांच्या शिक्षणविचारात राष्ट्रीयत्व, धर्मनिरपेक्षता इ. मूल्ये आहेत. त्याचबरोबर बंधुभाव, समता, स्वातंत्र्यकांक्षा इ. मूल्य घटकांनी त्यांचा शिक्षणविचार प्रेरित झालेला दिसतो."¹⁰ स्वामी रामानंद तीर्थ यांनीदेखील आपल्या शिक्षणविचारांमध्ये नैतिक, लोकशाही आणि जीवन मूल्यांना महत्त्वाचे स्थान दिलेले आहे. मूल्यांवरच स्वामी रामानंद तीर्थ यांचा शिक्षणविचार उभा राहिलेला आहे. राष्ट्रीय शैक्षणिक धोरण: 2020 नुसार,"क्रीडा-एकात्मिकगणना आणखी एक बहु-अभ्यासक्रमीय अध्यापन दृष्टिकोण आहे, जो स्थानिक शारीरिक उपक्रमांचा वापर अध्यापन पद्धतीमध्ये करून सहकार्य, स्वयं-पुढाकार, स्वतःची दिशा, स्वयंशिस्त, सांघिक कार्य, जबाबदारी, नागरिकत्व इ. विकसित करण्यात मदत करतो."¹¹ राष्ट्रीय शैक्षणिक धोरण: 2020 मध्ये विद्यार्थ्यांच्या शारीरिक तंदुरुस्तीवर जोर देण्यात आलेला आहे. खेळ व व्यायामाच्या माध्यमातून विद्यार्थ्यांमध्ये शारीरिक आरोग्याबरोबरच स्वयंशिस्त, जबाबदारीची भावना, सहकार्य वृत्ती, सांघिक कार्यकुशलता इ. चा विकास होत असतो. राष्ट्रीय शैक्षणिक धोरण: 2020 मधील शारीरिक तंदुरुस्तीवर ज्याप्रमाणे भर देण्यात आला आहे, त्याप्रमाणेच स्वामीजींनी यापूर्वी काही वर्षे अगोदर हा विचार त्यांच्या शैक्षणिक कार्यामध्ये अंमलात आणलेला आहे. "स्वामीजींच्या शिक्षणविचारात शारीरिक आणि मानसिक विकास, स्वावलंबन, छोटीमोठी तंत्रकौशल्य यांचे प्रशिक्षण विद्यार्थ्यांना देणे यांचा समावेश आहे. श्रमदानातून श्रमाला प्रतिष्ठा आणि मूल्य प्राप्त करून देण्याचे प्रयत्न त्यांच्या शैक्षणिक उपक्रमात समाविष्ट होते."¹² हिप्परगा आणि अंबाजोगाई येथे शिक्षक म्हणून भूमिका बजावताना स्वामीजींनी विद्यार्थ्यांच्या मानसिक विकासाबरोबरच त्यांच्या शारीरिक विकासावरदेखील भर दिला आहे. विद्यार्थी जीवनामध्ये शारीरिक आरोग्य त्यांच्या शैक्षणिक वाटचालीमध्ये महत्त्वाची भूमिका पार पाडत असते, याची स्वामीजींना चांगल्या प्रकारे जाणीव होती. "विद्यार्थ्याला शिक्षणाबरोबर शारीरिक आरोग्यही गरजेचे आहे. एका निरोगी शरीरात एक निरोगी मन राहू शकते, असे त्यांना वाटे. त्यामुळे ते मुलांकडून व्यायाम व योगसाधना करून घेत."¹³ अशाप्रकारे स्वामी रामानंद तीर्थ यांनी विद्यार्थ्यांच्या मानसिक आणि शारीरिक विकासावर भर दिलेला आहे. शैक्षणिक विकासासाठी विद्यार्थ्यांची शारीरिक तंदुरुस्ती अत्यंत महत्त्वाचे असल्याचे ते अधोरेखित करतात.

"राष्ट्रीय शैक्षणिक धोरण: 2020 नुसार, "एकमताने ठरवलेला आणि अध्यापनशास्त्रीय उपक्रम हाती घेतले जातील. यामध्ये विद्यार्थ्यांमध्ये सर्व स्तरांवर विविध महत्त्वपूर्ण कौशल्य विकसित व्हावी यासाठी कृत्रिम बुद्धिमत्ता, डिझाईन थिंकिंग, सर्वांगीण आरोग्य, ऑर्गेनिक लिविंग, पर्यावरण शिक्षण, जागतिक नागरिकत्व शिक्षण यासारख्या समकालीन विषयांची प्रसंगोचित टप्प्यावर ओळख करून दिली जाईल."¹⁴ राष्ट्रीय शैक्षणिक धोरण: 2020 मध्ये काळानुसार बदलत्या शिक्षणावर भर दिलेला आहे. कारण बदलत्या काळानुसार समाज व देशाच्या गरजांमध्ये बदल होत असतो. म्हणून बदलत्या गरजांची पूर्तता करण्यासाठी शिक्षणाला कालसुसंगत करण्याचे उद्दिष्ट राष्ट्रीय शैक्षणिक धोरण: 2020 मध्ये निश्चित करण्यात आलेले आहे. स्वामी रामानंद तीर्थ यांच्या मते,"मूलतः शिक्षण ही संकल्पना चल व स्थिर स्वरूपाची नसून काळानुरूप राजकीय सामाजिक गरजांनुसार शिक्षणाची उद्दिष्टे बदलतात."¹⁵ अशाप्रकारे स्वामी रामानंद तीर्थ यांनी राष्ट्रीय शैक्षणिक धोरण: 2020 प्रमाणेच कालसापेक्ष शिक्षणाचा विचार यापूर्वीच प्रतिपादन केलेला आहे. कारण शिक्षण ही संकल्पना स्थिर नसून तीमध्ये काळानुसार परिवर्तन होत असतात. समाजाच्या बदलत्या गरजा, आवश्यकता यानुसार शिक्षण प्रक्रियेमध्ये परिवर्तन होणे ही बदलत्या काळाची गरज

असल्याची प्रतिपादन स्वामीजी करतात. राष्ट्रीय शैक्षणिक धोरण: 2020 मधील सर्वात महत्त्वाची शिफारस म्हणजे, "मोफत आणि सक्तीचे शालेय शिक्षण होय."¹⁶ या शिक्षण धोरणानुसार शालेय स्तरावरील शिक्षण सर्वांना मोफत व सक्तीचे करण्याची केलेली शिफारस होय. 03 वर्ष ते 18 वर्षे वयोगटातील सर्वांना मोफत व सक्तीच्या शिक्षणाची शिफारस या शैक्षणिक धोरणात करण्यात आलेली आहे. "सर्वासाठी शिक्षण, समतेसाठी शिक्षण, लोककल्याणासाठी शिक्षण हाच विचार सातत्याने स्वामीजींच्या मनात येत होता."¹⁷ तत्कालीन हैदराबाद संस्थानामध्ये निजाम सत्ताधीशाने शिक्षणाचे उर्दू माध्यम, खाजगी शाळांना बंदी तसेच इतर बंधनांद्वारे शिक्षणाच्या सार्वत्रिकरणात अडथळे निर्माण केले होते, परंतु स्वामीजींनी सर्वासाठी शिक्षणाचा आग्रह धरून त्या विचाराची अंमलबजावणी करण्यासाठी प्रयत्नांची पराकाष्ठा केलेली होती. "विद्यार्थ्यांचा शारीरिक, बौद्धिक, मानसिक, भावनिक, अध्यात्मिक विकास शिक्षणातून साधला गेला पाहिजे. अशादृष्टीने परिपूर्ण शिक्षणविचार स्वामीजींनी मांडला."¹⁸ शिक्षणाद्वारे विद्यार्थ्यांच्या व्यक्तिमत्त्वाचा सर्वांगीण विकास साधण्यावर स्वामी रामानंद तीर्थ यांनी भरलेला होता. त्यादृष्टीने त्यांनी आपले शैक्षणिक विचार प्रतिपादन केलेले आहेत. अशाप्रकारे स्वामी रामानंद तीर्थ यांचे शैक्षणिक विचार हे आजही कालसुसंगत असल्याचे स्पष्ट होते.

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भारतीय ज्ञान परंपरा और आर्टिफिशल इंटेलिजिन्स

(AI) Artificial Intelligence.

प्रा. डॉ. उमेश अशोक शिंदे

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भारतीय ज्ञान परंपरा यह एक प्राचीन समय से चलती आई भारतीय शिक्षा व्यवस्था है। हजारों सालोंसे यह प्रवाहित रही है। वेद उपनिषदोंसे लेकर विविध प्रकार के दर्शन, वेदांग, पुराण, धर्म, नाट्य, शास्त्र, श्रुती, स्मृती, लोक वाङ्मय आदि का ज्ञान भंडार का मतलब है भारतीय ज्ञान परंपरा ... विविध प्रकार की ज्ञान शाखाओं के बारेमें जानकर अपने जीवन का पुर्णतः 'अभ्युदय निःश्रेयस' ऐसा विकास करना, धर्म, अर्थ, काम, मोक्ष इन पुरुषार्थोंको अपनाकर जीवन का सर्वोच्च लक्ष्य हासिल करना यह भारतीय ज्ञान परंपरा का आधार है।

मेरा जन्म क्यों हुआ है ? मेरे कर्तव्य कौनसे हैं ? मेरे जन्म का सार्थक कैसे होगा ? मैं स्वयं के प्रति, परिवार के प्रति, समाज, राष्ट्र और विश्व के प्रति क्या योगदान दे सकता हूँ ? मेरा विकास कैसे होगा ? इन प्रकार की सारी संकल्पनाओंके बारे में समझकर अपने जीवन का ध्येय निश्चित करना और जीवनभर उस मार्ग पर चलना इस के लिए नींव के रूप में सदा मार्गदर्शक ऐसा काम भारतीय ज्ञान परंपरा करती है। जीवन का हर एक अंग, हर एक क्षेत्र भारतीय ज्ञान परंपरासे व्याप्त है। सुबह जागने से लेकर भूमि माता का वंदन करते समय, नहाते समय, भोजन करते वक्त, दैनंदिन कामकाज करते वक्त ... हर वक्त भारतीय ज्ञान परंपरा विविध रूप में हमें सहायता करती है। मानो की भारतीय ज्ञान परंपरा हमारे श्वास जैसी है ... ब्रह्म या आत्मा जैसी है ... जो सदा हमारे साथ रहती है। इसका अभ्यास हर एक भारतीय को करना होगा। इससे वह अपने जीवनमें सर्व प्रकार का आनंद और यश प्राप्त करेगा। विशेष रूप से, AI के प्रति भारत का नवाचार समर्थक और कल्याण-आधारित दृष्टिकोण वैश्विक दक्षिण के विकासशील देशों के लिए बहुत मूल्यवान है। वैश्विक मंच पर भारत ने इस संदेश को जोरदार तरीके से पेश किया है। हाल ही में नई दिल्ली में हस्ताक्षरित G20 नेताओं की घोषणा में AI के लिए "नवाचार समर्थक शासन दृष्टिकोण" की वकालत की गई है।

यह भारतीय ज्ञान परंपरा एक श्रृंखला का हिस्सा है, जो कार्नेगी इंडिया के आठवें वैश्विक प्रौद्योगिकी शिखर सम्मेलन में हुई चर्चाओं से मुख्य निष्कर्षों पर प्रकाश डालता है, जिसे भारत सरकार के विदेश मंत्रालय के साथ सह-आयोजित किया गया था।

कृत्रिम बुद्धिमत्ता (एआई) पर भारत की राष्ट्रीय रणनीति नवाचार को बढ़ावा देने और जोखिम को कम करने के बीच एक नाजुक संतुलन की खोज है।

वैश्विक प्रौद्योगिकी शिखर सम्मेलन (जीटीएस) 2023 में, भारत की एआई रणनीति चर्चा का एक प्रमुख विषय थी- भारत के मंत्रिस्तरीय प्रतिनिधि ने नीति सक्षमकर्ताओं और सुरक्षा उपायों की आवश्यकता के बारे में बात की, उद्योग जगत के नेताओं ने उपयोग-मामले-आधारित एआई रणनीति प्रस्तुत की, जबकि वैश्विक नीति निर्माताओं ने शेष विश्व के लिए भारत के शासन मॉडल के मूल्य पर जोर दिया। इस निबंध

में, हम इन सवालों पर गहराई से चर्चा करेंगे और भारत की राष्ट्रीय एआई रणनीति के प्रमुख तत्वों और जोखिमों और अवसरों के बीच संतुलन बनाने में शामिल समझौतों पर अंतर्दृष्टि साझा करेंगे।

भारत की एआई रणनीति के प्रमुख तत्वों पर अंतर्दृष्टि साझा करता है और जोखिमों को अवसरों के साथ संतुलित करने में शामिल कुछ व्यापार-नापसंदों की रूपरेखा तैयार करता है।

कृत्रिम बुद्धिमत्ता (एआई) पर भारत की राष्ट्रीय रणनीति नवाचार को बढ़ावा देने और जोखिम को कम करने के बीच एक नाजुक संतुलन की खोज है।

वैश्विक प्रौद्योगिकी शिखर सम्मेलन (GTS) 2023 में, भारत की AI रणनीति चर्चा का एक प्रमुख विषय था - भारत के मंत्रिस्तरीय प्रतिनिधि ने नीति सक्षमकर्ताओं और सुरक्षा उपायों की आवश्यकता के बारे में बात की, उद्योग जगत के नेताओं ने उपयोग-मामले पर आधारित AI रणनीति प्रस्तुत की, जबकि वैश्विक नीति निर्माताओं ने शेष विश्व के लिए भारत के शासन मॉडल के मूल्य पर जोर दिया।

हम इन सवालों पर गहराई से चर्चा करेंगे और भारत की राष्ट्रीय AI रणनीति के प्रमुख तत्वों और जोखिमों और अवसरों के बीच संतुलन बनाने में शामिल ट्रेड-ऑफ पर अंतर्दृष्टि साझा करेंगे। अमलान मोहंती कहते हैं, "कार्नेगी इंडिया के एक गैर-निवासी विद्वान हैं। उनकी विशेषज्ञता के क्षेत्रों में गोपनीयता, सामग्री नीति, प्लेटफॉर्म विनियमन, प्रतिस्पर्धा और AI शामिल हैं।"

भारत और AI अवसर:-

पिछले कुछ वर्षों में, भारत सरकार ने सामाजिक कल्याण के लिए AI अनुप्रयोगों को सक्रिय रूप से प्रोत्साहित किया है। कुछ उदाहरणों में बीमारियों का पता लगाने, कृषि उत्पादकता बढ़ाने और भाषाई विविधता को बढ़ावा देने के अनुप्रयोग शामिल हैं।

प्रौद्योगिकी का उपयोग करके बड़े पैमाने पर प्रभाव डालने के लिए भारत का प्रस्तावित मॉडल आकर्षक है। उदाहरण के लिए, वित्तीय समावेशन को बढ़ावा देने के लिए डिजिटल सार्वजनिक अवसंरचना (DPI) का लाभ उठाने के इसके हालिया प्रयासों की विश्व बैंक ने भी सराहना की है।

वैश्विक प्रौद्योगिकी पर:-

अब, जब दुनिया का ध्यान तेज़ी से एआई की परिवर्तनकारी क्षमता की ओर जा रहा है, भारत की राष्ट्रीय रणनीति प्रभावशाली होगी। विशेष रूप से, एआई के प्रति भारत का नवाचार समर्थक और कल्याण-आधारित दृष्टिकोण वैश्विक दक्षिण में विकासशील देशों के लिए बहुत मूल्यवान है।

वैश्विक मंच पर, भारत ने यह संदेश जोरदार तरीके से दिया है। हाल ही में नई दिल्ली में हस्ताक्षरित जी-20 नेताओं की घोषणा में एआई के लिए "नवाचार समर्थक शासन दृष्टिकोण" की वकालत की गई है। इसके बाद, आर्टिफिशियल इंटेलिजेंस शिखर सम्मेलन पर वैश्विक भागीदारी में, जिसकी मेजबानी भी भारत ने की थी, "सहयोगी एआई" की अवधारणा तैयार की गई, जिसमें सदस्य देशों ने विकासशील दुनिया के लिए एआई संसाधनों तक समान पहुँच को बढ़ावा देने पर सहमति व्यक्त की।

भारतीय ज्ञान प्रणालियाँ

1. भारतीय पद्धति टिकाऊ है और सभी के कल्याण के लिए प्रयास करती है। यह महत्वपूर्ण है कि हम अपनी विरासत की व्यापक ज्ञान प्रणाली को पुनः प्राप्त करें और दुनिया को काम करने का 'भारतीय तरीका' दिखाएँ। इसके लिए विद्वानों की पीढ़ियों को प्रशिक्षित करने की आवश्यकता है

- जो दुनिया को हमारी महान सभ्यता के लिए अद्वितीय और विशिष्ट जीवन शैली का प्रदर्शन और उदाहरण देंगे।
2. NEP, 2020 प्राचीन और शाश्वत भारतीय ज्ञान और विचार की इस समृद्ध विरासत को एक मार्गदर्शक सिद्धांत के रूप में मान्यता देता है। कौशल, उद्योग संपर्क और रोजगार के एकीकरण के माध्यम से समग्र शिक्षा भारतीय ज्ञान प्रणालियाँ हैं।
 3. NEP, 2020 प्राचीन और शाश्वत भारतीय ज्ञान और विचार की इस समृद्ध विरासत को एक मार्गदर्शक सिद्धांत के रूप में मान्यता देता है। भारतीय ज्ञान प्रणालियों में ज्ञान, विज्ञान और जीवन दर्शन शामिल हैं जो अनुभव, अवलोकन, प्रयोग और कठोर विश्लेषण से विकसित हुए हैं। मान्य करने और व्यवहार में लाने की इस परंपरा ने हमारी शिक्षा, कला, प्रशासन, कानून, न्याय, स्वास्थ्य, विनिर्माण और वाणिज्य को प्रभावित किया है। इसने भारत की शास्त्रीय और अन्य भाषाओं को प्रभावित किया है, जो पाठ्य, मौखिक और कलात्मक परंपराओं के माध्यम से प्रसारित हुईं। इस अर्थ में "भारत का ज्ञान" में प्राचीन भारत का ज्ञान, उसकी सफलताएं और चुनौतियाँ, तथा शिक्षा, स्वास्थ्य, पर्यावरण और वास्तव में जीवन के सभी पहलुओं से संबंधित भारत की भविष्य की आकांक्षाओं की भावना शामिल है।

केंद्रीय शिक्षा और कौशल विकास मंत्री श्री धर्मेन्द्र प्रधान ने आज 'भारतीय ज्ञान प्रणालियों का परिचय: अवधारणाएं और अमल' पर एक पाठ्यपुस्तक का विमोचन किया। श्री सुभाष सरकार, शिक्षा राज्य मंत्री; श्री के. संजय मूर्ति, सचिव, उच्च शिक्षा; श्री ए.डी. सहस्रबुद्धे, एआईसीटीई अध्यक्ष; और एआईसीटीई, आईकेएस प्रभाग एवं शिक्षा मंत्रालय के प्रतिनिधियों ने इस कार्यक्रम में भाग लिया।

अनुभव श्री धर्मेन्द्र प्रधान ने इस बात पर प्रसन्नता व्यक्त की कि लेखकों ने इस पुस्तक में भारतीय ज्ञान प्रणाली को एक अकादमिक स्वरूप प्रदान किया है। श्री प्रधान ने वैश्विक स्तर पर भारतीय ज्ञान, संस्कृति, दर्शन और आध्यात्मिकता के व्यापक प्रभाव के बारे में बताया। उन्होंने प्राचीन भारतीय सभ्यता के बारे में बताया और इसके साथ ही यह भी जानकारी दी कि आखिकार किस तरह से इसने पूरी दुनिया को सकारात्मक रूप से प्रभावित किया है। वेदों, उपनिषदों और अन्य भारतीय ग्रंथों के बारे में उल्लेख करते हुए उन्होंने कहा कि हमारी प्राचीन विरासत अद्भुत कृतियों से भरी हुई है जिसे संरक्षित, प्रलेखित और प्रचार-प्रसार करने की नितांत आवश्यकता है। उन्होंने प्राचीन भारत की विज्ञान आधारित प्रथाओं और ज्ञान के विभिन्न उदाहरणों के बारे में भी बताया, जिन्हें हम आज भी आधुनिक दुनिया में प्रासंगिक पा सकते हैं।

महोदय ने कहा कि प्रधानमंत्री श्री नरेन्द्र मोदी के नेतृत्व में भारतीय शिक्षा प्रणाली में वैकल्पिक ज्ञान प्रणालियों, दर्शन और परिप्रेक्ष्य को प्रतिबिंबित किया जा रहा है। उन्होंने कहा कि वैसे तो हम अपने प्राचीन अतीत की अच्छी चीजों को अपनाते हैं, लेकिन इसके साथ ही हमें अपने समाज में निहित समस्याओं के प्रति भी सचेत रहना चाहिए और एक ऐसे भविष्य का निर्माण करना चाहिए जो प्राचीन अतीत के विशिष्ट ज्ञान व समकालीन मुद्दों के बीच उचित सामंजस्य सुनिश्चित करे। उन्होंने कहा कि समस्त दुनिया की अनगिनत समस्याओं का समाधान भारतीय ज्ञान प्रणाली में निहित है।

भारतीय स्वदेशी ज्ञान और शाश्वत विकास**श्री. नंदकिशोर दामोदर बोडके****सहायक प्राध्यापक,****एस.एस.आर.कॉलेज ऑफ एज्युकेशन, सिलवासा****संक्षेप**

स्थानीय और स्वदेशी ज्ञान का तात्पर्य समाज द्वारा अपने प्राकृतिक परिवेश के साथ तादात्म्य के लंबे इतिहास के साथ विकसित समझ, कौशल और दर्शन से है। अनुकूल और गतिशील, प्रकृति के प्रति श्रद्धा, समग्रता और धारणा यह स्वदेशी ज्ञान के कुछ महत्वपूर्ण गुण हैं। जलवायु परिवर्तन चुनौतियों का सामना करने के लिए स्थानीय ज्ञान बेहद महत्वपूर्ण है। भारतीय ज्ञान प्रणालियों में ज्ञान, विज्ञान और जीवन दर्शन शामिल हैं जो अवलोकन, अनुभव, प्रयोग और कठोर विश्लेषण से विकसित हुए हैं। स्वदेशी ज्ञान का अनुप्रयोग समृद्ध और विविध है, जैसे जल प्रबंधन, पारंपरिक कृषि पद्धतियाँ, भूमि उपयोग की पद्धतियाँ, आयुष चिकित्सा, पशुपालन, भोजन बनाने की विधि करना और संरक्षण, बीज भंडारण, पर्यावरण संरक्षण, मौसम के संकेतोंको समझना, मानव स्वास्थ्य, फसल स्वास्थ्य, खाद्य सुरक्षा और कई अन्य। NEP २०२० प्राचीन और शाश्वत भारतीय ज्ञान और विचार की विरासत को एक मार्गदर्शक सिद्धांत के रूप में मान्यता देता है।

मुख्य शब्द : आदिम जनजाति, स्वदेशी ज्ञान, शाश्वत विकास, जलवायु परिवर्तन

प्रस्तावना**स्वदेशी लोग-**

स्वदेशी लोग विशिष्ट सामाजिक और सांस्कृतिक समूह हैं, जो उन भूमियों और प्राकृतिक संसाधनों से सामूहिक पैतृक संबंध साझा करते हैं जहां वे रहते हैं, उसे धारण करते हैं या जहां से वे विस्थापित हुए हैं। जिस भूमि और प्राकृतिक संसाधनों पर वे निर्भर हैं, वे उनकी पहचान, संस्कृति, आजीविका के साथ-साथ उनके भौतिक और आध्यात्मिक ज्ञान से अटूट रूप से जुड़े हुए हैं। यह वो आबादी हैं जो स्वाभाविक उपनिवेशीकरण और आक्रमण से पहले अस्तित्व में थीं। दुनिया भर में अनुमानित ४७६ मिलियन स्वदेशी लोग हैं। हालाँकि वे वैश्विक जनसंख्या का केवल ६ प्रतिशत हैं, लेकिन उनमेंसे अत्यधिक गरीबों में उनकी हिस्सेदारी लगभग १९ प्रतिशत है।

स्वदेशी ज्ञान -

स्थानीय और स्वदेशी ज्ञान का तात्पर्य समाज द्वारा अपने प्राकृतिक परिवेश के साथ तादात्म्य के लंबे इतिहास के साथ विकसित समझ, कौशल और दर्शन से है। स्वदेशी ज्ञान कहानियों, गीतों, स्थानों, मूल्यों और भाषाओं के रूप में उपलब्ध है। यह बड़ों से बच्चों और पीढ़ी-दर-पीढ़ी हस्तांतरित होता रहता है। यह अवलोकनों पर आधारित है, लौकिक और स्थान आधारित है, रहन-सहन, रिश्तेदारी आधारित है और सबसे बढ़कर यह समग्र है। स्वदेशी ज्ञान को उन स्वदेशी लोगों से अलग नहीं किया जा सकता है जिन्होंने कई सहस्राब्दियों में अपना ज्ञान विकसित किया है। स्वदेशी ज्ञान के कुछ महत्वपूर्ण गुण इस प्रकार हैं;

- यह सैद्धांतिक रूप से गतिशील, व्यवस्थित और सार्वभौमिक है। यह अलिखित है और मौखिक परंपराओं से जाना जाता है।
- यह व्यावहारिक सामान्य ज्ञान है, जो दी गई शिक्षाओं और अनुभव पर आधारित है।
- यह समग्र है - इसे विभाजित नहीं किया जा सकता है और यह आध्यात्मिकता में निहित है, यह लोगों का स्वास्थ्य, संस्कृति और भाषा जुड़ा है।
- यह संसाधनों के उपयोग को नियंत्रित करने वाले नियमों को निर्धारित करता है - प्रकृति का सम्मान करना और हमें अपने दायित्व का एहसास करवाता है ।
- इसे हम साँझा कर सकते हैं - यह गतिशील, संचयी और स्थिर है।
- यह जीवन जीने का एक तरीका है - ज्ञान का अच्छे तरीकों से उपयोग करना ही बुद्धिमत्ता है।
- इसमें दिल और दिमाग का एक साथ प्रयोग किया जाता है । यह जीवित रहने के लिए आत्मा से आता है।
- यह लोगों को विश्वसनीयता प्रदान करता है।
- यह अनुभव पर आधारित है, समय के साथ अवलोकन से प्राप्त किया गया है - ऐसा तर्क दिया जाता है।
- यह स्थानीय स्तर पर निर्णय लेने के लिए सबसे उपयोगी हो सकता है ।
- यह स्थानीय पर्यावरण, वन्य जीवन आदि के स्वास्थ्य का वर्णन करता है, बढ़ावा देता है।
- मानव और जैविक प्रणालियों के बीच संबंधों पर विचार करता है ।
- यह अक्सर इन सहजीवी संबंधों का वर्णन करता है और पर्यावरण से कैसे जुड़ा जाए, इसके बारे में जीवन निर्वाह संबंधी निर्णयों को आधार प्रदान करता है।
- सामूहिक स्मृति:-सामूहिक स्मृति एक समुदाय के भीतर भाषा, कहानियों, गीतों, समारोहों, किंवदंतियों और कहावतों के माध्यम से मौखिक रूप से एक पीढ़ी से दूसरी पीढ़ी तक प्रसारित होती है।
- धारणा:-आदिवासी समाज में यह धारणा रही है कि उनका संबंधित स्वदेशी ज्ञान शास्वत सामाजिक और आर्थिक विकास की कुंजी है।
- अरेखीय : इन समुदायों द्वारा बुजुर्गों के सम्मान में अंतर्निहित मूल्यों में से एक है। समय और प्रकृति का ढाँचा चक्रीय हैं और अनुभव मायने रखते हैं।

स्वदेशी समाज अपनी स्थानीय भाषा को नजरअंदाज करता हैं, जिसके परिणामस्वरूप पारंपरिक ज्ञान का नुकसान होता है । जिसे आधुनिक विज्ञान प्रतिस्थापित नहीं कर सकता है। भारतीय स्वदेशी ज्ञान में एक नैतिकता है, क्योंकि यह नैतिक मूल्यों पर जोर देता है, नैतिक मूल्य जैसे की , विनम्र होना और प्रकृति के प्रति आदरभाव होना है। स्वदेशी ज्ञान इस विचार में निहित है कि प्रकृति जीवन को बनाए रखने के लिए निर्माता द्वारा बनाई गई है, इसलिए मन, पदार्थ और आत्मा अविभाज्य हैं। इसका उद्देश्य प्रकृति का संरक्षण करना है।

स्वदेशी ज्ञान समाज की किसी संस्कृति के लिए अद्वितीय है। जबकि समुदाय के बीच स्वदेशी ज्ञान में कई समानताएँ हो सकती हैं, यह प्रत्येक समुदाय का जीवंत अनुभव है जो भारतीय स्वदेशी ज्ञान को समृद्ध करता है। यह ज्ञान लंबे समय में विकसित हुआ है और अवलोकन, अनुभव पर आधारित है,

इसलिए इसे आधुनिक सिद्धांतों के सत्यापन की आवश्यकता नहीं है ।

UNESCO के अनुसार ज्ञान विकसन, ज्ञान का संरक्षण और प्रसारण में स्वदेशी भाषा महत्वपूर्ण होती है । इसके अलावा, स्वदेशी भाषाओं के संरक्षण की आवश्यकता के बारे में महत्वपूर्ण पहलू यह है कि यह ग्रामीण शहरी विभाजन की बाधा को तोड़ती है और 'हैं' और 'नहीं हैं' के बीच की रेखा धुंधली हो जाती है ।

जलवायु परिवर्तन और स्वदेशी ज्ञान के बीच संबंध

जलवायु परिवर्तन के प्रभाव पहले से ही न केवल आदिम लोगों को बल्कि अन्य लोगों के जीवन, आजीविका और मानवाधिकारों को भी प्रभावित कर रहा है। आदिम लोगों ने लंबे समय तक खुद को बनाए रखने के लिए प्रकृति और जलवायु भिन्नता के साथ काम करने की अपनी क्षमता के माध्यम से खुद को बचाए रखा है, जो मुख्य रूप से वर्षा, तापमान भिन्नता, स्थानीय जैव विविधता, स्थानीय वास्तुकला और आहार-विहार आदि अपने अनुभवात्मक ज्ञान पर आधारित है। जलवायु परिवर्तन चुनौतियों का सामना करने के लिए स्थानीय ज्ञान बेहद महत्वपूर्ण है, क्योंकि इससे उन्हें पर्यावरणीय चुनौतियों से निपटने के लिए रणनीति तैयार करने के पूर्वानुभव की मदद मिलती है। जलवायु परिवर्तन पर संयुक्त राष्ट्र ने जो रूपरेखा बनाई है उसमें स्वदेशी लोगों को विशेष स्थान दिया है।

स्थानीय और स्वदेशी ज्ञान प्रणाली शास्त्र विकास लक्ष्य की प्राप्ति में योगदान करती है, UNESCO ने स्मारकों और स्थलों की अंतरराष्ट्रीय परिषद और कैलिफोर्निया विश्वविद्यालय के बी.एस. ओरलोव जैसे अंतरराष्ट्रीय लेखकों के साथ मिलकर स्वदेशी लोगों, संस्कृति, ज्ञान के बीच संबंधों की नवीनतम योजना तैयार की है। उसमें जैव विविधता, पारिस्थितिकी तंत्र नीति और मूल्यांकन में स्वदेशी ज्ञान की मान्यता और उपयोग को बढ़ावा दिया है। अफसोस की बात है कि जलवायु परिवर्तन की चुनौतियों के जवाब के लिए एजेंडा तय करने में स्वदेशी समाज की आवाज अभी भी काफी कमजोर है

स्थानीय समुदायों के स्वदेशी ज्ञान के महत्व यह है कि, जिसने बड़े पैमाने पर दुनिया की बढ़ती पर्यावरणीय समस्याओं, बढ़ती असमानताओं और पारिस्थितिक संकट में आंशिक रूप से योगदान दिया है। अब यह निश्चित हो गया है कि, स्वदेशी ज्ञान प्रणाली शास्त्र विकास के लिए महत्वपूर्ण प्रेरक शक्ति है, जो भविष्य में जरूरतों को पूरा करने की क्षमता वर्तमान को बिना नुकसान पहुंचाये बढ़ा सकती है। यहां यह समझना अति महत्वपूर्ण है कि गरीबी कम करने, आजीविका में सुधार और पर्यावरण को स्थिरता प्राप्त करने के लिए संचित ज्ञान स्वदेशी ज्ञान है। १९९२ के पर्यावरण और शिक्षा पर संयुक्त राष्ट्र सम्मेलन, ब्रंटलैंड आयोग और पर्यावरण और विकास पर विश्व आयोग (१९८७), के माध्यम से ही स्वदेशी ज्ञान की अवधारणा को दुनिया भर में मान्यता मिली।

कई शोधकर्ता बताते हैं कि स्वदेशी ज्ञान उपयोगी रूपरेखा, विचार, मार्गदर्शक सिद्धांत, प्रथाएं और उपाय प्रदान करता है जो बड़े पैमाने पर दुनिया की सामाजिक, आर्थिक और पर्यावरण संरक्षण बहाल करने के लिए प्रभावी विकास प्रक्रिया की नींव के रूप में काम कर सकता है। हालाँकि, यह भी एक तथ्य है कि हाल के दिनों में स्वास्थ्य, शिक्षा, गरीबी में कमी, प्रौद्योगिकी विकास आदि सुधार के बावजूद, दुनिया को वर्तमान और भविष्य में प्राकृतिक आपदाओं का खतरा है। प्राकृतिक संसाधनों पर दबाव बढ़ रहा है। विकास और पर्यावरण में संतुलन बनाये रखने की आवश्यकता है । भारत जैसे दुनिया के विकासशील देशों को सामने यह समस्या है कि, जो विकास और प्राकृतिक संसाधनों अपक्षय के बीच किसका चयन करे।

भारतीय स्वदेशी ज्ञान प्रणालियाँ

भारतीय ज्ञान प्रणालियों में ज्ञान, विज्ञान और जीवन दर्शन शामिल हैं जो अवलोकन, अनुभव, प्रयोग और कठोर विश्लेषण से विकसित हुए हैं। चर्चा के बाद स्वीकार करने और व्यवहार में लाने की परंपरा ने भारतीय शिक्षा, कला, प्रशासन, कानून, न्याय, पर सकारात्मक प्रभाव डाला है। ज्ञान प्राप्त करने के कुछ तरीकों में कहानी सुनाना, व्यक्तिगत प्रतिबिंब, स्थानों का दौरा, समारोह, कला, संगीत और नृत्य आदि शामिल हैं।

भारत विभिन्न जातीय एवम नस्लीय समूहों, सांस्कृतिक पृष्ठभूमि, धार्मिक अंतर्ज्ञान, सामाजिक संरचना आदि से संबंधित लोगों का घर है, जिनमें से प्रत्येक के पास अपनी अनूठी स्वदेशी ज्ञान प्रणालियाँ हैं, जिनके बारे में माना जाता है कि पर्यावरण का स्थायी उपयोग करने का ज्ञान परम्परासे मिलता है।

भारतीय स्वदेशी ज्ञान का अनुप्रयोग

स्वदेशी ज्ञान का अनुप्रयोग समृद्ध और विविध है, जैसे जल प्रबंधन, पारंपरिक कृषि पद्धतियाँ, भूमि उपयोग की पद्धतियाँ, आयुष चिकित्सा, पशुपालन, भोजन बनाने की विधि करना और संरक्षण, बीज भंडारण, पर्यावरण संरक्षण, मौसम के संकेतोंको समझना, मानव स्वास्थ्य, फसल स्वास्थ्य, खाद्य सुरक्षा और कई अन्य।

भारत में एक मजबूत और जीवंत संस्कृति और प्राकृतिक विविधता है और प्रत्येक सांस्कृतिक समूह या समुदाय ने वर्षों से अपनी स्वयं की ज्ञान प्रणाली विकसित की है जो मूल रूप से मौखिक परंपराओं के माध्यम से हस्तांतरित हुई थी। लगभग ७४४ आदिवासी समुदायों, जातीय समूहों और विविध सांस्कृतिक पृष्ठभूमि का घर, ज्ञान प्रणालियों के एक समृद्ध स्वदेशी ज्ञान का भंडार बनाता है। मौजूदा साहित्य और शोध निष्कर्षों के अनुसार, यह अनुमान लगाया गया है कि लगभग ७०% भारतीय आबादी ग्रामीण आधारित है जिसमें प्राकृतिक संसाधन ग्रामीण गरीबों की रोजमर्रा की जरूरतों को पूरा करने में महत्वपूर्ण भूमिका निभाते हैं। अपने अस्तित्व और आजीविका के लिए लोगों की अपने तात्कालिक पर्यावरण पर गहरी निर्भरता, अनुभव और दिए गए संसाधनों के बारे में ज्ञान विकसित करने में सक्षम बनाती है। भारत में जातीय अल्पसंख्यकों, आदिवासी समुदाय, ग्रामीण आबादी, महिलाओं और अन्य वंचित समूह प्रकृति के करीब रहते हैं और अपनी आजीविका के लिए वन और प्राकृतिक संसाधनों पर निर्भर हैं। यह घनिष्ठ निर्भरता स्थानीय समुदायों और वातावरण के बीच एक प्रकार का सहानुभूतिपूर्ण संबंध स्थापित करती है, जो उनके सामंजस्यपूर्ण सह-अस्तित्व और संसाधन प्रबंधन के प्रति शाश्वत दृष्टिकोण में दिखाई देता है। पराजुली और दास द्वारा २०१३ में किया गया शोध पर्यावरण स्थिरता में स्वदेशी ज्ञान की महत्वपूर्ण भूमिका की पुष्टि करता है। हालाँकि, जब प्राकृतिक संसाधनों के नीति निर्माण और विकासात्मक योजना की बात आती है, तो स्थानीय समुदायों की सबसे महत्वपूर्ण आवाज़ें, जो पारिस्थितिकी तंत्र के व्यापक पारिस्थितिक ज्ञान के वाहक हैं, अक्सर अनसुनी कर दी जाती हैं।

भारत में प्राकृतिक संसाधनों को न केवल जीविकोपार्जन, आजीविका के साधन के रूप में देखा जाता है, बल्कि उनके चारों ओर ब्रह्माण्ड विज्ञान का निर्माण भी किया जाता है। भारत में पवित्र नदी, पवित्र स्थल, पवित्र वन या पेड़ आदि की अवधारणा है, जो न केवल उनके धार्मिक विश्वास और प्रथाओं की पुष्टि करती है, बल्कि 'पवित्र' संसाधनों के संरक्षण के माध्यम से शाश्वत विकास को भी बढ़ावा देती है। हालाँकि, आज,

स्थानीय समुदायों का स्वदेशी ज्ञान न केवल वैश्वीकरण, विकासात्मक कार्यक्रमों, पर्यावरणीय खतरों के तत्वों के प्रति आहत है, बल्कि भूमि और वन अधिकारों से संबंधित मुद्दों, संसाधन प्रबंधन में शक्ति संघर्ष, लैंगिक असमानता, पारंपरिक विश्वास प्रणाली में आधुनिकीकरण का प्रभाव, और युवा पीढ़ी को ज्ञान का हस्तांतरण न होना आदि के प्रति भी संवेदनशील है।

भारत में आबादी का एक बड़ा हिस्सा कृषि क्षेत्र से संबंधित है, इसमें कोई संदेह नहीं है कि देश की अधिकांश भूमि पर छोटे और सीमांत किसानों, शिकारियों आदि का कब्जा है। वातावरण में उपलब्ध वनों और असंख्य वन उत्पादों पर निर्भर हैं। देश की अर्थव्यवस्था में कुल रोजगार का लगभग आधा हिस्सा कृषि क्षेत्र में है। स्वदेशी ज्ञान बहुआयामी है और इसमें कृषि, वन, चिकित्सा, मानव स्वास्थ्य, पौधे और पशु जीवन, भूमि, जल संरक्षण, खाद्य सुरक्षा आदि में ज्ञान प्रणाली की एक विस्तृत श्रृंखला है। यद्यपि स्थानीय किसान पर्यावरण के संरक्षण और स्थिरता को बनाए रखने के लिए सरल उपायों और जैविक ज्ञान को लागू कर रहे हैं। ऐसी पुरानी मौजूदा प्रथाओं को अवैज्ञानिक के रूप में बदनाम किया जा रहा है और विशेष रूप से कृषि प्रणालियों में आधुनिक तकनीक को समायोजित करने के लिए उन्हें नजरअंदाज कर दिया गया है या दरकिनार कर दिया गया है।

पूर्वोत्तर भारत में जनजातीय समुदाय प्राचीन काल से बड़े पैमाने पर स्थानांतरण खेती का अभ्यास करते हैं, जिसे JHOOM भी कहा जाता है और यह पाया गया है कि इन समुदायों ने दिए गए पर्यावरण के साथ सद्भाव में रहने के लिए अपनी स्वयं की ज्ञान प्रणाली विकसित की है। इसी तरह, कर्नाटक की सोलिगा जनजातियाँ अपनी पारिस्थितिकी, वन संरक्षण, कृषि प्रणाली, भूमि उपयोग और अन्य संसाधन प्रबंधन के पारंपरिक ज्ञान का उपयोग करती हैं। सोलिगा जनजाति आग को नियंत्रित करती है, जिसके बारे में उनका मानना है कि यह आक्रामक प्रजातियों के नियंत्रण, स्थानीय स्वदेशी प्रजातियों के पुनर्जनन, बीजों की निष्क्रियता, कीटों पर नियंत्रण और वन्यजीवों के लिए भोजन को पुनर्जीवित करने के लिए अच्छा है। वे मिट्टी की उर्वरता बढ़ाने के लिए स्थानांतरण खेती का भी अभ्यास करते हैं। इस समुदाय के पास अच्छी जल प्रबंधन प्रथाएं थीं। हालाँकि, लद्दाख की अपनी कृषि पद्धतियाँ भी हैं। उनकी स्थानीय वास्तुकला उन्हें अत्यधिक सर्दियों से बचने में मदद करती है। आम तौर पर जल भंडारण के लिए इन राज्यों ने शास्वत जल प्रबंधन तंत्र विकसित किया है। उत्तराखंड की ग्रामीण महिलाओं ने चिपको आंदोलन किया और पर्यावरण की स्थिरता बढ़ाने के लिए वन आवरण में सुधार किया। हरियाणा और राजस्थान के कुछ क्षेत्रों में बिश्नोई समुदाय ने समय के साथ आवश्यक जीव-जंतुओं के भीतर एक हरित वातावरण बनाने में मदद की है जो स्थिरता में सुधार करने में मदद करता है।

चुनौतियों में से एक मनुष्य और जानवर के बीच सामंजस्य स्थापित करना है। हाल ही में भारत में चीता का पुनर्स्थापन और भारत में शेर और बाघों की बढ़ी हुई आबादी सही दिशा में एक कदम है। अन्य चुनौतियाँ विकास की आवश्यकता और पर्यावरण के संरक्षण के बीच संघर्ष को जन्म देती हैं। यहीं पर सद्भाव प्राप्त करने के लिए स्वदेशी ज्ञान काम आएगा। इसलिए आवश्यकता दोहरी है, पहली स्वदेशी ज्ञान के पोषण के लिए नीति निर्माण और दूसरी, स्वदेशी ज्ञान को अधिक वैज्ञानिक और अनुसंधान आधारित बनाना।

भारतीय संदर्भ में संपूर्ण ज्ञान वेदों पर आधारित है जो काव्यात्मक मंत्रों के रूप में हैं।

ऋग्वेद:- ऋचाएँ ईश्वर और प्रकृति की स्तुति में हैं।

यजुर्वेद:-यह अनुष्ठान करने के लिए मार्गदर्शक है।

सामवेद:- यह गीत के रूप में ज्ञान है।

अथर्ववेद:- यह संस्कृति, रीति-रिवाजों, विश्वासों, आकांक्षाओं के बारे में जानकारी का स्रोत है।

इसे समसामयिक बनाने के लिए NEP को २०२० में पेश किया गया। राष्ट्रीय शिक्षा नीति, २०२० "भारतीय लोकाचार में निहित एक शिक्षा प्रणाली के माध्यम से शिक्षा में बड़े पैमाने पर परिवर्तन की कल्पना करती है, जो सीधे भारत को बदलने में योगदान दे सकती है। NEP २०२० की रचना अवसर, समानता, गुणवत्ता, सामर्थ्य और जवाबदेही के पांच मार्गदर्शक स्तंभों पर की गई है। NEP २०२० प्राचीन और शाश्वत भारतीय ज्ञान और विचार की विरासत को एक मार्गदर्शक सिद्धांत के रूप में मान्यता देता है। भारतीय ज्ञान प्रणालियों में ज्ञान, विज्ञान और जीवन दर्शन शामिल हैं जो अनुभव, अवलोकन, प्रयोग और कठोर विश्लेषण से विकसित हुए हैं, इसमें स्वदेशी ज्ञान को मान्य करने और अभ्यास में लाने की परंपरा को फिर से जीवंत करने पर जोर दिया गया है। इसका प्रभाव शिक्षा, कला प्रशासन, कानून, न्याय, स्वास्थ्य और वाणिज्य पर पड़ेगा। मातृभाषा पर जोर देने से स्वदेशी ज्ञान को पुनर्स्थापित करने में मदद मिलेगी।

निष्कर्ष

स्वदेशी ज्ञान हमारे ग्रह के सामने आने वाली जटिल पर्यावरणीय चुनौतियों से निपटने के लिए एक शक्तिशाली उपकरण प्रदान करता है। स्वदेशी ज्ञान के मूल्य को पहचानकर, स्वदेशी समुदायों के अधिकारों और परंपराओं का सम्मान करके, और स्वदेशी ज्ञान धारकों और आधुनिक संरक्षणवादियों के बीच सहयोग को बढ़ावा देकर, हम पर्यावरण संरक्षण के लिए अधिक प्रभावी और समग्र दृष्टिकोण बना सकते हैं। इस ज्ञान को अपनाना केवल एक पारिस्थितिक अनिवार्यता नहीं है; यह सभी के लिए अधिक समावेशी और शाश्वत भविष्य की दिशा में एक कदम है।

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Artificial Intelligence: A Revolution in the Field of Education**Dr. Sarika M. Patel***Asst. Prof. SSR College of Education, Saily, Silvassa***And****Dr. Mahesh C. Patel***Principal, Meghwad Primary School,**Ta. Kaprada, Dist. Valsad, Gujarat*

Abstract

Artificial intelligence (AI) is transforming the way we live, work, and communicate. At present, the term 'AI' describes a wide range of technologies by which human beings are surrounded. And the field of education is certainly included in the scope of AI. Artificial Intelligence is going to bring revolutionary changes in the teaching learning methodologies in education rather in every field. With the tremendous speed, accuracy and cognitive abilities AI will bring drastic transformation in day-to-day life of people. AI can certainly empower teachers, educators and students. It accelerates teaching learning as well as self-learning. It provides personalized educational experiences, quickly and effectively. Every coin has two sides and so AI is also not an exceptional generative. It also comes with some challenges and potential drawbacks. In this exploration of the pros and cons of AI in education following are the cons of AI. Balancing the advantages of AI with its potential drawbacks in education requires planning, training and upgradation, as well as continuous evaluation. If teachers overcome the risks of bias, misinformation, and student isolation with careful scrutiny, teachers can explore the potential of AI as a revolutionary educational tool for their students and themselves.

Key Words: Artificial Intelligence, Revolution, Education.

Introduction

Artificial intelligence (AI) is a field related to computer science and technology that deals with creating machines or software programs capable of performing tasks that require human intelligence and which require human cognitive functions like reasoning, problem solving, learning, perception and making decisions. As per the definition, Artificial intelligence (AI) refers to computer systems capable of performing complex tasks that previously only a human could do, such as reasoning, making decisions and solving problems. In simple words Artificial intelligence (AI) is transforming the way we live, work, and communicate. At present, the term 'AI' describes a wide range of technologies by which human beings are surrounded. And the field of education is certainly included in the scope of AI. Need of the hour is to share knowledge and to develop

policies for “Artificial Intelligence”. It is a rapidly advancing class of capabilities which are increasingly embedded in all educational technology systems. It is very much needed to engage teachers, educational authorities, academicians, policy makers, researchers, and providers to work together on framing practices and activities which train students to cope up in the era of Artificial Intelligence.

Artificial Intelligence

In late 2022 and early 2023, people became aware of new generative AI chatbots and began to experience that how AI could be used to write notes and essays, create lesson plans, create images, personal assignments as well as for public responses in mass media, social media, at conferences, seminars and in news media. AI-enabled systems have evolved rapidly. The key elements of AI include: Natural language processing (NLP), Expert systems, Robotics, Intelligent agents and Computational intelligence. Interest is rising in AI in Education rapidly but many priorities for improvements in teaching and learning are unmet.

Educators wish if the rapid advances in AI could help in routine works such as voice assistants in their profession and homes, tools to correct grammar, update records, complete sentences, write essays, write applications etc. Actually, we all use AI-powered services in our phones in everyday lives. Educators will have to learn technology-enhanced approaches. Rather, many educators are trying to explore AI tools which are related to education such as; speech recognition to increase the support available for learning disabled students, to facilitate multilingual learners and slow learners. Teachers and students embrace Chat GPT for education.

AI, Knowledge and Information

Artificial Intelligence provides the mechanisms that enable technology to gain knowledge. It allows them to get information, process, and use received knowledge to perform given tasks that express intelligent behaviour like perception, learning, representation, planning, reasoning and execution. Knowledge and intelligence are different from each other in many ways. Knowledge is the collection of information and skills we perceive through experience while applying that knowledge to make decision- making and problem- solving is intelligence.

Characteristics of an AI-powered knowledge base includes;

- **Faster service**

What a scientist can do in 10 minutes, AI can do more than a million at the same time. An AI-powered knowledge base significantly makes educational activities, practices faster which is a satisfactory factor for all stakeholders.

- **Accuracy and relevancy**

AI provides complete accuracy and relevancy at large sets of data. It provides analysis of data and then makes predictions based on the information. At the end users are provided with

conclusions that address their needs.

- **Consistency**

All stakeholders have access to the same relevant content, which means they are provided with the same information and consistent customer experience.

- **Simplification**

It is not making data complex. It works on the proper path and goes step by step.

- **Improved collaboration**

All the stakeholders work together. AI gathers feedback and recommendations from agents, customers, and public users to update and improve content.

While using AI Educators concerns about many dimensions. It is well-aware of “teachable moments” and pedagogical strategies that a human teacher can address but are undetected or misunderstood by AI models. Everyone in the field of education has a responsibility to harness the good to serve educational priorities and also protect against the dangers that may arise as a result of using AI.

Pros of AI in Teaching Learning

- **Assistance.** Teachers can make their work easier. Teachers with the support of AI can perform better with lesson plans, to initiate new project ideas for students, for solving an equation and creating quizzes. With assistance from artificial intelligence, teachers can gain more time to teach their students effectively.
- **Speed.** If students find difficulties while working on projects or assignments, artificial intelligence programs can provide immediate help in the absence of teachers. Students can even ask for effective strategies, for effective pedagogy or easy ways to understand any difficult concept.
- **Individualization.** AI programs can provide learning opportunities for individuals. It can help an individual to understand with translation to their language. So, it becomes easier for students in a multilingual classroom. For instance, ChatGPT can quickly translate learning materials to another language.
- **Experiences.** Artificial intelligence in education offers a platform and opportunities to get experience of each and every activity, phenomenon, new concepts, and processes. It can provide ample examples and demonstration of various content irrespective of any subject.
- **Personalization.** Artificial intelligence can also personalize the teaching learning process for students. By analysing student performance, AI can provide effective tools considering the levels of students such as slow learners, fast learners, gifted students or physically disabled students.
- **Simplifying knowledge discovery.** Direct experiences of research, experiments and

demonstration has led to knowledge discovery accessible easily for all. Today's systems add discovering and updating knowledge to the mix. Teachers are able to use multiple tools, including cloud-based solutions, to share their knowledge and expertise with students.

- **To maintain knowledge base content up-to-date.** Many times a tremendous amount of data ends up as stored in a knowledge base. Eventually, it becomes outdated. It is difficult to update or to dispose of the stored information. AI supports maintenance of knowledge by reminding users to update knowledge regularly.

Cons of AI in Teaching Learning

Every coin has two sides and so AI is also not an exceptional generative. It also comes with some challenges and potential drawbacks. In this exploration of the pros and cons of AI in education following are the cons of AI.

- **Bias.** If AI programs like ChatGPT are trained with biased information then it may lead students to confusions or wrong concepts. Biased response by AI can perpetuate stereotypes and social inequalities. It can also lead to an unfair and biased evaluation process.
- **Mistakes/Errors.** Teachers and students cannot assume that information provided by AI is always accurate. In addition to bias, AI may generate misinformation. The data that AI draws may have mistakes, errors or outdated.
- **Cheating.** Students can use AI powered programs to write entire assignments, essays, projects, reports or their homework. However, there are AI programs that can detect AI writing which help teachers to identify their students cheating. But sometimes these programs may falsely identify a students' original work as plagiarism.
- **Isolation.** If students interact and deal with software programs and technologies more than with teachers. So, they can begin to feel disconnected and isolated. Their motivation may decrease without attachment and report with teachers which could lead to an increase in dropout rates and depression.
- **Jobs.** Artificial intelligence is proving its potential as a powerful teaching learning tool as well as many other areas. Some people are afraid that AI can decrease the employment of human resources and teachers are also one amongst them.

Conclusion

In the emerging era of technology no field is left out in using AI mechanisms. Balancing the advantages of AI with its potential drawbacks in education requires planning, training and upgradation, as well as continuous evaluation. AI can certainly empower teachers, educators and students. It accelerates teaching learning as well as self-learning. It provides personalized

educational experiences, quickly and effectively. If teachers overcome the risks of bias, misinformation, and student isolation with careful scrutiny, teachers can explore the potential of AI as a revolutionary educational tool for their students and themselves.

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Historical Perspective of Indian Knowledge System

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Abstract :

The Indian Knowledge Systems (IKS) comprise of Jnan, Vignan, and Jeevan Darshan that have evolved out of experience, observation, experimentation, and rigorous analysis. This tradition of validating and putting into practice has impacted our education, arts, administration, law, justice, health, manufacturing, and commerce. The Indian National Education Policy (NEP), as enacted in 2020, emphasizes the inclusion of IKS into curriculums at all levels of education. In line with this, the National Credit Framework (NCF) has made it possible for students to earn credit in courses relating to ancient Indian sciences and arts. IKS is also being included under the Vision 2047 for Bharatiya Rasayana Sastram initiative. In the 2022-2023 budget, IKS's financial allocation was doubled to Rs. 20 crore (US\$2.5 million). Under University Grants Commission (UGC) guidelines, it is advised that 5% of a student's total credits should be in IKS courses at the undergraduate and postgraduate levels. The UGC aims to train 1.5 million teachers in IKS by 2025, and has launched an online IKS MOOC course. IKS has also spearheaded and funded certain research initiatives relating to traditional Indian knowledge, such as in relation to agriculture and architecture

Key Words : Historical Perspective, Indian Knowledge System (IKS)

Introduction :

The specific vidya or branch of Indian knowledge systems (IKS) dedicated to the discussions of those principles, theories, and experience-based prescriptions was called dandaniti, the other three vidyas being ānvīkṣikī, trayī, and vārtā. This four-fold division is mentioned in Kautilya's Arthaśāstra Schools of Thought Systems – Among the above knowledge systems, India's various philosophical and belief systems have pride of place and will be outlined here, beginning with the classical systems of Vedānta, Nyāya and Sāṃkhya and exploration continues with Mīmāṃsā, Vaiśeṣika and Yoga.

IKS aims to support and facilitate further research to solve contemporary societal issues. IKS is based on Vedic literature, the Vedas and the Upanishads. Various enumerations and classifications of systematic knowledge, or sciences, have been transmitted; perhaps the most common ones refer to fourteen or eighteen locations of knowledge (vidyāśāntāna): the four Vedas

and the six auxiliary sciences to the Vedic texts (the sciences of articulation or phonology, prosody).

The main objective of integrating IKS into the education system is to ensure that India's ancient knowledge systems, such as Ayurveda, Yoga, and traditional arts, are preserved and promoted for future generations.

Bharatiya Khel

The game of seven stones, which is one of the 75 games featured by Bharatiya Khel. Indian Games is an initiative of the Indian government under the National Education Policy (NEP) and IKS policies to introduce 75 traditional Indian games into schools across the country. Inter School competitions will be held, with one seasonal game selected each month, and the best-performing schools and teachers will earn certificates of recognition.

Support

The work of the IKS division has been interpreted by some as being guided by a mission to preserve Indian heritage, apply ancient knowledge to modern problems such as climate change and decolonise Indian education in a way that reduces undue Western influences.

Criticism

Critics of the IKS division have asserted that its curricula peddle pseudoscience and pseudohistory, do not constitute a genuine scholarly "decolonization" programme, are a tool of indoctrination by the Hindutva ideology of the ruling and will economically and professionally disadvantage Indian graduates in the workforce.

Many critics argue that the IKS division promotes fringe pseudoscientific and pseudo historical views. Writing for The Wire, Vasudevan Mukunth criticized the introduction of a new textbook under the auspices of IKS as a "Trojan horse of pseudoscience". The textbook in question dismisses as a myth the commonly accepted belief that "aeronautics was developed by Wright Brothers in 1903," asserting instead that 5,000 years before the Wright Brothers, "Maharshi Bhardwajan wrote an epic called Yantra Sarvasva and aeronautics is a part of the epic. Yantra Sarvasva is not available now but out of whatever we know about it, we can believe that planes were a reality in Vedic age." The textbook also asserts that "It's a Myth that Theory of Gravity was discovered by Isaac Newton in 1666 AD; the truth is that thousands of years before Newton, a number of epics were written on the gravitational force and we can find the evidence in the Rig Veda."

Manasi Thapliyal Navani, a professor in the School of Education Studies at Dr. B. R. Ambedkar University Delhi, has criticized the IKS curriculum as not being genuinely decolonial, stating that "Indigenous knowledge education or decolonization projects begin with a critical dialogue with history and with the dominant forces that have shaped modern disciplines,"

and because IKS curricula lack such critical engagement, "the whole project essentially boils down to becoming one of indoctrination."

Another criticism is that the IKS curricula may deprive students of access to useful Western knowledge, or bias them against it. In his article for The Wire, Mukunth also warned that an IKS education "would render [Indian] graduates even more unemployable, or under-employed, than they already are". Some critics have urged that IKS courses be made optional so as to not create issues for students who want to take courses that are better for their employment prospects.

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Indian Knowledge System and NEP-2020**Dr. Renuka B. Chavda***Assistant Professor**Smt.K.S.N. Kansagara Mahila College, Rajkot*

Abstract

If we look at our Indian education system in the past, it was like a colonial education system, i.e. we mostly based our education on the British education policy. This type of colonial system of education was started by the English Medium School which is mostly known as Anglo Vernacular School which was established by Lord Macaulay in 1835 i.e. mostly through an English Education Act. But today the Indian government changed our education policy which has been created by the Government of India in the year 2020 will be known as the National Education Policy, which mainly exposes the knowledge of India and the tradition of India and its importance increases greatly. In order to solve the contemporary society more and more research is done and students can also know our ancient tradition Vedic literature and it is mentioned in this National education policy, then the present research paper elaborates about the Indian knowledge system and its role, its objectives and the mission in the current National Education Policy Information has been given. Thus, it can be considered very important to know the role of the Indian knowledge system in this National Education Policy.

Key words : Indian knowledge system (IKS), NEP -2020, Education

Introduction

The Indian Knowledge System (IKS) is a structured process of knowledge transfer based on Vedic literature, Upanishads, and Vedas. It is recognized by the NEP-2020 National Education Policy as a guiding principle. The IKS includes Jnan, Vignan, and Jeevan Darshan, influencing education, arts, administration, law, justice, health, manufacturing, and commerce. It includes ancient India's knowledge, successes, challenges, and future aspirations.

The Indian ancient traditional knowledge system, with its diverse roots and evolution, is increasingly being studied for its relevance and sustainability. Analyzing its nature, history, philosophy, and values is crucial for enhancing human welfare efforts.

Objectives:

The primary purpose of this paper is given below.

1. To gain an understanding of the Indian knowledge system.
2. To know the role and purpose of Indian knowledge tradition in the national education policy of India.

Indian Knowledge System

The philosophy of the Indian ancient knowledge system is deeply rooted in various schools of thought that have evolved over thousands of years. Some of the key philosophical systems include:

1) Vedanta

Vedanta is a significant part of the Indian knowledge system, serving as the foundation of Hindu philosophy and a comprehensive framework for understanding reality, consciousness, and existence. It is rooted in the Vedas, the oldest sacred texts of India, and focuses on the exploration of ultimate reality (Brahman) and the individual self (Atman). Vedanta emphasizes the pursuit of self-realization and spiritual liberation (moksha), which leads to freedom from the cycle of birth and death (samsara) and attainment of eternal bliss (paramananda). It employs various methods of inquiry, such as scriptural study (shravana), reflection (manana), and meditation (nididhyasana), to deepen understanding and realization. Despite its diverse philosophical interpretations, Vedanta promotes tolerance and inclusivity, acknowledging the validity of different paths and viewpoints. Vedanta has profoundly influenced Indian culture, shaping literature, art, music, and social norms. Its teachings on ethics, morality, and knowledge pursuit have permeated Indian society for centuries, contributing to the development of a rich philosophical and spiritual tradition. Overall, Vedanta serves as a guiding light in the Indian knowledge system, offering profound insights into reality and the human condition.

2) Nyaya:

The Nyaya school of philosophy is a significant part of the Indian knowledge system due to its focus on logic and epistemology. It offers a systematic approach to acquiring knowledge and determining truth, with theories such as inference, perception, comparison, testimony, and presumption. Nyaya encourages critical analysis and rigorous examination of arguments, facilitating intellectual inquiry and resolving philosophical disputes. It integrates with other philosophical systems like Vedanta, Mimamsa, and Vaisheshika, enriching interdisciplinary dialogue and fostering mutual understanding. Nyaya's logical and analytical methods have practical implications in ethical and legal reasoning, influencing legal systems and ethical codes. It also contributes to the systematization of knowledge in Indian thought by categorizing knowledge types, objects, and inquiry methods. Despite its ancient origins, Nyaya remains relevant in contemporary times, offering insights into logical reasoning, epistemological inquiry, and critical thinking.

3) Yoga

Yoga is a vital aspect of the Indian knowledge system, offering a holistic approach to well-being and self-realization. It is deeply rooted in the spiritual traditions of India, aiming to liberate individuals from the cycle of birth and death. Yoga practices, such as asanas, breath control,

meditation, and ethical guidelines, promote physical and mental health, mental well-being, and emotional balance. It facilitates self-realization and inner transformation by providing tools for self-inquiry, introspection, and self-awareness. Yoga also promotes the integration of body, mind, and spirit, promoting holistic integration and balance. It is grounded in philosophical principles from ancient texts like the Yoga Sutras of Patanjali, the Bhagavad Gita, and the Upanishads. Yoga is an integral part of India's cultural heritage and tradition, evolving over time through the contributions of various sages, practitioners, and lineages. It has gained global influence, influencing diverse cultures and societies worldwide. Ultimately, yoga continues to inspire seekers and practitioners worldwide, contributing to the enrichment of human consciousness and collective evolution.

4) **Samkhya**

The Samkhya school of philosophy is a significant part of the Indian knowledge system due to its metaphysical inquiry, understanding of the self, psychological framework, ethical implications, and integration with yoga. Samkhya delves into the nature of existence, consciousness, and the universe, positing two eternal principles: Purusha (consciousness) and Prakriti (matter). It provides insights into the individual self and its relationship with the material world, elucidating the concept of liberation (kaivalya). Samkhya also offers a psychological framework for understanding human experience and consciousness, classifying the various elements of the psyche and analyzing their functions in perception, cognition, and action. It emphasizes discernment and detachment as means to overcome ignorance and attain spiritual liberation. Samkhya's philosophical principles continue to inspire scholars, practitioners, and seekers interested in understanding the fundamental aspects of life and the universe. Despite its ancient origins, Samkhya remains relevant in contemporary times, enriching the intellectual landscape of Indian philosophy and inspiring contemplation and dialogue in the pursuit of truth and wisdom.

5) **Advaita Vedanta**

Advaita Vedanta is a non-dualistic philosophy that emphasizes the identity of the individual self (Atman) with the ultimate reality (Brahman). It asserts that there is only one underlying truth and that the world's diversity is illusory. Advaita Vedanta encourages rigorous inquiry into reality and self-realization, focusing on direct insight as the means to transcend ignorance and realize one's true nature as Brahman. It is deeply rooted in the Vedanta tradition, drawing upon the Upanishads, Brahma Sutras, and the Bhagavad Gita. Advaita Vedanta also recognizes the importance of ethical living and moral conduct, teaching that compassion, non-violence, and selflessness are inherent qualities of the realized sage. It has had a profound influence on Indian culture, shaping religious practices, philosophical discourse, literature, art, and music. Its teachings have gained recognition beyond India, attracting scholars, practitioners, and

seekers worldwide. Despite its ancient origins, Advaita Vedanta remains relevant in contemporary times, offering profound insights into the nature of consciousness, the human condition, and the search for meaning and purpose in life.

So from this it can be said that Indian thought and spirituality have been shaped by philosophical systems like Mimamsa and Vaisheshika, providing frameworks for understanding reality, consciousness, ethics, and the ultimate goal of human life.

The role of Indian knowledge system in the NEP-2020.

The Indian Knowledge System (IKS) is a structured process of knowledge transfer based on Vedic literature, Upanishads, Vedas, and Upvedas. It is recognized by the National Education Policy as a guiding principle. The IKS comprises Jnan, Vignan, and Jeevan Darshan, which have evolved through experience, observation, experimentation, and rigorous analysis. This tradition has impacted various fields, including education, arts, administration, law, justice, health, manufacturing, and commerce. It includes knowledge from ancient India, its successes and challenges, and India's future aspirations.

The Indian Knowledge System (IKS) will be introduced scientifically in school and higher education curricula, incorporating tribal knowledge and indigenous learning methods. The IKS covers various subjects such as mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, governance, polity, and conservation. Specific courses in tribal ethno-medicinal practices, forest management, traditional crop cultivation, and natural farming will also be made available. An elective course on Indian Knowledge Systems will be available to secondary school students. The policy emphasizes the importance of first-hand learning about India's rich diversity, promoting tourism and developing awareness of India's culture, traditions, and knowledge. Under 'Ek Bharat Shrestha Bharat', educational institutions will identify 100 tourist destinations and send students to study their history, scientific contributions, traditions, indigenous literature, and knowledge.

Currently, 32 IKS Centres are established to catalyze research, education, and dissemination of IKS. 75 high-end inter-disciplinary research facilities are being implemented, and around 5200 internships have been offered. Over 8000 Higher Education Institutions have started adopting IKS in their curriculum and digitizing 1.5 Lakhs books. The IKS Division has developed Vision 2047, a roadmap for establishing a thriving Bhāratīya Gnana Paramparā. Incorporating IKS courses in mainstream education would provide inspiration while preserving the heritage of our learning systems.

- **Mission Of Iks:-**

The mission of the Indian knowledge system is multifaceted and encompasses various goals and objectives aimed at preserving, promoting, and advancing the rich heritage of indigenous knowledge, traditions, and cultural practices. Some key aspects of the mission of the Indian

knowledge system include:

- 1) Indian Knowledge System Preservation and Promotion
 - Preserves and promotes traditional knowledge, wisdom, and cultural practices.
 - Includes indigenous medicine systems, agricultural practices, artisanal skills, folklore, languages, and arts.
- 2) Indian Knowledge System Integration with Modern Education
 - Integrating traditional knowledge systems.
 - Incorporating indigenous perspectives.
 - Integrating indigenous principles into curriculum.
 - Adapting teaching methodologies across subjects.
- 3) Indian Knowledge System: Research and Innovation
 - Utilizes traditional wisdom and indigenous knowledge.
 - Addresses contemporary challenges in healthcare, agriculture, sustainability, technology.
 - Explores ancient practices for modern solutions.
- 4) Indian Knowledge System: Cultural Identity and Heritage
 - Emphasizes shaping individual and collective identities.
 - Celebrates and preserves diverse cultural expressions.
 - Celebrates and preserves art forms, festivals, and languages.
- 5) Indian Knowledge System: Empowering Communities
 - Recognizes and values traditional knowledge.
 - Ensures inclusivity and equity in education, healthcare, and economic opportunities.
 - Based on cultural diversity and indigenous wisdom.
- 6) Indian Knowledge System: Sustainable Development and Conservation
 - Advocates harmony with nature.
 - Promotes traditional ecological practices.
 - Prioritizes conservation, biodiversity, and resilience.
- 7) Indian Knowledge System Global Outreach
 - Shares heritage and insights globally.
 - Fosters international collaboration.
 - Promotes cross-cultural understanding, mutual respect, and shared learning.
- IKS Cell:

Indian Knowledge System (IKS) is an innovative cell under the Ministry of Education (MoE) at AICTE, New Delhi. Its purpose is to promote interdisciplinary research, preserve and disseminate IKS for further research and societal applications. IKS also plays an active role in spreading the rich heritage of our country and traditional knowledge across various fields such as Arts and literature, Agriculture, Basic Sciences, Engineering & Technology, Architecture,

Management, and Economics. Its website is as follows <https://iksindia.org/>

So, the Indian knowledge system recognizes the importance of traditional knowledge, cultural heritage, and indigenous wisdom in promoting human well-being, sustainable development, and global harmony. It aims to use past wisdom to create a more inclusive, resilient, and sustainable future for all.

Conclusion:-

The Indian Knowledge System (IKS) is an innovative cell established to promote interdisciplinary research on all aspects of IKS, preserve and disseminate IKS for further research and societal applications. It includes knowledge from ancient India, its successes and challenges, and India's future aspirations in education, health, environment, and all aspects of life. IKS includes tribal knowledge, indigenous and traditional learning methods, and covers various fields such as mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, governance, polity, and conservation. It promotes tourism and develops awareness of India's diversity, culture, traditions, and knowledge of various parts of the nation. IKS includes Universal human values, Vedic Maths, Yoga, Ayurveda, Sanskrit, Indian Languages, sacrosanct religious regions, archaeological sites and monuments, Heritage of India, Indian Literature, Indian Sculpture, Indian Music and dance forms, Drama, Visual Arts, Performing Arts, Craftsmanship, and more.

For the deep understanding about IKS universities may introduce learner credits or IKS electives in all courses which will imbibe learners across all disciplines with traditional knowledge and pride. Additionally institutional support mechanisms through IKS centers can initiate research, education, and outreach activities in various parts of the country.

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Role of English Language Learning in Indian Knowledge System Under Artificial Intelligence

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Abstract:-

The sustainable Indian approach aims to promote everyone's well-being. Regaining our heritage's extensive knowledge system and showcasing the "Indian way" of doing things to the rest of the world are crucial. To do this, we must raise generations of academics who will represent and illustrate to the rest of the world the kind of life that is so distinctive and special to our great civilization. As a guiding concept, the NEP 2020 acknowledges this great legacy of timeless Indian wisdom and philosophy. Experience, observation, experimentation, and thorough analysis have led to the development of Jnan, Vignan, and Jeevan Darshan, the three components of the Indian knowledge systems. This method of approval and implementation has influenced the fields of education, the arts, administration, law, justice, health, business, manufacturing, and commerce. This has had an impact on Bharat's classical and other languages that were passed down through creative, oral, and literary traditions. The term "knowledge of India" in this context refers to both the achievements and difficulties of ancient India as well as the country's future goals with regard to the environment, health, education, and practically every facet of daily life.

Key words: - NEP, AI Language, Indian Knowledge system

Introduction

Many futuristic pictures spring to mind when you think about artificial intelligence. But the education system needs to adapt as AI swiftly becomes a commonplace aspect of our daily lives. Every day, firms employ machine learning in their operations. For their business operations to benefit from this potent technology, companies must comprehend how machine learning operates. AI, ML, and DL will have far greater capabilities in the future than they do now. Additionally, they will have a greater impact on a variety of aspects of our lives, including chat bots, wearable technology, mobile phones, home assistants, social media, and so on. We no longer need to move or touch anything in order to accomplish a task thanks to smart technology.

Though it has long been the subject of philosophical and science fiction discussions, artificial intelligence (AI) is quickly becoming a reality. AI gained widespread recognition in 2017.

With firms like Google pouring billions of dollars into creating an increasing number of AI applications, it was all over the headlines every day. AI covers a wide range of interesting topics, such as how intelligent robots are created and what it may look like in the future if these machines become more commonplace than people. The use of computers to perform tasks that would typically need human intelligence is known as artificial intelligence. However, what precisely is it? And why does it excite us so much? The science of creating machines with human-like thought processes is known as artificial intelligence. It is capable of actions deemed "smart." Unlike humans, AI technology can process enormous amounts of data in many ways. AI wants to be able to accomplish human-like tasks including pattern recognition, decision-making, and judgement. We need to include a lot of data into them in order to do this. For example, image identification and categorization are based entirely on AI technology.

AI-assisted English language learning has grown in popularity because of its many advantages. First of all, learners can have a customized and adaptable learning experience with AI language learning tools. These resources can determine the skill levels of students and design lessons that are tailored to their individual requirements and interests. Students may learn at their pace and get immediate feedback on their progress with AI, which makes it easier for them to monitor their development over time. Learning English with AI also offers the chance to grow and enhance all language proficiency. AI technologies can provide a range of tasks and exercises to improve one's speaking, writing, listening, and reading abilities. They offer dynamic and captivating resources that enhance the fun and efficiency of language learning.

Furthermore, natural language processing technology is frequently included into AI language learning platforms, enabling students to practise speaking with virtual chat bots. Students who participate in this immersive programme improve their speaking abilities, get over their fear of making mistakes, and develop self-assurance in socially awkward settings. Last but not least, using AI to learn English can be affordable and convenient. Learners can access language resources and classes at any time and from any location with the help of online platforms and apps. The necessity for pricey traditional language classes is removed by this flexibility, which also improves convenience in language learning.

The ability of AI to customize and adjust to individual demands is one of the main benefits of employing it for language acquisition. A learner's strengths and limitations can be evaluated using AI technology, which can then be used to build personalized learning experiences that meet their individual needs and learning preferences. AI language learning platforms are able to monitor a learner's development and pinpoint areas in which they require improvement by using machine learning algorithms. This enhances the effectiveness of the learning process by enabling the system to offer exercises and activities that are specifically focused on those areas. Artificial intelligence (AI) language learning systems can also adjust to the speed and skill level of their users.

Regardless of your learning style, AI can offer you challenges and resources that are appropriate for your current level of proficiency.

This flexibility guarantees that you are always stretched, but not overextended, which can significantly improve learning. AI language learning systems can also provide tailored criticism and recommendations for enhancement. AI may provide you immediate feedback on how you pronounce words, use grammar, and use vocabulary by monitoring your performance in real-time. This will enable you to recognise and fix errors more successfully. All things considered, the customisation and flexibility provided by AI language learning can greatly improve your learning process, making it more effective, efficient, and customised to your unique needs and objectives. While there are many advantages of utilising AI to learn languages, it's crucial to be aware of any potential risks and disadvantages as well. The absence of interpersonal interaction is one of the primary drawbacks. A human teacher provides a more intimate relationship and immediate feedback than other AI language learning technologies.

Learning a language is a difficult process that requires not only vocabulary and grammar comprehension but also awareness of cultural quirks and the capacity to carry on meaningful discussions. Artificial intelligence tools can find it difficult to impart the same depth and comprehension as a human teacher. Furthermore, the accuracy of translations and the ability of AI language learning technologies to recognise context may be limited. Given how quickly languages change, there may be situations in which AI systems are unable to keep up with the newest slang, idioms, or cultural allusions. Additionally, they could have trouble pronouncing words clearly or speaking with regional accents. An additional disadvantage is the excessive dependence on technology. Artificial intelligence (AI) is a useful tool, but it shouldn't take the place of human connection and communication. Learning a language involves more than just memorising vocabulary and grammar; it also involves building relationships with people and getting practice speaking in everyday contexts.

Even though AI has become an inevitable part of our lives, we may understand while AI has many benefits for language acquisition, it's crucial to understand that it shouldn't completely replace conventional language learning techniques. Rather, more thorough and efficient language learning can result from combining AI with conventional techniques. Conventional approaches to language acquisition, like taking language courses, conversing with native speakers, and integrating yourself into the community, offer priceless chances for practice and practical application. With the help of these techniques, students may communicate with one another, get rapid feedback, and comprehend the language more deeply. Through the provision of individualised learning experiences catered to each learner's unique requirements and preferences, AI can improve these conventional approaches.

To supplement classroom instruction, AI language learning platforms can provide

interactive exercises, adaptive quizzes, and virtual chats with chat bots. By providing a multitude of tools and resources, artificial intelligence can also enhance conventional language learning techniques. Vocabulary, grammar, and pronunciation can all be improved by learners with the help of AI-powered language learning apps, grammar checkers, and online dictionaries.

Students can take use of the best aspects of both worlds by integrating AI with conventional language learning techniques. Individuals can still partake in in-person conversations and immersive experiences that are offered by conventional techniques, but with the added benefit of AI technology's flexibility and ease. A more comprehensive and well-rounded approach to language acquisition is made possible by this hybrid methodology. We can say that “AI can aid in language acquisition, but traditional language instruction and AI can work together to create a better learning environment in the Indian context.”

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Role of Indian Knowledge System to Development of Entrepreneurship**Dr. Vilas Sadashiv Epper***Associate Professor**Dr. Babasaheb Ambedkar Marathwada University,**Chatrapati Sambhajanagar*

Abstract:

Entrepreneurship is the backbone of the Indian Economy, particularly rural economy, which leads to utilizing the available resources. Such available resources have human resources, natural resources, capital and so on. With the help of Entrepreneurship such resources convert into the products and services which fulfill the needs and wants of society. However the Indian Knowledge System has to provide the creativity and new ideas to develop the Entrepreneurship qualities among the present and potential Entrepreneurs. The source and instruments of Indian Knowledge System strongly advocate the development of Entrepreneurship which as above mentioned fulfill the needs of local people, village and group of villages, which is now converting into the global market that is “Local to Global”. Some goods and services are world famous which are produced and manufactured by small and gig patricians from old age, which had the history of the Indian Knowledge System. Therefore in this paper the researcher has strived to understand the Indian Knowledge System and its importance in the present global era.

Key Words: Entrepreneurship, Indian Knowledge, Rural economy, Global Market, Industry, Granthas, Upanisads, BhagwatGeeta, self-reliant, sustainable development.

Introduction:

Indian economy just like a tree, which roots are presented by agriculture, stem by industry, branches and leaves by trade and commerce, according to this proverb we can understand the importance of agriculture sector how is its importance. In short India is an agrarian country, this agriculture occupation has predominantly occupied 69 % for their livelihood. So the people still lives in rural areas. Near about 60% of employment is available in agriculture and various agro-based businesses and Entrepreneurship played a very important role from the old age with the help of the Indian Knowledge System. The industrial sector of India also depends on agriculture for its raw materials. The industrial agricultural goods processing sector depends on this sector. In short, agriculture business is very important which plays a vital role in the Indian economy, that's why it is said that India is an agrarian country. However, it ranks second in agricultural production in the world.

Historical background of Indian Knowledge System

India has the its old history of knowledge and its civilization has always attached great value to knowledge , witness its amazingly large body of intellectual texts, the world's largest collection of manuscripts, its attested tradition of texts, thinkers and schools in so many domains of knowledge. Shrimad BhagwatGeeta is the ocean of knowledge and principles of all sectors including business, administration, politics and governance. The hero of Mahabharata Arjun has asked the many questions to his Guru Lord Krsna about so many things and Lord Krishna answered to Arjuna that knowledge which is the great purifier and liberator of the self. As we had noted that India's knowledge tradition is ancient and uninterrupted like the flow of the river Ganga, from the Vedas (Upanisads) to Sri Aurobindo, knowledge has been at the centre of all rational and speculative inquiry in India¹.

In Maharashtra Sant Sahitya is another ocean of knowledge, including Sarth Dnyaneshwari Grantha, Saint Tukaram Gatha, which is the knowledge with life experienced about common man and human beings. The principles and knowledge explained by our Saint which is the answer to many questions and problems, which is the source of Indian knowledge.

However three terms are closely connected in all discussions of knowledge Darsana, jñāna and vidyā. Darsana, philosophy is the "system," the point of view, which yields/leads to jñāna, knowledge. When knowledge gathered about a particular domain is organized and systematized for purposes of, say, reflection and pedagogy, it is called vidyā, "discipline." The entire body of organized knowledge is divided into two sets in the Mundakopanisad —pāra vidyā and apāra vidyā (Mundakopanisad, 1.1.4), knowledge of the ultimate principle, paramātma or Brahman (that is the metaphysical domain) and knowledge that is secondary to the means by which one grasps aksara-Brahman,(knowledge of the worldly domain). Distinction is accordingly made between jñāna and vijñāna, the knowledge of facts of the perceptible world. The first kind of knowledge is observational and is gained by the eyes, etc. The other is experiential and is gained by the inner self as drashtā.

In the tradition, knowledge has been constituted, stored and maintained in the framework of the oral culture. According to Bhartrhari, knowledge is constituted in our inner self. There is the antaryāmi, constituted by the input of the senses (indriyas), processed by the mind (manas) and the intellect (buddhi), and finally constituted knowledge exists as our transformed, alert self, cit (VakyapadTya). Therefore, while both perception and inference are given primacy as epistemologies, tarka (argumentation) is also accorded an important place. the Indian mind has not relied completely on mind and senses and has accorded the central role in knowledge formation to meditation and deep reflection, cintana and manana. Also śabda-pramāṇa (verbal testimony) has always enjoyed authority with major systems of thought. Seeing with "mind's eye" is the typical epistemology of Indian thought. The Jaina thinkers, interestingly, define perception as Htma-

pratyaksa — what is present to the inner self and not as what is present to the senses. To put it in contemporary vocabulary, Indian mind has depended more on hypothetical-deductive methodology than on observational inductive methodology².

Objectives of the study.

1. To understand the Indian knowledge system related to entrepreneurship,
2. To the study of entrepreneurship and its needs in Indian economy,
3. To the study of various sectors where the needs to develop entrepreneurship,
4. To the study of Indian knowledge to develop the entrepreneurs quality,
5. To the study of problems and challenges of entrepreneurs.

Research Methodology.

Being this study is descriptive nature, it has been studied the Indian knowledge system with conceptually and for the purpose of this paper secondary data and information has been collected from the books, internet, website, and the research papers has been reviewed in this regard. However the ocean of Indian knowledge system is our intellectual property, it includes Vedas, Upnishad, Shrimad BhagvatGita, Economics of Kautilya, and so many books and Granthas.

Social Organization of Knowledge in India

Indian knowledge is legacy in many areas in the Indian society and its great values in related to many subjects like such as Medicine, Arithmetic, Agriculture, Grammar, Language, Dance, Music and Astrology, to name just a few, there is wide and extensive knowledge both at the level of the classical texts and the folk traditions. Quite commonly, they are referred to as iRstra and loka paramparil respectively. This is a significant feature of knowledge formation in India and perhaps no major civilization other than the Chinese has this aspect³.

Indigenous Health Traditions.

The Indian sub-continent abounds as it were in a variety and diversity of health traditions. We have with us what is perhaps the longest unbroken health tradition which has not only a stream of practitioners but also a textual and theoretical backing in terms of the Ayurvedic and siddha systems of medicine (Balasubramanian & Radhika:1989). They have made their presence felt even outside India, in other parts of Asia such as China, Thailand, Cambodia and Indonesia. However, what is most remarkable about the Indian medical tradition is that it prevails at two different levels, namely the classical system and the folk system. By the classical system, we refer to the codified systems such as Ayurveda, Siddha and QnUnT traditions. Some examples as following, Home remedies and cures for common ailments, Knowledge and beliefs regarding foods, Folklore on health, Individuals /families specializing in the treatment of specific diseases, e.g., jaundice,

asthma. Knowledge of diagnostic procedures, Knowledge of preventive measures. Knowledge of rtucaryU or adaptation of food and regimen to suit the seasons, Yoga and other physical cultural practices of a preventive and promotive nature. Special areas such as bone setting, visa-cikitsU (treatment for poisons), paftcakarma (five purificatory procedures)⁴, etc

Agriculture sector Food security and self reliant villages.

It is said that India is agrarian country. Agro sector has providing the foods and vegetables to huge population of our country. The Indian knowledge system has been providing the old and very qualitative and organic foods and vegetables not only to Indian people but also many agro produces to the world. The turmeric or curcuma “longa” which has the medicine qualities exported to many country, Grapes, banana, cotton and many such produces has been exported. Indian knowledge system promotes an entrepreneurial mindset, creativity, and innovation among the people inspiring them to become entrepreneurs which provide employment opportunities to the rural people. However in the olden days the villages system was self reliant, and the people of villages fulfill their basic needs at the local that is villages. There were bartering system, one is exchange the goods and article to another, both have the needs and want to consume the goods, however in the absence of money as exchange means they used the goods, some time or at weekly some villagers come together at the particular place to exchange their goods, that call as weekly market, in the weekly market is the popular, many people come with some needs and with excessive goods which they have. Maximum goods are manufactured, produced at the village level by the small artisans. However agriculture was the prime occupation, others allied sectors were the supportive which prepare instruments, tools and articles which were used to fulfill the needs of agriculture activities, such artisans traditionally called “Bara Balutedar”, some artisans were work to social activities, entertainment, and other recreation activities they are mainly six types called as “Aalutedar”, such “Athara Pagad Jati”, closely related to each other, there is very good and amicable atmosphere and social environment the old village system, and self reliant nature, and the source of guideline and the knowledge in the Indian knowledge system.

Entrepreneurship Development and Indian knowledge system

To express the importance of Indian Knowledge in development of entrepreneurs in a significant move, India is embarking on a transformational journey to restructure its education system based on the country's rich knowledge traditions, as emphasized by RSS leader Indresh Kumar in Greater Noida in one program. Kumar highlighted the importance of the Indian knowledge system in inculcating an entrepreneurial mindset in students, encouraging them to take risks, embrace innovation, and become creators rather than mere job-seekers.⁵

Reviving Ancient Traditions and Knowledge

The concept of the Indian knowledge system has gained significant momentum in recent

years, with a focus on reviving the ancient traditions and knowledge of India. During an event at the Sharda University, Kumar, a national executive member of the RSS, emphasized the inclusion of tribal knowledge, indigenous and traditional ways of learning, as well as various fields such as mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, governance, politics, and conservation under the NEP⁵.

Kumar also commended India's traditional sciences, highlighting their accuracy in providing information about solar and lunar eclipses, among other forecasts, in comparison to other Technologies worldwide.

P K Gupta, the chancellor of Sharda University, shed light on the efforts to support and facilitate further research based on Vedic literature, Vedas, and Upanishads to address contemporary social issues. He mentioned that existing Indian knowledge system courses are being synchronized with digital learning platforms to enhance accessibility and engagement. India's journey towards restructuring its education system based on its knowledge traditions holds immense potential in shaping the future of education and empowering students with a holistic understanding of their heritage and its relevance in the modern world. By embracing the wisdom of the past and integrating it with contemporary advancements, India is poised to make significant strides in fostering innovation, entrepreneurship, and well-rounded individuals who can contribute to the nation's progress and global competitiveness⁵.

Entrepreneurship Development needs of today's.

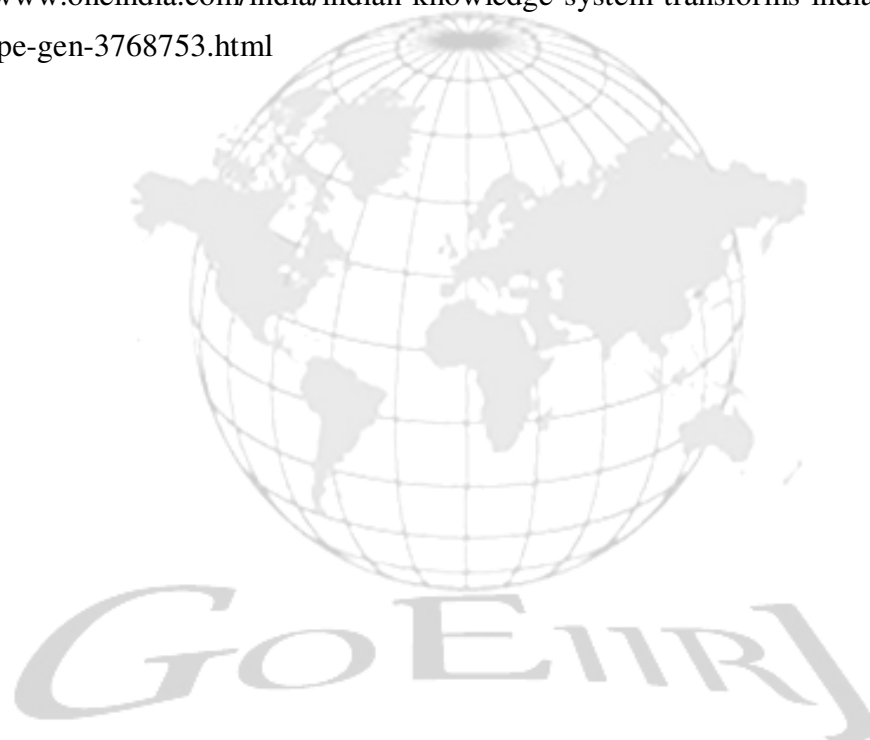
Tremendous resources are available in India, due to the apathetic role of people, policy makers, and due to the more bribery or corruption system we are lagging behind in many ways. However our old knowledge system has the answer and solution to many questions, which provide a self-reliant system. Now a there is the cut throat competition, each and every business man has the strive to obtain the profit, its means there is only profit making objects, which exploit the customers economically, particularly the big business and multinational companies, eventually the trend of capitalism has increasing which is cause to uneven development and emerging the two classes in the economy. However it is necessary to develop entrepreneurship and small and cottage industries which will provide employment opportunities.

Conclusion.

Entrepreneurship development is most important in the agricultural and rural economy which has provided an avenue to utilize the available resources, its help to employment opportunities to rural people, the excess load of human force diverted to allied sectors, it will help to increase the income of the rural people. However in India it is witnessed that the Indian economy was developed in the olden days due to the great knowledge and technology, which maintain the sustainable development and maintain the self reliant economy.

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Role of CET Cell as an ICT Tool in Integration of Indian Knowledge System

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Abstract

Indian higher education is revolutionary in terms of accessibility and moulding. Rapid and impressive growth of higher education in India needs to transform the traditional assessment system into a digital assessment system. The Government of Maharashtra has established the State Common Entrance Test Cell (CET Cell) to conduct Computer Based Test (CBT) for the admission to the Professional higher education Courses in the state of Maharashtra. CET Cell empowers aspiring individuals through fair, transparent, and standardized assessment and facilitates access to quality education and opportunities, driving positive societal impact.

CET Cell actively collaborates with educational institutions, policymakers, and stakeholders to contribute to the enhancement of the overall educational ecosystem. CET Cell acts as a catalyst for positive change in education. Online platform of computer based test of CET cell is an authentic tool of ICT that helps to integrate the Indian Knowledge System.

Key Words- CET Cell, CBT , ICT tool, positive changes in education

Introduction

The Indian higher education system is the third largest in the world. Indian higher education is revolutionary in terms of accessibility and moulding. Rapid and impressive growth of higher education in India needs to transform the traditional assessment system into a digital assessment system⁽¹⁰⁾.

I. About CET Cell

The Government of Maharashtra has established the State Common Entrance Test Cell (CET Cell) as per Section 10 of the Maharashtra Unaided Private Professional Educational Institutions (Regulation of Admissions and Fees)^(1 to 5). Act, 2015. The CET Cell conducts various entrance exams for Admission to Professional courses in the state of Maharashtra, India. According to G.R. No. CET-2015/C.No.379/MSHI-2, Dated 4th December, 2015^(6,7,8,11) and G.R. No. CET-2016/F.No.84/MSHI-2, Dated 7th April, 2016^(6,7,11), the Competent Authority shall conduct the Computer Based Test (CBT) for the admission to the First Year of Full Time Professional Courses in Higher Education such as B.Ed. (Bachelor of Education), M.Ed. (Master

of Education), B.P.Ed. (Bachelor of Physical Education), M.P.Ed. (Master of Physical Education), BA/BSc BEd.(5 yrs integrated course) and BEd-MEd.(3 yrs integrated course).

II. Vision of CET Cell⁽⁹⁾.

To be a pioneering force in the education sector, empowering aspiring individuals through fair, transparent, and standardized assessments. To foster a meritocratic society by facilitating access to quality education and opportunities, driving positive societal impact.

III. Mission of CET Cell

Conducting Fair and Rigorous Examinations : CET Cell commits to designing and executing examinations that are fair, unbiased and uphold the highest standards of academic rigor. **Transparent Evaluation and Reporting:** CET Cell strives for transparency in evaluation processes, ensuring that results accurately reflect individual merit and potential. commitment is to provide comprehensive and understandable reports to both candidates and institutions.

Access to Quality Education: CET Cell aims to break barriers to education by providing a reliable and standardized means of assessing academic proficiency. Through such examinations CET Cell endeavour to open doors to quality educational institutions and diverse opportunities.

Continuous Innovation: CET Cell pledge to stay at the forefront of assessment methodologies and technologies. By embracing innovation, CET Cell aims to enhance the effectiveness, security, and efficiency of examination processes.

Collaboration for Educational Excellence: CET Cell actively collaborates with educational institutions, policymakers and stakeholders to contribute to the enhancement of the overall educational ecosystem. CET Cell's mission is to be a catalyst for positive change in education.

Ethical and Professional Conduct: CET Cell adheres to the highest ethical standards in all operations. Commitment is to uphold integrity, confidentiality and professionalism in every aspect of its work.

Through the mission, CET Cell aspires to create a level playing field for all individuals seeking educational opportunities, fostering a society where talent and hard work are the foremost criteria for success.

Table 1 represents the status of CETs of Higher Education Courses while Table 2 represents the status of Centralized Admission Process of Higher Education Courses conducted by CBT method in the last three years .

Features of CET Cell –

CET Cell is endowed with following features of online platform used for Computer based Test (CBT)

- i. Comprehensive evaluation - CET Cell has established the CBT system which is able to evaluate students' performance on the basis of MCQs (multiple choice questions) based on General Knowledge, Mental Ability, Teaching Aptitude and Logical Reasoning resulting

in comprehensive evaluation of students.

- ii. Easy Implementation- Online platform of CBT system takes lesser time and reduces manual work and helps to save the expenses required for paper and other physical resources.
- iii. Automatic Grading and Results – CBT software includes automatic correction to eliminate tedious tasks and auto-grade feature to generate report cards enabling students the convenient access .
- iv. Randomization strategy and Proctoring -Randomization strategy of multiple choice questions and its options in computer based tests restrict the misconduct in exam hall such as cheating. However, a proctoring method is also implemented which restricts browsing activity of students.
- v. Password-protected system –Software of computer based test helps to store questionnaires and assessment results in digital format in a password-protected system providing the security .
- vii. Advanced software- Advanced exam software will not crash the system in case of multiple sessions or heavy traffic because of high online activity enabling students to take tests efficiently from remote locations.

Conclusion -

CET Cell empowers aspiring individuals through fair, transparent and standardized assessment and facilitates access to quality education and opportunities, driving positive societal impact. It acts as a catalyst for positive change in education. Online platform of computer based test of CET cell is an authentic tool of ICT that helps to integrate the Indian Knowledge System.

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Table 1 : Status of CETs of Higher Education Courses										
		A.Y. 2023-24			A.Y. 2022-23			A.Y. 2021-22		
Sr. No.	CET Name	Registered Candidates	Appeared Candidates	Attendance (%)	Registered Candidate s	Appeared Candidate s	Attendance (%)	Registered Candidate s	Appeared Candidate s	Attendance (%)
1	B.Ed. (Gen & Spl.)	87878	73364	83.48	79984	72479	90.62	79083	72378	91.52
2	M.Ed .	3264	2477	75.89	3066	2155	70.29	2985	2617	87.67
3	B.P.Ed	6921	5134	74.18	9399	7596	80.82	7399	6293	85.05
4	M.P.Ed	2556	1916	74.96	2088	1633	78.21	2686	2313	86.11
5	B.A.B.Ed/ B.Sc.B.Ed. (5Yrs. Int)	2311	932	40.33	1409	683	48.47	2287	CET awaited	
6	B.Ed.-M.Ed. (3 Yrs. Int.)	2115	960	45.39	1794	990	55.18	1794	771	42.9

Table. 2 : Status of Centralized Admission Process of Higher Education Courses										
		A.Y. 2023-24			A.Y. 2022-23			A.Y. 2021-22		
Sr. No.	Course Name									
1	B.Ed. (Gen & Spl.)	466	34830	30042	478	36159	33593	481	34964	32376
2	M.Ed.	51	2661	982	55	2881	1175	59	2981	1381
3	B.P.Ed.	53	5895	4924	54	6060	3957	56	6115	4458
4	M.P.Ed.	29	971	787	31	982	879	59	2981	1381
5	B.A. B.Ed/ B.Sc. B.Ed. (5 Yrs. Int.)	5	453	112	8	553	331	9	553	359
6	B.Ed.-M.Ed. (3 Yrs. Int.)	1	55	17	1	55	26	1	55	27

Contribution of Indian knowledge System toward achieving Sustainable Development Goals

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Dhule

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Abstract

Sustainable development is a way for people to use resources without the resources running out. The term used by the Brundtland Commission defined it as Development with sustainability that, "meets the needs of the present and also compromising the ability of future generations to meet their own needs."

The development of a nation that manages its natural resources sustainably to meet the usage to the present generation at the same time preserve for future generations, is called Sustainable Development. It aims at using and preserving natural resources without damaging the environment. The 17 Sustainable Development Goals are created by The United Nations aimed to achieve them by 2030. The United Nations member States agreed on these 17 Goals to end Poverty, ensure prosperity and protect the Planet. The main objective was to produce a set of universal goals that meet the urgent environmental, political and economic challenges facing our world.

Key Words : Sustainable, Goals, poverty, prosperity, planet, environment.

Introduction.

There are 17 Sustainable Development Goals, which are created by United Nations in 2012. The theme was accepted to produce a set of universal goals that meet the urgent environmental, political and economic challenges facing the whole world.

The main aim was to achieve all these 17 Sustainable Development Goals by 2030.

All 193 United Nations member States agreed on these 17 sustainable development Goals to end Poverty, to ensure prosperity and to protect the planet.

Actually, in 2015, all the 17 Sustainable Development Goals were introduced

They are as follows.

- 1) **No Poverty:** -It means all the members of United Nations aimed to end Poverty in all its forms everywhere.
- 2) **Zero Hunger:** -The members of United Nations aimed to end Hunger and to achieve food security and improved nutrition and promote sustainable Agriculture.
- 3) **Good Health and Well being:** -It means to ensure healthy lives and promote well being for

all, at all ages.

- 4) **Quality Education**:-The members of United Nations aimed to ensure inclusive and equitable quality education and promote life long learning opportunities for all. it's really very important goal so that the nation could develop with all qualitative Education.
- 5) **Gender equality**:- The goal aimed to achieve gender equality and empower all women and girls. It shows that no gender discrimination will be there in all these countries.
- 6) **Clean Water and Sanitation**:-This goal ensure availability and sustainable Management of water and sanitation for all.
- 7) **Affordable and Clean Energy**:-It ensures access to Affordable, reliable, sustainable and modern energy for all.
- 8) **Decent Work and Economic Growth**:- It promoted sustainable, inclusive and sustainable Economic Growth, Full and productive employment and decent work for all.
- 9) **Industry, Innovations, and Infrastructure**:-This aimed to build Resilient Infrastructure, To promote inclusive and sustainable industrialization and foster Innovation. This will help to make sustainable development in the industrial field.
- 10) **Reduced Inequalities**:-The Tenth Goal of Sustainable Development Goals is to reduce inequality within and among countries. To maintain the equality all over was the aim of this goal.
- 11) **Sustainable Cities and Communities**:-The members of United Nations aimed to make cities and human settlements inclusive, Safe, Resilient and sustainable. All communities will be benefited and could progress.
- 12) **Responsible Consumption and Production**:-The members of United Nations aimed to ensure sustainable consumption and production patterns.
- 13) **Climate Action**:-In this 21st century of digital world, the members of United Nations aimed to take urgent action to combat Climate Change and its impacts.
- 14) **Life below Water**:- The members of United Nations aimed to conserve and sustainable use of the Oceans, Seas and Marine Resources for sustainable development.
- 15) **Life on Land**:-This goal aimed to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss.
- 16) **Peace, Justice and strong institutions**:-The aim of this goal is to promote peaceful and inclusive societies for Sustainable Development, to provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
- 17) **Partnerships for the Goals**:-This last goal of Sustainable Development aimed to strengthen the means of implementation and revitalize the global partnership for sustainable development.

Many researches are done on this Sustainable development Goals. They have stressed that the indigenous Knowledge provides useful framework, ideas, guiding principles, practices and measures that can serve as foundation for Effective Development Process for restoring social, economic and environmental resilience of the world at stage.

According to Schaper (1999) the indigenous approach to sustainable development is giving focus on Community orientation, resources sharing and co operation

It is central to the way of life. Indigenous communities hold a great role in ensuring the sustainable development of the Earth's surface that's whole land of earth, Eco system and bio diversity.

It will help to incorporate all aspects of life. Spirituality, History, Cultural practices, social interactions, Language and healing.

The 17 sustainable development Goals directly contribute and some of them contribute in directly.

The Division for sustainable development Goals in the United Nations Department of Economic and Social Affairs (UNDESA) provides sustainable support and capacity building for the Sustainable development Goals and their related thematic issues. For example, Water, energy, climate, ocean, urbanization, transport, science and technology, the global sustainable development report, partnership and small island developing states. In order to make the 2030 Agenda a reality, broad ownership of the sustainable development Goals must translate into strong commitment by all stakeholders to implement the global Goals.

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Challenges in Implementing Indian Knowledge System in Higher Education

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Abstract

The knowledge systems that have developed over thousands of years in India are known as Indian Knowledge Systems (IKS). Indian Knowledge Systems (IKS) represent a vast and ancient repository of wisdom that encompasses various fields such as philosophy, science, medicine, arts, and management. Rooted in the cultural and spiritual heritage of India, IKS has significantly influenced the development of thought and practices across the centuries. Indian Knowledge Systems (IKS) is a division of the Government of India's Ministry of Education which purports to promote indigenous Indian systems of knowledge. This rich legacy of timeless Indian knowledge and philosophy is acknowledged as a guiding element in the NEP, 2020. The Jnan, Vignan, and Jeevan Darshan knowledge systems of India have developed from experience, observation, experimentation, and thorough analysis. Our education, arts, administration, law, justice, health, manufacturing, and commerce have all been touched by this legacy of validating and putting into practice. This has affected Bharat's classical languages as well as other languages that were passed down orally, through artistic and literary traditions. In this context, "knowledge of India" refers to both the achievements and difficulties of ancient India as well as the country's future goals about the environment, health, education, and all other facets of daily life. The Bhartiya approach is tenacious and aims to promote everyone's well-being. We must recover the extensive knowledge base of our ancestry and teach the rest of the world the "Indian way" of doing things. To do this, generations of scholars must be trained to illustrate and represent to the rest of the world a way of life that is so distinctive from the rest of our great civilization. The current study aims to highlight the challenges and Implementation of the Indian knowledge system in higher education system in India.

Keywords : Repository, Heritage, Transmission

Introduction

India has always placed a strong emphasis on education because of its rich, varied, and age-old culture. Since education is so important in shaping the future of a nation, the Indian government has enforced a complete structure known as the Indian Knowledge System. This system represents a comprehensive approach to education, drawing inspiration from the nation's

historical wisdom while embracing contemporary knowledge and viewpoints from throughout the globe.

This system embodies an all-encompassing approach to education, embracing modern information and views from throughout the world while taking inspiration from the nation's historic wisdom. The Indian Knowledge System, which has its roots in the values of inclusion and cultural heritage, reflects a dedication to developing well-rounded people who can make significant contributions to society. We see a tapestry that combines modern technology, traditional traditions, and an optimistic outlook as we examine the complexities of this system. The context for a deeper look at how the Indian government's educational initiatives mold the nation's next generation of scholars and leaders is established by this introduction. The Indian Knowledge System integrates extracurricular activities, athletics, and the arts into the curriculum with a heavy emphasis on holistic development. Through this combination, students are certain to develop a skill set that goes beyond academic brilliance.

Concept of IKS

Indian Knowledge Systems (IKS) is an innovative cell under the Ministry of Education (MoE) at AICTE, New Delhi. It is established to promote interdisciplinary research on all aspects of IKS and preserve and disseminate IKS for further research and societal applications. It will actively engage in spreading the rich heritage of our country and traditional knowledge in the fields of Arts and literature, Agriculture, Basic Sciences, Engineering & Technology, Architecture, Management, Economics, etc the government-supported Indian Knowledge System is an example of an all-encompassing, culturally-based educational approach. It fosters a thorough awareness of the world by fusing traditional values with modern knowledge, drawing from India's ancient wisdom. This approach emphasizes holistic development through the arts, athletics, and extracurricular activities, going beyond textbook education. The Indian Knowledge System (IKS) is the systematic transmission of knowledge from one generation to the next generation. It is a structured system and a process of knowledge transfer rather than a tradition. The Indian Knowledge System is based on the Vedic literature, the Upanishads, the Vedas, and the Up Vedas.

Objectives of Indian knowledge system:

The Indian knowledge system aims to support and facilitate further research to solve contemporary societal issues in several fields such as Holistic health, Psychology, Neuroscience, Nature, Environment & Sustainable development.

The primary aim of drawing from the past and integration of the Indian knowledge systems is to solve the contemporary and emerging problems of India and world by using our ancient knowledge systems represented by uninterrupted tradition of knowledge transfer and unique point of view (Bhāratīyu Drishti).

Challenges to implementing IKS in colleges in India.

1. Lack of awareness and understanding of IKS:

Many people, including college administrators and faculty, are not aware of IKS or its importance. This lack of awareness and understanding can make it difficult to implement IKS in colleges.

2. Lack of resources:

IKS is often undocumented and passed down orally from generation to generation. This makes it difficult to develop and implement IKS-based courses and programmes in colleges. Additionally, there is a lack of funding for IKS research and education in India.

3. Resistance to change:

A few people may be resistant to the idea of implementing IKS in colleges. They may view IKS as outdated or irrelevant. Additionally, a few faculty members may be reluctant to change their teaching methods and curriculum to accommodate IKS.

4. Language barrier:

IKS is often transmitted in Indian languages. This can create a language barrier for students and faculty who do not speak these languages.

5. Inadequate Infrastructure:

Many Indian institutions face infrastructural deficiencies, including outdated facilities and a lack of technology.

6. The colonial legacy:

The British colonial education system in India was designed to replace Indian knowledge systems with Western knowledge systems. This legacy has created a bias against IKS in the Indian education system.

7. The focus on Western knowledge systems:

The Indian education system is still largely focused on Western knowledge systems. This can make it difficult to accommodate IKS in the curriculum.

8. The lack of qualified faculty:

There is a shortage of qualified faculty to teach IKS courses in colleges. This is because IKS is not widely taught in universities in India.

9. Lack of Funding

There is a lack of funding for IKS research and education in India.

The implementation of IKS in colleges in India can offer several benefits.

1. Help students to learn about their cultural heritage

IKS can help students to learn about their cultural heritage and to develop a deeper understanding of the environment. By introducing students to India's rich legacy, the

Indian Knowledge System greatly impacts them through its emphasis on cultural enrichment.

2. Holistic Development

The Indian Knowledge System strongly emphasizes holistic development, incorporating arts, sports, and extracurricular activities into the educational fabric. The system focuses on creativity and critical thinking equips students with the tools to navigate diverse challenges, fostering a mindset beyond rote learning

3. Practical Application

The Indian Knowledge System places a premium on practical application, emphasizing hands-on learning and honing problem-solving skills. By prioritizing the real-world application of knowledge, students are equipped with theoretical understanding and gain invaluable skills in adaptability and innovation.

4. Language Proficiency

The Indian Knowledge System prioritizes language proficiency by promoting regional languages, preserving linguistic diversity, and enriching students with a deep appreciation for their cultural heritage. Bilingual education further enhances communication skills, recognizing their crucial role in a global context.

5. Inclusivity and Accessibility

The Indian Knowledge System places a high value on accessibility and inclusivity, ensuring that education is not limited by socioeconomic status. To ensure that every student, regardless of background, has access to high-quality education, special provisions have been put in place. Furthermore, the system adopts inclusive practices and provides support that is customized to meet the various learning requirements of kids.

6. Digital Literacy

By incorporating digital literacy into the curriculum, the education system prepares students to harness the power of technology for communication, problem-solving, and innovation. This emphasis on digital skills enhances their academic journey and positions them to excel in a technologically evolving global landscape, fostering a generation adept at leveraging digital tools for success.

7. Global Competence

By fostering a global outlook, the system equips students to navigate diverse professional environments and contribute meaningfully internationally. This emphasis on international competence positions students to thrive in an interconnected world where cultural fluency and collaboration are integral to success.

8. Entrepreneurial Mindset

This approach cultivates an entrepreneurial spirit, inspiring students to become

creators rather than job seekers. The system empowers students to contribute actively to economic growth by fostering an environment that values innovation and risk. This entrepreneurial mindset prepares students for dynamic career paths. It nurtures a culture of self-reliance, creativity, and problem-solving, essential for navigating the challenges of a rapidly evolving global economy.

9. Environmental Consciousness

This approach equips students with an awareness of environmental issues and instill a sense of responsibility toward the ecosystem. By incorporating ecological considerations into the curriculum, students gain a theoretical understanding of environmental challenges and are motivated to adopt eco-friendly behaviors.

10. Continuous Learning

Incorporating a culture of continuous learning, the Indian Knowledge System equips students for a lifetime of education. Emphasizing adaptability as a core skill, it recognizes the importance of navigating an ever-evolving professional landscape. By instilling a mindset of perpetual growth and learning, students are academically prepared and develop the resilience needed to thrive in dynamic and challenging environments.

Conclusion

The introduction of IKS in India may help in the development of a thorough awareness of the environment and a sense of cultural heritage among the stakeholders. Since IKS is founded on implicit knowledge, it can assist students in confronting and overcoming problems that they encounter in the real world, such as those related to food security and climate change. However, there are some significant obstacles to this IKS inclusion, and these obstacles must be overcome before inclusion. A step has been taken by the Indian government under NEP to incorporate IKS into the curriculum. For teachers to effectively teach IKS and possess the necessary expertise, they must receive adequate instruction. Information technology must be used to streamline the IKS data and make it available in a way that best suits the needs and capabilities of the many stakeholders. Given that India's Indigenous Knowledge Systems have developed over thousands of years, this cannot be completed in a single day. Over time, it will be gradually replaced.

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A Critical Evolution of Gurukul System a part of Indian Knowledge system in Juxtaposition of Modern Education System

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Abstract: -

In this paper authors focus and discuss on the largest issue facing modern India is the educational system. Our nation's growth and prosperity are solely attributed to the educational system. The governments of both eras also developed and revised a new education policy plan concurrently with India's independence. "Education Policy 2020" has just gone into effect. In any case, we are attempting to learn more about the recently established educational system, and in this revised piece, I hope to share some history about the previous one. Human life can only acquire information through education. Had to travel to Ashrams and Gurukuls in the past to receive an education. Human life can only acquire information through education. Had to travel to Ashrams and Gurukuls in the past to receive an education. What we were taught in school at the time would pique everyone's curiosity. Which subjects were covered during the education? How was education delivered in those days, and how did it impact people's lives? Through this amendment, we have attempted to contact you with all of these inquiries.

Keywords: - Ancient Education, Gurukul, Indian Education, Education Policy, Shishya

Introduction

Since ancient times, India has taken pride in its rich history in the fields of study and education. It is often known that individuals seeking high-quality education in India came from other countries, including Europe, the Middle East, and Portugal. The Gurukul System is a well-known educational system that was once used in India.

A Gurukul System: -

Around 5000 BC, the residential schooling system originated on the Indian subcontinent. It was more prevalent during the Vedic era, when students were taught a wide range of academics together with how to live a disciplined and civilized life. In actuality, Gurukul served as both the center of instruction and the home of the instructor, or Acharya, where students resided until their studies were completed. Everybody was treated similarly at the Gurukul, where the guru (teacher)

and the shishya (student) shared a house or were quite close to one another. Since the bond between a guru and a shishya was so sacred, no money was taken from the disciples. However, the student was expected to make a symbolic offering known as a guru Dakshina.

An early hostel under the Gurukul system was intended to provide students with communal lodging, food, and education. The early hostel not only provided a supportive atmosphere for learning and development but also encouraged kids to interact with classmates and mentors to enhance their social skills. In addition to their academic performance, students' overall development was evaluated.

The Gurukul system was heavily influenced by intellectuals. Intellectuals were held in great regard as mentors and advisors to students. Intellectuals had a responsibility to teach students and provide them with a well-rounded education that included both theoretical and practical knowledge. In general, the old Gurukul system gave philosophy, character development, and practical skills a lot of weight. Intellectuals' roles stressed the value of mentorship and direction in education, and the idea of an early hostel offered pupils a safe space to learn and develop. Modern education systems can learn a lot from the Gurukul system's features and apply them to their own methods of instruction and learning.

In India, male education began in traditional gurukuls, or schools, under the guidance of a guru. The gurukuls, one of the first types of public-school offices, were funded by donations from the general population. Dharampal had a crucial role in altering the perception of pre-colonial education in India. The principal works of Dharampal are based on records kept by the colonial authorities about Indian arts, technology, agriculture, and education throughout that era of colonial authority. His groundbreaking historical research, carried out over a ten-year period, offers proof from early reports by British administrators of the widespread presence of indigenous educational institutions in the Punjab, Bengal, Bombay, and Madras Presidencies, teaching a sophisticated curriculum, with approximately 30% of children aged 6 to 15 attending school every day, the majority of whom were from the Shudra caste.

The Gurukul system's significance in modern times: -

The fundamental goal of Gurukuls was to teach pupils in a natural setting where shishyas coexisted in brotherhood, humanism, love, and discipline. Language, science, and math were among the topics where the most important lessons were imparted through group debates, independent study, etc. Not only that, but activities that enhanced their critical thinking and intelligence, like singing, sports, crafts, and the arts, were also highlighted. They become fit and positive through practices like yoga, meditation, mantra chanting, and the like. In order to instill practical skills in them, it was also required that they perform daily tasks independently. All of these aided in the development of their personalities and boosted their self-esteem and discipline. Early education in India was carried out under the supervision of a guru, sometimes referred to as a

prabhu. A person's caste and the associated obligations that came with it influenced the manner in which education was provided. The Brahmans received instruction in scriptures and religion, while the Kshatriya were taught in the many aspects of fighting. To carry out these duties, the men of the opposing caste, the Shudras, the working class, got skill training. Public access to early Indian educational institutions was often restricted. Students in ashrams were expected to follow the strict monastic norms of the guru and refrain from going into cities. However, as the population of the Gupta empire increased, urban study institutions multiplied and towns such as Varanasi and the Buddhist center at Nalanda became increasingly.

There are some significant distinctions between the Gurukul system of the past and the current

1. Curriculum:

While current education systems place more emphasis on a wider range of disciplines, such as sciences, languages, and social studies, the Gurukul system was primarily concerned with teaching pupils practical skills, ethics, and values.

2. Teaching Methods:

Students in the Gurukul system received tailored instruction according to their needs, and the teacher-student relationship was highly prized. In contrast, modern educational institutions mainly rely on lectures in the classroom and standardized assessments.

3. Infrastructure:

While modern schools and colleges are frequently big establishments with cutting-edge infrastructure and technology, gurukuls were traditionally modest, residential schools situated in natural settings.

4. Assessment:

While standardized tests and grading systems are frequently used in current education systems, in the Gurukul system, teachers assessed students based on their performance and growth.

5. Diversity:

Modern education systems strive to be more inclusive and accessible to a wider range of pupils, regardless of their gender, ethnicity, or socioeconomic background. The Gurukul system was mostly restricted to boys from certain castes or classes.

Does India still need the Gurukul system?

A lot of individuals might think the gurukul system is an odd idea and highly unstructured. When a youngster lives with an instructor, without a curriculum or a rigid schedule, some may wonder how precisely a child will learn anything. On the other hand, contemporary educationalists have looked back and found that many of the Gurukul system's teaching strategies can be

incorporated into the current educational framework. This list will also assist us in understanding the significance of the gurukul system.

- **Contemporary infrastructure:**

Students can only learn deeply when they are focused on applying practical information. Unfortunately, however, modern education only emphasizes literature.

- **Modern infrastructure:**

Students can only learn deeply when they are focused on applying practical knowledge. Unfortunately, the school system of today only values memorization and academic knowledge, which is insufficient. The Gurukul system placed a strong emphasis on practical knowledge to equip students for success in all facets of life. To help students become better people today, the ideal balance between extracurricular and academic activities, as well as instruction in mindfulness and spiritual awareness, can be created.

- **Holistic education:**

The current educational system mostly relies on a rank-based structure that is motivated by students' resentment of their peers. The overly ambitious parents who just use academic achievement to gauge a student's understanding add fuel to the fire. Alternatively, the Gurukul method can be implemented on a value-based framework, emphasizing each child's individuality to help them succeed in their chosen field. Additionally, this will develop good character, which is very different from intense rivalry and elevated stress levels, which typically result in sadness.

- **The relationship between teacher and student:**

In the modern world, it is imperative to guarantee that teachers and students have a cordial and respectful relationship. This is because kids are more inclined to imitate their caregivers when they feel safe and trusted. This was a feature of the Gurukul system, which is still instilled today through the utilization of training sessions and activities to strengthen relationships with students.

The current educational system's shortcomings

Sadly, the aforementioned idea has vanished, and the contemporary educational system that Lord Macauley introduced to India in 1835 is centered on the competitive race to outpace one's peers. Personality development, the formation of a moral conscience, and ethical instruction are completely absent. One of the main problems with this education is that it is more of a commercial idea than an institutional one that aims to give students a comprehensive education. It allots relatively little time to physical exercise and the acquisition of other skills that can help students grow into better people.

That's why we think is Gurukul system is superior to contemporary education because of Gurukul pupils exhibit greater organization and discipline. In school, they learn how to adhere to a

carefully laid out routine. Compared to typical students, the pupils are more concentrated and attentive. This is a result of their training in methods like meditation, which improve their capacity for concentration.

Conclusion

Essentially, the goal of implementing the Gurukul system in Indian education is to help kids grasp the notion of leading a balanced life. From an early age, children should be taught this very philosophy of balance so that they can make informed judgments regarding their employment, food, exercise, and other lifestyle choices. All things considered, there are clear distinctions between the Gurukul system and contemporary educational methods with regard to infrastructure, instruction, and evaluation. But each system has advantages and disadvantages, and combining the two could result in a more comprehensive and successful education.

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इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातील आशयातून विद्यार्थ्यांमध्ये 'भारतीय ज्ञान प्रणालीची रुजवणूक' या दृष्टिकोनातून चिकित्सक अभ्यास

डॉ. प्रियांका प्रफुल्ल सुभेदार

प्राध्यापक

शासकीय अध्यापक महाविद्यालय पनवेल

सारांश

आपल्या देशाला वैभवशाली परंपरा व वारसा लाभलेला आहे. आधुनिक विज्ञानाने ज्या गोष्टी शोधून काढलेल्या आहेत त्यापैकी अनेक शोध प्राचीन काळामध्ये भारतामध्ये लागलेले आहेत शून्याचा शोध, दशांश अपूर्णाक आणि आणखी असे कितीतरी शोध आहेत जे प्राचीन काळात भारतामध्ये विद्वानांनी, वैज्ञानिकांनी आणि ऋषीमुनींनी लावलेले आहेत. भारतीय ज्ञान प्रणालीमध्ये गणित, खगोलशास्त्र, तत्त्वज्ञान, योग, वास्तुशास्त्र, वैद्यकशास्त्र, कृषी, अभियांत्रिकी, भाषाशास्त्र, साहित्य, क्रीडा, खेळ, तसेच शासन, राज्य आणि संवर्धन यांचा समावेश करण्यात आलेला आहे. त्याबरोबरच त्याग, समर्पण, सहिष्णुता व सुसंस्कार हे सुद्धा भारतीय संस्कृतीचे गुणविशेष आहेत. या वारश्याचा परिचय व्हावा, सुसंस्कार व्हावेत यासाठी नवीन राष्ट्रीय शैक्षणिक धोरण 2020 यामध्ये भारतीय ज्ञान प्रणालीचा समावेश करण्यात आलेला आहे. असे म्हटले जाते की देशाचे भविष्य शाळा शाळांमध्ये घडले जाते. जर संस्कारक्षम वयामध्ये भारतीय ज्ञान प्रणाली मधील घटकांचा परिचय विद्यार्थ्यांना झाला तर सुसंस्कारित पिढी तयार होईल. आधुनिक काळातील शिक्षण देत असताना भारतीय संस्कृतीचा उज्ज्वल वारश्याचा परिचय विद्यार्थ्यांना करून देता येईल. शिक्षकाला आपला विषय शिकवित असतानाच भारतीय ज्ञान प्रणालीचा परिचय विद्यार्थ्यांना करून देता येईल. त्यामुळे भारतीय ज्ञान प्रणालीची रुजवणूक करण्यासाठी इयत्ता आठवीच्या विज्ञान पाठ्यपुस्तकांमध्ये कोणता आशय योग्य आहे याचा शोध घेण्याचा प्रयत्न संशोधकाने केलेला आहे.

प्रस्तावना:-

भारताला समृद्ध अशी ज्ञान परंपरा लाभलेली आहे तिचा अनादी काळापासून चालू आहे. भारतीय ज्ञान परंपरा यामध्ये वेद, उपनिषदे, पुराणे धर्मशास्त्र नाट्यशास्त्र इत्यादी गोष्टींचा समावेश आहे. भारतीय ज्ञान प्रणालीमध्ये ज्ञान विज्ञान आणि जीवनदर्शन यांचा समावेश होतो. भारतीय ज्ञान प्रणालीमध्ये गणित, खगोलशास्त्र, तत्त्वज्ञान, योग, वास्तुशास्त्र, वैद्यकशास्त्र, कृषी, अभियांत्रिकी, भाषाशास्त्र, साहित्य, क्रीडा, खेळ, तसेच शासन, राज्य आणि संवर्धन यांचा समावेश करण्यात आलेला आहे. आधुनिक विज्ञान व गणितामध्ये लागलेले अनेक शोध आपल्या देशातील प्राचीन वैज्ञानिकांनी विद्वानांनी लावलेले आहेत. उदाहरणार्थ आर्यभट्ट यांनी लावलेला शून्याचा शोध, दशांश संख्या लेखन पद्धती अशी अनेक उदाहरणे देता येतील. तसेच वैद्यक शास्त्रामध्ये शस्त्रक्रियेचे ज्ञान सुश्रुत यांना होते. सुश्रुत यांना प्लॅस्टिक सर्जरीचे जनक असे म्हटले जाते. महर्षी चरक यांना 340 वनस्पतींची व त्यांचा उपयोग रोगांवर कसा करावयाचा याच्या उपचारांचे ज्ञान होते. प्राचीन भारतामध्ये खगोलशास्त्रामध्ये खूप प्रगती झालेली होती. ग्रह, उपग्रह, तारे, पिके घेण्यासाठी पाऊस पडण्याचा कालावधी, ग्रहणे, हवामान अंदाज हे सर्व अचूकतेने वर्तवण्यासाठी लागणारे खगोलशास्त्रीय ज्ञान हे प्राचीन भारतीय संस्कृतीमध्ये अत्यंत प्रगत स्वरूपामध्ये होते. शरीर व मन स्वस्थ राखण्यासाठी

आवश्यक असणारे योगाचे ज्ञान ही प्राचीन भारतीय सांस्कृतिक अतिप्रगत स्वरूपात होते ज्याचा सध्याच्या काळात जगभर प्रसार होत आहे व त्याचा वापर पाश्चिमात्य राष्ट्रांकडून केला जात आहे. भारतीय ज्ञानपरंपरेमधील ज्ञान मौखिक, शिलालेख, ताम्रपट याद्वारे जतन केले गेले.

परंतु अनेक परकीय आक्रमणे झाल्यामुळे हे जतन केलेले ग्रंथ नष्ट करण्यात आले. विज्ञान तंत्रज्ञानाची प्रगती व आधुनिकतेकडे वाटचाल करत असताना भारताचा समृद्ध वारसा व परंपरा याचे जतन करून पुन्हा एकदा पुढील पिढीला आपल्या या वैभवशाली परंपरेची माहिती होण्यासाठी नवीन शैक्षणिक धोरण 2020 मध्ये भारतीय ज्ञान प्रणाली याचा समावेश करण्यात आलेला आहे.

संशोधनाची गरज:-

भारतीय ज्ञान प्रणालीमध्ये जे विषय समाविष्ट आहेत त्यांचा परिचय शालेय स्तरावर विविध विषयांच्या माध्यमातून विद्यार्थ्यांना होणे आवश्यक आहे. आधुनिक काळातील शिक्षण देत असताना भारतीय संस्कृतीचा उज्वल वारसा याचा परिचय विद्यार्थ्यांना करून देणे शक्य आहे. त्यासाठी आपला विषय शिकवित असताना भारतीय ज्ञान प्रणालीचा परिचय होण्यासाठी योग्य आशय पाठ्यपुस्तकांमध्ये कोठे आहे याचा शोध शिक्षकांना घ्यावा लागेल. हे दूवे (प्लग पॉईंट्स) शिक्षकांना शोधावे लागतील. या आशयासंबंधीत कोणती माहिती भारतीय ज्ञान प्रणालीतून देता येईल याचे पूर्व नियोजन करून ते अध्ययन प्रसंग शिक्षकांना निर्माण करावे लागतील. म्हणजेच आपला विषय शिकवत असताना गोष्टीच्या माध्यमातून, व्हिडिओ द्वारे भारतीय ज्ञान प्रणाली संबंधी माहिती विद्यार्थ्यांना देता येईल. त्यामुळे भारतीय ज्ञान प्रणालीची रुजवणूक करण्यासाठी इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकांमध्ये कोणता आशय योग्य आहे याचा शोध घेण्याचा प्रयत्न संशोधकाने केलेला आहे.

उद्दिष्टे:-

- 1) इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातील कोणता आशय भारतीय ज्ञान प्रणालीची रुजवणूक करण्यासाठी उपयुक्त आहे याचा अभ्यास करणे.
- 2) इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातील भारतीय ज्ञान प्रणालीसाठी पोषक आशयासाठी अध्ययन अनुभव सुचित करणे.

गृहितके:-

1. अभ्यासक्रमाचे हेतु साध्य करण्याचे पाठ्यपुस्तक हे एक साधन आहे.
2. साधारणपणे पाठ्यपुस्तक हे अभ्यासक्रमातील उद्दिष्टांचा विचार करून तयार केलेले असते.

संशोधनाची व्याप्ती :-

1. प्रस्तुत संशोधनामध्ये इयत्ता आठवीच्या सामान्य विज्ञानाच्या पाठ्यपुस्तकाचा विचार केलेला आहे.
2. प्रस्तुत संशोधनामध्ये इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातून विद्यार्थ्यांमध्ये भारतीय ज्ञान प्रणालीची रुजवणूक या दृष्टिकोनातून विचार केलेला आहे .

संशोधनाच्या मर्यादा:-

1. प्रस्तुत संशोधन इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकापुरते मर्यादित आहे.
2. प्रस्तुत संशोधन इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातील आशयातून विद्यार्थ्यांमध्ये भारतीय ज्ञान प्रणालीची रुजवणूक यापुरते मर्यादित आहे.

संशोधन पद्धती :-

प्रस्तुत संशोधनासाठी आशय विश्लेषण तंत्राचा वापर केलेला आहे.

संशोधनाची साधने:-

संशोधनासाठी पडताळा सूची या साधनाचा वापर करण्यात आला.

संकलित माहितीचे विश्लेषण अर्थनिर्वचन:-

प्रस्तुत संशोधनात इयत्ता आठवीच्या सामान्य विज्ञानाच्या पाठ्यपुस्तकातील प्रत्येक पाठातील आशयाचे विश्लेषण करण्यात आले .त्यासाठी पडताळा सूचीचा वापर करण्यात आला.

निरीक्षणे व निष्कर्ष :-**निरीक्षणे-****उद्दिष्ट क्रमांक 1-**

इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातील खालील आशय विद्यार्थ्यांमध्ये भारतीय ज्ञान प्रणालीची रुजवणूक करण्यासाठी उपयुक्त आहे.

1. इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातील पाठ क्रमांक दोन मध्ये आरोग्य आणि रोग यामध्ये विविध रोगांची माहिती दिलेली आहे. रोगांचे वर्गीकरण प्रकार ते होण्याची कारणे त्याची लक्षणे आणि त्यावर करावयाची उपायोजना आलेली आहे
2. इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातील पाठ क्रमांक पाच पृष्ठ क्रमांक 28 अणूचे अंतरंग यामध्ये अणूची कल्पना कणाद महषी यांनी मांडली याविषयीची माहिती देण्यात आलेली आहे.
3. इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातील पाठ क्रमांक सात पृष्ठ क्रमांक 49 धातू व अधातू यामध्ये धातूचे भौतिक गुणधर्म, पदार्थाचे भौतिक गुणधर्म धातूचे रासायनिक गुणधर्म, सोन्याची शुद्धता इत्यादी आशय दिलेला आहे.
4. इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातील पाठ क्रमांक आठ पृष्ठ क्रमांक 54, यामध्ये प्रदूषण, हवेचे प्रदूषण याचा प्राणी आणि वनस्पतीवर होणारा परिणाम ,हवा प्रदूषणाची कारणे व परिणाम, हरितगृह परिणाम, ग्लोबल वॉर्मिंग ,आम्ल पर्जन्य हा आशय आहे.तसेच जलप्रदूषण ,त्याचे माणसावर व परिसंस्थेवर होणारे परिणाम, मृदा प्रदूषण ,त्याची कारणे आणि उपाय हे घटक आहेत.
5. इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातील पाठ क्रमांक अकरा ,पृष्ठ क्रमांक 75 मानवी शरीर व अवयव यामध्ये श्वसन, श्वसन संस्था रक्ताभिसरण संस्था, हृदय व त्याचे कार्य, रक्तदाब इत्यादी विषयी माहिती देण्यात आलेली आहे.
6. पाठ क्रमांक बारा ,पृष्ठ क्रमांक 83 यामध्ये आम्ल व आम्लारी यांची ओळख करून देण्यात आलेली आहे.
7. पाठ क्रमांक पंधरा, पृष्ठ क्रमांक 104 ध्वनी यामध्ये ध्वनीची निर्मिती , संगीतातील विविध वाद्ये यांची ओळख करून देण्यात आलेली आहे
8. पाठ क्रमांक अठरा, पृष्ठ क्रमांक 122 यामध्ये परिसंस्था व तिचे घटक, हिरवीगार जंगले या आशयाचा समावेश आहे.
9. पाठ क्रमांक एकोणविस, पृष्ठ क्रमांक 129 यामध्ये ताऱ्यांचे जीवन चक्र यामध्ये तारे आणि

तात्यांचा जन्म यांची माहिती दिलेली आहे.

उद्दिष्ट क्रमांक 2-

इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातील भारतीय ज्ञान प्रणालीसाठी पोषक आशयासाठी अध्ययन अनुभव खालील प्रमाणे आहेत

1. भारतामध्ये प्राचीन काळात आयुर्वेदाचा वापर रोग चिकित्सेसाठी केला जात असे त्याला अष्टांग आयुर्वेद असे म्हटले जाते., यामध्ये दूषित हवा ,अन्न ,पाणी ,विविध प्राणी यापासून होणाऱ्या विविध आजारांची चिकित्सा केली जाते. अधिक ची माहिती आरोग्य व रोग या प्रकरणातील आशय शिकविताना शिक्षकांना स्पष्ट करता येईल व भारतीय ज्ञान प्रणालीमधील आयुर्वेदाचा परिचय विद्यार्थ्यांना करवून देता येईल
2. अणू सिद्धांताचे जनक कणाद महर्षी यांनी अणूची संकल्पना 2600 वर्षांपूर्वी मांडली. हा संदर्भ देऊन विद्यार्थ्यांना या घटकाची अधिक माहिती सांगून भारतीय ज्ञान प्रणाली याचा परिचय करून घेता येईल.
3. प्राचीन भारतामध्ये नागार्जुन यांनी बारा वर्ष रसायन शास्त्र व धातू शास्त्र या मध्ये संशोधन केले होते. 2500 वर्षांपूर्वी धातूचा शोध, त्याचे शुद्धीकरण ,त्यांचे उपयोग याचे प्रगत ज्ञान भारतामध्ये त्या काळात होते.याविषयी अधिक माहिती सांगून भारतीय ज्ञान प्रणाली मधील रसायनशास्त्राचा परिचय विद्यार्थ्यांना करवून देता येईल.
4. भारतीय परंपरेमध्ये निसर्गातील पशुपक्षी, वृक्ष आणि पर्यावरण या सर्वांनाच महत्त्वाचे स्थान दिलेले आहे.प्राचीन भारतात पृथ्वीला माता व मानव हे तिचे अपत्य आहे असे म्हटले जात असे. त्यामुळे मातेचे रक्षण करणे हे प्रमुख कर्तव्य मानले जात होते. निसर्गाला हानी पोहोचवणाऱ्या व्यक्तींना त्याकाळी शिक्षा दिली जात असे.
5. भारतामध्ये आयुर्वेदाला सुमारे तीन हजार वर्षांपासून चालत आलेली परंपरा लाभलेली आहे. महर्षी चरक, सुश्रुत ,वाग्भट यांनी आयुर्वेदाचा पाया रचला.चरक संहितेमध्ये विविध आजारांवरील औषधांविषयीची माहिती देण्यात आलेली यासंबंधीचीअधिक माहिती सांगून त्याद्वारे भारतीय ज्ञान प्रणालीचा परिचय विद्यार्थ्यांना करून देता येईल
6. प्राचीन भारतामध्ये रसायनशास्त्राचे ज्ञान अत्यंत प्रगत स्वरूपाचे होते. चरक, सुश्रुत, वाग्भट, नागार्जुन हे रसायनशास्त्रज्ञ प्राचीन भारतात होऊन गेले.इसवी सन 400 मध्ये दिल्ली मेहरोली येथे विक्रमादित्याने उभारलेला स्तंभ अद्याप गंजलेला नाही. ही माहिती आम्ल व आम्लारी शिकविताना विद्यार्थ्यांना देऊन भारतीय ज्ञान प्रणाली या मधील रसायनशास्त्रातील अधिक माहिती मिळवण्यासाठी विद्यार्थ्यांना सांगता येईल.
7. भरत मुनी हे भारतीय संगीताचे आद्य प्रवर्तक समजले जातात. त्यांनी पाच कोमल व सात शुद्ध स्वर आहेत असे मांडले. इसवी सन. पूर्व 2900 या काळात भरत मुनी शारदा विद्यापीठात शास्त्रीय संगीत शिकवत असत. या प्राचीन परंपरेचा परिचय विद्यार्थ्यांना ध्वनी निर्मिती व ध्वनी वाद्य शिकवताना करून देता येईल.
8. प्राचीन काळामध्ये भारतामध्ये निसर्गाचा आदर केला जात होता. पर्यावरणाचे संरक्षण व संवर्धन केले जात होते.माणसाने झाडांचे संरक्षण केले पाहिजे, वनस्पती व झाडे ही मानवाची संपत्ती आहे. अशी विचारधारा त्या काळात प्रचलित होती . भारतीय संस्कृती ही पर्यावरण पूरक संस्कृती आहे . ऋग्वेदामध्ये जंगलतोड न

करण्याविषयी म्हटलेले आहे. अशाप्रकारे वृक्ष संवर्धन विषयीची माहिती आपल्याला विद्यार्थ्यांना सांगून त्यांना भारतीय ज्ञान प्रणाली मधील आशय विद्यार्थ्यांपर्यंत पोहोचवता येईल.

9. ताऱ्यांचे जीवन चक्र आणि ताऱ्यांचा जन्म याची माहिती देताना भारतामध्ये पाचव्या व सहाव्या शतकात होऊन गेलेले महान खगोलशास्त्रज्ञ आर्यभट्ट यांनी खगोलशास्त्रामध्ये प्रभावी शोध लावले होते . पृथ्वी सूर्याभोवती फिरते त्यामुळे दिवस आणि रात्र होतात ,सूर्य पृथ्वीभोवती फिरत नाही हे त्यांनी नमूद केलेहोते.भारतीय ज्ञान प्रणाली संबंधी ही माहिती विद्यार्थ्यांना सांगता येईल.

निष्कर्ष:-

एकंदरीतच वरील सर्व बाबींचा विचार करता इयत्ता आठवीच्या सामान्य विज्ञान पाठ्यपुस्तकातील आशयातून भारतीय ज्ञान प्रणालीची रुजवणूक करता येईल. शिक्षकांना आपला विषय शिकविताना अध्ययन प्रसंग निर्माण करवून भारतीय ज्ञान प्रणालीचा परिचय विद्यार्थ्यांना देता येईल. त्यासाठी विचार प्रवर्तक प्रश्न विचारणे, वाचनासाठी अधिकचे संदर्भ विद्यार्थ्यांना पुरविणे याचाही वापर विद्यार्थ्यांमध्ये भारतीय ज्ञान प्रणाली रुजविण्यासाठी शिक्षकांना करता येईल.

शिफारसी:-

1. शिक्षकांनी भारतीय ज्ञान प्रणालीची माहिती विद्यार्थ्यांना सांगण्यासाठी यूट्यूब व्हिडिओ, पावर पॉइंट प्रेझेंटेशन याचा वापर करावा.
2. भारतीय ज्ञान प्रणाली मधील घटकांची माहिती इंटरनेट अथवा पुस्तकांमधून मिळविणे. असा प्रकल्प विद्यार्थ्यांसाठी देता येईल.

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प्राचीन भारतीय शिक्षण पद्धती आणि त्याची जडणघडण

स्नेहल जयंत महाजन

ग्रंथपाल

एस आर कॉलेज ऑफ एज्युकेशन, सिलवासा

गोषवारा:

पुरातनकाळात इ.स. 450 ते 500 वर्षांच्या दरम्यान भारतात गुरुकुल पद्धती होती. भारतात शिक्षण आणि शिक्षण पद्धतींचा विकास ब्रिटिश राजवटीत झाला. ब्रिटिशांनी महाविद्यालये आणि विद्यापीठे स्थापन करून दर्जेदार शिक्षण पद्धती भारतात अस्तित्वात आणली. कला, वाणिज्य, शास्त्र, अभियांत्रिकी, कृषी शिक्षणाची महाविद्यालये सुरू केली. प्राथमिक, माध्यमिक, महाविद्यालयीन शिक्षण पद्धती अस्तित्वात आली. शिक्षण आणि संशोधन संस्था स्थापन केल्या. पदवीपूर्व आणि पदव्युत्तर शिक्षण वेगवेगळ्या महाविद्यालयांमधून दिले जाऊ लागले. शिक्षणाचा दर्जा राखण्यावर त्यांनी भर दिला. शिक्षणक्षेत्रात शिस्त आणि उत्तम दर्जा यास महत्त्व दिले. भारतात खासगी आणि सरकारी संस्थांमधून शिक्षण दिले जाते. केंद्र सरकार, खासगी संस्था, स्थानिक संस्था, राज्य सरकारच्या संस्थांतर्फे विविध अभ्यासक्रमांच्या माध्यमातून शिक्षण दिले जाते. भारतातील शिक्षणाचे कार्य हे केंद्र सरकार किंवा राज्य सरकार यांच्या आधिपत्याखाली चालते. भारताच्या घटनेनुसार शिक्षण हा प्रत्येक व्यक्तीचा मूलभूत हक्क आहे. भारतातील विद्यापीठांवर केंद्र सरकारचे किंवा राज्य सरकारचे संपूर्ण नियंत्रण असते. भारताच्या आर्थिक प्रगतीसाठी सुधारित शिक्षण पद्धती उपयुक्त ठरणार आहे. उच्च शिक्षण आणि संशोधनात सरकारी संस्थांनी मोठी भरारी घेतली आहे. देशात खासगी शिक्षण संस्थांचा वाटा पाच टक्के आहे, तो आता 70 अब्ज कोटी डॉलर इतका आहे.

मुख्य शब्द : भारतीय शिक्षण पद्धती, शिक्षण क्षेत्र, संस्कार, प्राथमिक शिक्षण, उच्च शिक्षण

प्रस्तावना :

विकसित देशांचा विकास शिक्षणाच्याच मार्फत झाला. सध्या मानवी संसाधन विकासासाठी 'शिक्षण' हे सर्वात महत्त्वाचे साधन आहे. राष्ट्रीय विकास करायचा असेल तर भौतिक साधनसंपत्तीपेक्षा सर्वात महत्त्वाची साधनसंपत्ती म्हणजे मानव! ज्याप्रमाणे कोणत्याही इमारतीचा पाया मजबूत असल्याशिवाय ती इमारत मजबूत असू शकत नाही, त्याचप्रमाणे माणूस व शिक्षण या दोन्ही बाजू विकसित झाल्याशिवाय राष्ट्रविकास होऊ शकत नाही. मानव संसाधन विकासासाठी विविध कार्यक्षेत्रं पाहण्यास मिळतात. उदा. शैक्षणिक, वैज्ञानिक, आर्थिक, धार्मिक, सामाजिक, व्यावसायिक, सांस्कृतिक इ. शिक्षण हे समाजपरिवर्तनाचे एक हत्यार आहे. उत्कृष्ट नागरिक हा शिक्षणाच्या माध्यमातून घडवता येतो. 'भावी सक्षम नागरिक' घडवण्यास शिक्षण मदत करत असते.

संस्कार संकल्पना:

मनुष्याच्या वैयक्तिक व सामाजिक आयुष्यकर्मावर समाजात धर्माचा पगडा बराच बसला आहे असे दिसून येते. शिक्षण विषयक संस्कारात कालानुक्रमे विद्यारंभ किंवा अक्षरस्वीकरण हा संस्कार सर्वात आद्य होय. पाचव्या वर्षी प्राथमिक शिक्षणाचा प्रारंभ होवून मुले अक्षरे शिकू लागत त्यावेळी हा संस्कार करण्यात येत असे. त्यानंतर आठव्या वर्षी उपनयन संस्कार केला जात असे. त्यानंतर आठव्या वर्षी उपनयन संस्कार केला जात असे. ज्यामुळे गुरुगृही राहून पुढील शिक्षण घेण्याची परवानगी विद्यार्थ्याला मिळत असे. वैदिक काळात मुलींचे उपनयन होवून त्या ही गुरुगृही राहून अध्ययन पूर्ण करीत असत. वेदांचे अध्ययन संपवून ब्रह्मचारी गुरुगृहाहून स्वगृही परत जाण्याला निघाला म्हणजे समावर्तन संस्कार करण्यात येई

गुरुंचे महत्त्व:

वैदिक शिक्षण पद्धतीत गुरुंचे महत्त्व विशेष मानले आहे. गुरु हा शिष्याचा आध्यात्मिक पिता मानला गेला असल्याने आई व वडील यांच्यापेक्षा गुरुंचे स्थान शिष्याच्या आयुष्यात महत्त्वाचे ठरत असे. अति प्राचीन काळी लेखन कला अस्तित्वात नसताना गुरुच्या मुखातून आलेले ज्ञान ग्रहण केले जात असे. बौद्ध संघामध्ये भिक्षु लोक शिष्यांची आपल्या स्वतःच्या मुलांप्रमाणे सर्व व्यवस्था करीत असत. केवळ अध्यापन एवढाच गुरुचा कार्यभाग नसून व्यक्तिगत आरोग्याची काळजी कशी घ्यावी येथपर्यंतचे विषय गुरु शिष्यांना समजावून सांगत असत.

वैदिक अभ्यासाचे विषय:**१. वेदकालाचा पूर्वार्ध—**

या कालखंडात वैदिक मंत्र, इतिहास, यज्ञकर्म, भूमिती व ज्योतिष या वैदिक पद्धती जपण्यासाठी आवश्यक विषयांचे अध्यापन प्रामुख्याने केले जाई.

२. वेदकालाचा उत्तरार्ध व ब्राह्मण काल—

नाराशंसी गाथा, मंत्रार्थ समजून घेणे, इतिहास, छन्दशास्त्र हे विषय शिकविले जात. व्याकरणशास्त्र उदयाला आल्यानंतर त्याचाही अभ्यास सुरू झालेला दिसतो.

३. उपनिषदे, बौद्ध आणि सूत्रकालकृ

वेदविद्या, धनुर्वेद, आयुर्वेद, कायदा, ज्योतिष, नर्तन, वादन, चित्रकला वास्तुशास्त्र हे विषय शिकविले जात. काळानुसार उद्योग आणि भौतिक कला यांचा विकास झाल्याने शिक्षणातही धर्मशास्त्र, न्याय वेदांत या शात्रांचा समावेशही होऊ लागला. बौद्ध हिंदू व जैन अभ्यासकात शास्त्रचर्चा होत असल्याने या धर्मातील साहित्याचा अभ्यासही विद्यार्थी करीत असत.

४. स्मृती व पुराणकालकृ

या काळात वैदिक मतांचा अर्थ समजावून घेण्याची प्रवृत्ती कमी होत चालली, त्यामुळे तत्कालीन शिक्षणतज्ज्ञ त्याविषयी आग्रही होते. वेदार्थ संशोधनाकडे यांकाळात कमी लक्ष दिले

गेले. साहित्य, धर्मशास्त्र ,काव्य यांचा अभ्यास करण्याकडे कल वाढला. पाणिनीची सूत्रे,अष्टधातू,गणित,उणादी सूत्रे या काळत मुलांना नवव्या वर्षी साधारणपणे शिकवीत असत असे इत्सिंग याच्या वर्णनातून दिसते.

बौद्ध अभ्यासक्रम

महायान मताचा जम्बुदीप ६ भारतात प्रसार झाला व त्यांचे सर्व ग्रंथ संस्कृत भाषेत असत. त्यामुळे बौद्ध विद्यार्थ्यांनाही संस्कृत व्याकरण, कोश व साहित्य शिकविले जात. सविनयआदी ग्रंथातील उतारे त्यांच्याकडून पाठ करून घेतले जात. १६ व्या वर्षी त्यांच्या उच्च शिक्षणास प्रारंभ होई आणि त्यात तर्क व तत्त्वज्ञान या विषयांचा अभ्यास करण्यावर भर असे. विहारातील भिक्खूही हेतुविद्याशास्त्र, विभाशा इ. विषयांचा अभ्यास करीत.

विद्यार्थीदशा आणि जीवनक्रम

ब्रह्मचार्याने पाळावयाचे काही विशिष्ट नियम असत. आई वडील आणि गुरुंचा आदर करणे, खरे बोलणे,सदाचरण करणे,अलंकार तसेच शरीराचे सुशोभन करणाऱ्या गोष्टी टाळणे अशा गोष्टी ब्रह्मचार्याला विहित होत्या.तथापि द्राह्म्यायण ऋषींचे मत होते की तापणाऱ्या रस्त्याने चालताना पादत्राणे घालणे इ. गोष्टी चालू शकतील.

वार्षिक अधिवेशने आणि सुट्ट्या

वर्षारंभ किंवा उपाकर्म संस्कार श्रावणात होई तर वर्षांत किंवा उत्सर्जन संस्कार माघ महिन्यात होई. विद्यालयांना काही नित्य व काही नैमित्तिक सुट्ट्या असत. प्रतिपदा आणि अष्टमी या दिवशी अध्यापन बंद असे. काही नैमित्तिक कारणे जसे श्रोत्रीय किंवा राजाचा मृत्यू,सन्मान्य अतिथींचे आगमन या कारणास्तव सुट्टी मिळे.

शिक्षण पद्धती

तत्कालीन विद्यार्थी बरेचसे ग्रंथ हे पाठ करीत. लेखनकला अस्तित्वात आल्यानंतरही ही पद्धती सुरू असल्याचे दिसते.व्याकरण,मीमांसा यांचे केवळ पाठांतर होत नसून गुरुकडून ते समजावूनही घेतले जात.प्रत्येक गुरुजवळ १५-२० विद्यार्थीच शिकत असल्याने त्यांना प्रत्येक विद्यार्थ्याकडे व्यक्तिगत लक्ष देता येत असे.

परीक्षा पद्धती

दिलेला पाठ विद्यार्थ्याला समजला व त्याने तो कंठगत केल्याची गुरुला खात्री झाली म्हणजे मग त्याला पुढील पाठ देण्यात येई.

अन्तेवासी पद्धती

कला,उद्योग,व्यापार यांचे शिक्षण अन्तेवासी, ज्याला इंग्रजीत (Apprenticeship) म्हणतात त्या पद्धतीने दिले जात असे.नारद स्मृती ग्रंथात याचा उल्लेख सापडतो हे शिक्षण प्रत्यक्ष कारखाना इ ठिकाणी असे.विद्यार्थी आणि त्याच्या पालकाकडून या पद्धतीत कारखानदार करारही करून घेत असत.

वैद्यक, खनीशास्त्र, नौकाशास्त्र, लष्करी शिक्षण यांचा यात समावेश होई.

लष्करी शिक्षण

सुतसोम जातक या ग्रंथानुसार मोठ्या गावांमध्ये उच्च लष्करी शिक्षण देणाऱ्या लष्करी शाळाही होत्या. तक्षशीलेस अशी अनेक विद्यालये होती व त्यापैकी एकात भारतातील होते. (पृ. १०१) भाला, तलवार यांचा वापर, बाणाचे अचूक नेम कसे घ्यावेत याचे प्रशिक्षण दिले जाई. बहुतेक गावात आपले संरक्षक असे युवकांचे पथक असे. गावातील असे अध्यापक आपण तयार केलेले विद्यार्थी राजाकडे सैन्यात भरती करायला आणीत आणि त्याबदल्यात रोख रक्कम, हत्ती, घोडे इ. मिळवीत असत.

वैद्यक

शिक्षणापूर्वी विद्यार्थ्यांचे आयुर्वेदीय उपनयन होत असे. यासाठी संस्कृत भाषेचे चांगले ज्ञान आवश्यक असे कारण सर्व शिक्षण संस्कृतातूनच होत असे. अन्तेवासी पद्धतीनेही काही वैद्य लोक शिष्य स्वीकारत असत. अंतःशरीराच्या ज्ञानासह जखमा कशा धुवाव्यात, बाणाची शरीरात घुसलेली टोके कशी काढावीत येथपर्यंतचे शिक्षण दिले जात असे. चरक व सुश्रुत यांच्या ग्रंथांवरून या शिक्षणाची कल्पना येते. पशुवैद्यक शाखेचा प्रसारही यात झालेला दिसतो.

शिल्पकला

प्रथम शिल्पकला बाल्यावस्थेत होती पण नंतर गांधार, ग्रीक या कलांचा संपर्क आल्यानंतर ती विकसित होऊ लागली. भारतीय लोकांनी यात बरेच प्राविण्य मिळविले. पेशावर, मथुरा, भारहूत, अजंठा, अमरावती पाटलीपुत्र या ठिकाणी अशा शिक्षणाची केंद्रे होती. अन्तेवासी पद्धतीने या कलेचे शिक्षण मथुरा येथे दिले जात असे. हे शास्त्र शिकताना मूर्तिशास्त्र, पुराणे, गणित, वास्तुशास्त्र यांचेही शिक्षण आवश्यक मानले जाई.

प्राचीन शिक्षणकेंद्रे व शिक्षण संस्था

ब्राह्मण

विद्वान ब्राह्मण खाजगी रीतीने अध्यापनाचे कार्य करीत, अध्यापन हे त्यांचे धार्मिक कर्तव्य होते. बौद्ध संघाप्रमाणे ब्राह्मणांच्या शिक्षणाच्या सार्वजनिक संस्था नव्हत्या. काही ठिकाणी विद्वत परिषदा होत पण त्यामध्ये धार्मिक गुंतागुंतीचे प्रश्न सोडवले जात. बनारस, कांची, वाई, नाशिक येथे ब्राह्मणांची मोठी वस्ती असल्याने नवव्या शतकानंतर या भागात शिक्षणकेंद्रे अस्तित्वात आली. राजे लोक विद्वान ब्राह्मणांना अध्यापनासाठी गावे भेट देत असत. त्यांना अग्रहार म्हटले जात असे. अशा ठिकाणीही शिक्षणकेंद्रे उदयाला आली.

बौद्ध

समाजातील मुलांचे शिक्षण पहिल्यापासून आपल्या देखरेखीखाली घेण्याने धर्मप्रसाराचे काम अधिक सुलभ होते हे लक्षात आल्याने बौद्ध विहारातून सर्वानाच शिक्षण देण्याचे कार्य सुरू झाले. बौद्धांच्या मठ शिक्षणसंस्था पाचव्या शतकातच अस्तित्वात आलेल्या दिसतात, राजधानी, तीर्थ, मठ, देवालये

येथे शिक्षणसंस्था असत,राजे लोक येथील विद्वानांचा परामर्श घेत असत,तक्षशीला कनोज या अशा प्रकारच्या संस्था होत्या.

भारतातील सध्याची शिक्षण पद्धती

भारतातील सध्याची शिक्षण पद्धती सहा भागांत विभागलेली आहे.

(1) पूर्वप्राथमिक, (2) प्राथमिक, (3) विद्यालयीन (सेकंडरी), (4) ज्युनिअर कॉलेज (हायर सेकंडरी), (5) पदवी, (6) पदव्युत्तर.

(1) अभ्यासक्रम ठरवण्याकामी नॅशनल कौन्सिल ऑफ एज्युकेशनल रिसर्च (एन.सी.ई.आर.टी.) ही संस्था शालेय अभ्यासक्रमासंबंधी कारभार पाहाते.

(2) स्टेट एज्युकेशन बोर्ड –

(3) सेंट्रल बोर्ड ऑफ सेकंडरी एज्युकेशन (सी.बी.एस.ई.)

(4) ऑल इंडिया सेकंडरी स्कूल एज्युकेशन (ए.आय.एस.एस.ई.)

(5) ऑल इंडिया सीनियर स्कूल सर्टिफिकेट एक्झामिनेशन (सी.आय.एस.सी.ई.)

पूर्वप्राथमिक शिक्षण

भारतात दिवसेंदिवस पूर्वप्राथमिक शाळांची संख्या वाढत असून त्यांत विविधता आहे. पूर्वप्राथमिक शिक्षण घेणाऱ्या बालविद्यार्थीवर्गातही वाढ होत आहे. पूर्वप्राथमिक शिक्षणाची गरज शारीरिक तंदुरुस्ती, भावनिक वाढ, सामाजिक सुदृढता आणि प्राथमिक शिक्षणासाठी मानसिक तयारी करण्यासाठी आहे. तसेच, शाळा सोडण्याचे प्रमाण कमी व्हावे हे उद्दिष्ट आहे. यात प्रामुख्याने मुलींचे शिक्षण अधिक महत्त्वाचे आहे. त्यामुळेच पूर्वप्राथमिक शिक्षणाचे मुलांचे वय 3 ते 6 वर्षांचे आहे. राष्ट्रीय धोरण 1986 आणि 1992 नुसार या शिक्षणाची प्रत सुधारण्यासाठी प्रयत्न करण्याची गरज आहे. सर्व शिक्षा अभियानानुसार ते गरजेचे असूनही देश पातळीवरून आणि राज्य पातळीवरून त्यास अद्याप जसे महत्त्व द्यावयास हवे तसे दिले जात नाही.

प्राथमिक शिक्षण, विद्यालयीन शिक्षण आणि महाविद्यालयीन शिक्षण

प्राथमिक शिक्षण, विद्यालयीन शिक्षण आणि महाविद्यालयीन शिक्षणाची एकाच स्वरूपाची समान शिक्षण पद्धती भारतात 1994 मध्ये अस्तित्वात आली. प्राथमिक शिक्षण 14 वर्षे वयाच्या विद्यार्थ्यांपर्यंत दिले जाते. सातवीपर्यंतचे आणि सहा ते 14 वयोगटातील शिक्षण मोफत दिले जाते. ते सन 2009 च्या कायदानुसार आणि ते हक्काचे शिक्षण कायदानुसार दिले जाते. तसेच, सर्व शिक्षा अभियान या योजनेद्वारे दिले जाते. माध्यमिक शिक्षा अभियानांतर्गत 14 ते 18 वयोगटातील मुलांना शिक्षण दिले जाते. आता शास्त्र आणि तंत्रशिक्षण देण्याच्या सुविधा निर्माण झाल्या आहेत. केंद्रीय विद्यालयेही सरकारी कर्मचार्यांच्या मुलांसाठी सुरु केली आहेत. केंद्रीय विद्यालयांमार्फतही शिक्षण दिले जाते.

उच्च शिक्षण

बारावी पास विद्यार्थ्यांना पदवीसाठी कला, वाणिज्य, शास्त्र, अभियांत्रिकी, वैद्यकीय, कायदा,

कृषी या शाखांमध्ये प्रवेश दिला जातो. ही शिक्षण पद्धती “युनिव्हर्सिटी ग्रांट कमिशन’ यांच्या आधिपत्याखाली चालते. भारतात एकूण 20 केंद्रीय विद्यापीठे आहेत, 215 राज्य पातळीवरील विद्यापीठे आहेत, 100 अभिमत विद्यापीठे आहेत, 33 राष्ट्रीय संस्था आहेत. या सर्व संस्थांच्या अंतर्गत 16000 महाविद्यालये असून, त्यांतर्गत 1800 महिला महाविद्यालये आहेत. मुक्त शिक्षण हीदेखील एक महत्त्वाची शिक्षण पद्धती अंतर्भूत आहे. भारतातील उत्तम दर्जाची शिक्षण संस्था म्हणजे आय.आय.टी. संस्था ही अभियांत्रिकीसाठी उच्च दर्जाची मानली जाते.

भारतीय शिक्षणपद्धतीची जडणघडण

सर्व शिक्षणाचा आधारस्तंभ या भूमिकेतून प्राथमिक शिक्षणाकडे पाहिलं जातं. म्हणूनच भारतीय घटनेमध्ये वय वष्रे ६ ते १४ वयोगटांतील मुलांना मोफत सक्तीचे व सार्वत्रिक शिक्षण केले आहे. ब्रिटिशांच्या काळात जेवढा विकास पाहिजे तेवढा झाला नाही. कारण पाश्चिमात्य संस्कृतीचा आपल्या शिक्षणपद्धतीवर खूप प्रभाव पडला होता, त्या वेळी नोकरदार बनवण्याचे शिक्षण होते, तर सक्षम नागरिक बनवण्याचे शिक्षण नव्हतेच! त्यामुळेच स्वातंत्र्योत्तर काळात शिक्षणासाठी विविध आयोग व समित्या तयार झाल्या उदा. १९५२-५३ चा मुदलियार आयोग, यांनी शिक्षण मातृभाषेतून द्यावे, अशी शिफारस केली. तसेच १९६४-६६ च्या कोठारी आयोगानुसार प्राथमिक शाळा १ कि. मी. च्या आत असावी हे नमूद केलं. १९८६ च्या राष्ट्रीय शैक्षणिक धोरणानुसार प्राथमिक शिक्षणात खडूफळा मोहीम यावर भर दिला. प्रा. दवे यांनी प्राथमिक स्तरावर किमान अध्ययन पातळीची शिफारस केली. या सर्व गोष्टींचा भारतात फरक पडला. सध्या भारतात आठवीपर्यंत शिक्षण मोफत आहे. त्याचप्रमाणे गुणात्मक व संख्यात्मक वाढसुद्धा झाली आहे.

स्वातंत्र्यपूर्व व स्वातंत्र्योत्तर काळात विविध आयोग व प्राथमिक शिक्षणासाठी, माध्यमिक व उच्च शिक्षणासाठी काही आयोग नेमण्यात आले.

स्वातंत्र्यपूर्व काळातीलआयोग

- **चार्टर ॲक्ट** : हा १८१३ साली आला. यात शिक्षण पाश्चिमात्य कीपारंपरिक यावर वाद होता. लॉर्ड मेकॅले जाहिरनामा १८३४ साली जाहीर झाला. त्यातूनच भारतीय शिक्षणपद्धतीची सुरुवात होत गेली. याच अहवालाला लॉर्ड बेंटिकने मान्यता दिली.
- **१८५४ वूडचा खलिता** : या अहवालामध्ये सर चार्ल्स यांनी पाश्चिमात्य ज्ञानावर भर द्यावा यावर शिफारस केली, तसेच मद्रास, कलकत्ता, मुंबई या विद्यापीठांची स्थापना झाली.
- **१८८२ चा हंटर आयोग** : हंटर आयोगापुढेच महात्मा फुले यांनी आपली कैफियत मांडली. हंटर आयोग लॉर्ड रिपन यांनी मांडला. यामध्ये प्राथमिक, माध्यमिक, विद्यापीठीय शिक्षण, स्त्री शिक्षण यावर भर होता.
- **१९०२ भारतीय विद्यापीठ आयोग** : लॉर्ड कर्झन यांनी उच्च शिक्षणासाठी हा आयोग मांडला.

त्यांनी १९०४मध्ये भारतीय विद्यापीठ कायदा मांडलेला.

- **१९१७ सॅडलर आयोग** : सर मायकेल सॅडलर यांनी शिक्षणामध्ये विविध मार्गांनी विकास कसा करावा याबाबत शिफारशी सुचावल्या.
- **वर्धा शिक्षण योजना १९३७** : या योजनेचे अध्यक्ष डॉ. झाकीर हुसेन होते. तर वर्धा शिक्षणयोजनेची स्थापना महात्मा गांधी यांनी केली. हीच योजना मुलोटोगी शिक्षण, बेसिक शिक्षणपद्धती, नई तालीम या नावाने ओळखली जाते. यामध्ये स्वावलंबी शिक्षण, विद्यार्थी केंद्रीय शिक्षण, स्वाश्रयी शिक्षण, हस्तव्यवसाय शिक्षण, नतिक शिक्षण, मातृभाषेतून शिक्षण व ७ ते १४ वयोगटांतील मुलांना मोफत व सक्तीचं शिक्षण होतं.

स्वातंत्र्योत्तर काळातील आयोग

राधाकृष्णन् आयोग :

४ नोव्हेंबर १९४८ साली डॉ. राधाकृष्णन् यांच्या अध्यक्षतेखाली केंद्रीय शिक्षण सल्लागार मंडळाने या आयोगाची शिफारस केली. हा आयोग उच्च शिक्षणासाठी व माध्यमिक शिक्षणाची पुनर्रचना करण्यासाठी स्थापला गेला. हा आयोग स्वातंत्र्यप्राप्तीनंतरचा पहिला आयोग होता. मातृभाषेला महत्त्व देणे, स्त्रीशिक्षणावर भर देणे, संस्कृतीसंवर्धन यावर भर होता.

मुदलियार आयोग :

याला माध्यमिक शिक्षण आयोग संबोधलं जातं. याचे अध्यक्ष डॉ. अलादी लक्ष्मणस्वामी मुदलियार यांनी १९५२-५३साली हा आयोग स्थापन केला. यामध्ये पुढील बाबींवर भर देण्यात आला. शालेय शिक्षणाचा कालावधी १२ वर्षांवरून ११ वर्षांवर आणण्याची शिफारस केली. त्याचप्रमाणे बहुउद्देशीय शाळा असाव्यात हे सुचविण्यात आलं. विद्यार्थ्यांसाठी परीक्षा या व्यक्तिनिष्ठ नसाव्यात तर वस्तुनिष्ठ असाव्यात, गुणाऐवजी श्रेणी द्यावी. मातृभाषेतून शिक्षण असावं (३३१) म्हणजेच ३ वर्ष माध्यमिक, ३ वर्ष उच्च माध्यमिक, १ वर्ष अकरावीचे वर्ष असावं. या आयोगामध्ये शिक्षकांच्या सेवाशर्तीत सुधारणा घडवली गेली.

दुर्गाबाई देशमुख आयोग :

स्त्री शिक्षणासाठी पहिला महत्त्वाचा आयोग स्थापन झाला, तो १९५८ साली. त्या वेळी सरोजनी बाबर या आयोगाच्या सचिव होत्या. हा आयोग १९५६ साली सादर केला. यामध्ये शिक्षणासाठी विविध शिफारशी केल्या. उदा. स्वतंत्र स्त्रीशिक्षण विभाग, स्त्री-शिक्षण समिती नेमावी, शिक्षिकांना प्रशिक्षण द्यावं, स्त्रियांसाठी व्यवसाय शिक्षण द्यावं, अंशकालीन शिक्षणपद्धती असावी. त्यावर भर होता.

कोठारी आयोग :

डॉ. डी. एस. कोठारी १९४६-६६ साली यांच्या अध्यक्षतेखाली हा आयोग स्थापन केला. या आयोगामध्ये शैक्षणिक विस्तार व गुणवत्ता यावर भर दिला होता. डॉ. कोठारी यांच्या मते 'देशाचे भवितव्य हे वर्गावर्गातून घडत असतं. यामुळे शिक्षणातून देशाचा विचार या वाक्यास सुसंगत अशा खूप शिफारशी केल्या. त्या पुढीलप्रमाणे –

त्रिभाषा सूत्राचा विचार, शालेय शिक्षणाचे माध्यम मातृभाषा, आश्रम शाळात वाढ, स्त्रीविभाग स्वतंत्र असावेत, पदवीपर्यंत मातृभाषेतून शिक्षण व पदव्युत्तर शिक्षण इंग्रजीतून द्यावे, रात्र महाविद्यालयं सुरू करावीत, शिक्षकांना प्रशिक्षण द्यावे, विद्यापीठाच्या संख्येत वाढ करून ठरावीक महाविद्यालयांना स्वायत्तता द्यावी. विद्यार्थ्यांच्या गैरहजेरीचे प्रमाण कमी व्हावे यासाठी अंशकालीन प्रौढ साक्षरता वर्ग सुरू करावेत. शिक्षक वेतनश्रेणीत सर्वत्र समानता, प्राथमिक शाळेत पुस्तके व साहित्य मोफत, पुस्तकपेढी योजना सुरू करावी. श्रमशिविर व समाजसेवा कार्यक्रम सुरू करून बालकांचा सामाजिक विकास साधावा. आदिवासी मुलांसाठी वसतिगृह सुरू करावे, विद्यार्थी कल्याण योजना राबवावी, सर्व स्तरावर विज्ञान विषयाला महत्त्व द्यावे, विद्यार्थी संख्या विचारात घेऊन वर्गखोल्या असाव्यात, समाजाच्या गरजेनुसार पाठ्यक्रम असावा, त्यानुसार पाठ्यपुस्तकं तयार करावीत. डॉ. कोठारी यांनीच १०२३ आकृतीबंध सुचवला.

कोठारी आयोगाच्या शिफारशीनुसार पहिले राष्ट्रीय शैक्षणिक धोरण १९६८ मध्ये जाहीर केलं.

राष्ट्रीय शैक्षणिक धोरण १९६८ :

डॉ. त्रिगुणा सेन यांच्या अध्यक्षतेखाली हा आयोग स्थापन झाला. यामध्ये मूल्यमापन पद्धतीत सुधारणा करावी, प्राथमिक शाळांत, गळती व नापासाचे प्रमाण कमी करण्यासाठी कार्यक्रमांची आखणी, पाठ्यपुस्तकाचा गुणात्मक विकासावर भर, माध्यमिक शाळांना पाचवी ते सातवीचे वर्ग जोडावेत, प्रत्येक बालकांना चालत जाता येईल एवढ्या अंतरावर प्राथमिक शाळा असावी, कार्यानुभव विषयावर भर द्यावा, आदी गोष्टी सुचवल्या गेल्या.

ईश्वरभाई पटेल पुनर्वलोकन समिती :

राष्ट्रीय शैक्षणिक धोरण १९६८ च्या शैक्षणिक धोरणाचे परिणाम अभ्यासण्यासाठी गुजरात विद्यापीठाचे कुलगुरु ईश्वरभाई पटेल यांच्या अध्यक्षतेखाली समितीची स्थापना केली गेली. यात महत्त्वपूर्ण शिफारशी केल्या. उदा. औपचारिक व अनौपचारिक शिक्षणावर भर दिला गेला. अभ्यासक्रमात लवचिकता असावी, पर्यायी शिक्षण यावरही भर होता, पहिली ते चौथी गृहपाठ नसावा, समाजोपयोगी माध्यमातून शिक्षण द्यावे, प्राथमिक स्तरावर पाठ्यपुस्तके नसावीत, फक्त भाषेची पाठ्यपुस्तकंही बोली भाषेत असावीत, सर्वाना शिक्षणाची समान संधी असावी या प्रमुख शिफारशी होत्या.

माल्कम आदिशेषय्या समिती: उच्च माध्यमिक स्तरावर व्यावसायिक शिक्षण प्रश्नाचा अभ्यास करण्यासाठी १९७७ साली माल्कम आदिशेषय्या यांच्या अध्यक्षतेखाली समिती नेमली गेली. या समितीद्वारे शेती, ग्रामीण उद्योग, व्यवस्थापन यावर भर होता. तर व्यावसायिक शिक्षण व सर्वसाधारण शिक्षण हे दोन पर्याय उपलब्ध असावेत. राष्ट्रीय व राज्यस्तरीय व्यावसायिक शिक्षण परिषद असावी हे सुचवलं गेलं.

शालेय शिक्षण सुधार समिती :

१९८४ सालची ही समिती महाराष्ट्राच्या संदर्भात होती. ही पार्वतीबाई मलगोंडा यांच्या अध्यक्षतेखाली भरली. यात पुढील सूचना केल्या. मधल्या वेळेत जेवण योजना, बालवाड्या-प्राथमिक शाळांना जोडाव्यात, तसेच शिक्षक प्रशिक्षित असावेत. ३ किमी आत प्राथमिक शाळा असावी.

राष्ट्रीय शैक्षणिक धोरण १९८६ :

कै. राजीव गांधी यांच्या अध्यक्षतेखाली हे धोरण जाहीर झालं. या धोरणात महत्त्वपूर्ण शिफारशी केल्या गेल्या. उदा. नवोदय विद्यालय स्थापना, उच्चशिक्षणात सर्वाना समान संधी, शिक्षणाचा गुणात्मक विकासावर भर, मुक्त विद्यापीठ प्रणाली, प्रौढ व निरंतर कार्यक्रमावर भर, स्त्री शिक्षणावर भर, प्राथमिक स्तरावर कृषीप्रधान शिक्षण पद्धती, खडूफळा मोहीम, शिक्षणाचे सार्वत्रिकीकरण, शालेय गळतीचे प्रमाण कमी करण्यासाठी योजना, ६ ते १४ वर्षांपर्यंत मोफत व सक्तीचे प्राथमिक शिक्षण, माध्यामिक शिक्षणात व्यावसायिक शिक्षणाचा भर, शिक्षणाचे खासगीकरण इ.

राष्ट्रीय शैक्षणिक धोरण २००५ :

भारताचे तत्कालीन पंतप्रधान मनमोहन सिंग यांच्या किमान समान कृतिशील कार्यक्रमाधारित २००५ मध्ये नवे शैक्षणिक धोरण आखले गेले. त्यामध्ये व्यावसायिक व तांत्रिक कार्यक्रमांसाठी देशभरात समान प्रवेश परीक्षा सुरू केली. १८ ऑक्टोबर २००१ च्या भारत शासन निर्णयान्वये, जेईई, एआयईई (राष्ट्रस्तरीय) आणि एसएलईई या तीन परीक्षायोजना आखल्या गेल्या. त्यामुळे बदलते प्रवेश-अटी असताना व्यावसायिक स्तर राखण्याची दक्षता घेणे सोपे झाले. तसेच आशय पुनरावृत्ती, अनेक प्रवेश परीक्षांना सामोरे जाणे, मनोकायिक व आर्थिक बोजा विद्यार्थी-पालकांवर पडणे इत्यादी बाबींपासून सुटका झाली. त्यानंतर २००६ मध्ये मनमोहन सिंग यांनी निरक्षर व नवसाक्षरांसाठी (१५ वर्षीय व त्यापेक्षा मोठ्यांकरिता) ही केंद्र शासनपुरस्कृत शैक्षणिक योजना सुरू केली. २००१ च्या जनगणनेनुसार १२.७ कोटी भारतीय प्रौढ साक्षर झाले. त्यांपैकी ६०: स्त्रिया, २३: अनुसूचित जाती आणि १२: अनुसूचित जमाती या योजनेचा लाभ घेऊन साक्षर झालेत.

राष्ट्रीय शैक्षणिक धोरण २०२० :

विद्यमान पंतप्रधान नरेंद्र मोदी यांनी २०१४ नंतर पूर्वीच्या राष्ट्रीय शैक्षणिक धोरणाचा आढावा घेण्यासाठी २०१६ मध्ये माजी केंद्रीय सचिव टी. एस. आर. सुब्रमण्यम यांच्या अध्यक्षतेखाली राष्ट्रीय धोरण समिती नेमली. या समितीने पूर्वीच्या पुढील शासकीय योजनांचा आढावा घेतला : डिस्ट्रिक्ट प्रायमरी एज्युकेशन प्रोग्रॅम (डीपीईपी), सर्वशिक्षा अभियान (एसएसए, २००१), राइट टू एज्युकेशन (आरटीई), नॅशनल प्रोग्रॅम फॉर एज्युकेशन फॉर गर्ल्स अँड एलिमेंटरी लेव्हल (एनपीईजीईएल), राष्ट्रीय माध्यमिक शिक्षा अभियान (आरएमएसए, २००६), माध्यमिक स्तरावर अपंगांसाठी इन्क्लुझिव एज्युकेशन फॉर दी डिसेबल्ड फॉर सेकंडरी स्टेज (आयईडीएसएस), प्रौढ साक्षर भारत (अँडल्ड एज्युकेशनल इंडिया), उच्च शिक्षण विकासासाठी राष्ट्रीय उच्चतर शिक्षा अभियान (आरयूएसए, २०१३) इत्यादी. शासनाने २६ जुलै २०२० मध्ये नवीन राष्ट्रीय शैक्षणिक धोरणाला मंजूरी देऊन ती जून २०२३-२४ या सत्रापासून संपूर्ण देशात लागू होणार आहे. इस्रोचे माजी प्रमुख के. कस्तुरीरंगन यांच्या अध्यक्षतेखाली ६ समितीय सदस्यांनी या नव्या धोरणाचा मसुदा तयार केला आहे. यानुसार शालेय शिक्षणाची रचना १०.

२ ऐवजी ५, ३, ३, ४ अशी करण्यात आली आहे. यामध्ये पूर्वप्राथमिक ३ वर्षे व २ वर्षे पहिली व दुसरी असणारय पुढील ३ वर्षे तीसरी ते पाचवी असणारय त्यानंतरची ३ वर्षे सहावी ते आठवीपर्यंत असणार आणि शेवटची ४ वर्षे नववी ते बारावी अशा एकूण १५ वर्षांमध्ये शालेय शिक्षणाची रचना अथवा आकृतीबंध आखण्यात आला आहे. सुरुवातीचे ३ ते ६ वर्षे वयोगटात असलेले मुले आतापर्यंत शालेय अभ्यासक्रमांतर्गत येत नव्हतीय परंतु नवीन शैक्षणिक धोरणामुळे त्यांचा शालेय अभ्यासक्रमांतर्गत समावेश करण्यात आला आहे.

निष्कर्ष :

मानवाला आपल्या पूर्ण क्षमता वापरता येण्यासाठी, समान आणि न्याय्य समाज विकसित करण्यासाठी तसेच राष्ट्रीय विकासाचा चालना देण्यासाठी शिक्षण हा पाया आहे. भारताच्या सातत्यपूर्ण प्रगतीसाठी आणि आर्थिक विकासास, सामाजिक न्याय आणि समानता, राष्ट्रीय प्रगती, राष्ट्रीय एकात्मता आणि संस्कृतीचे जतन या क्षेत्रांमध्ये वैश्विक पातळीवर नेतृत्व करण्यासाठी सर्वाना दर्जेदार शिक्षण उपलब्ध करून देणे महत्वाचे आहे. व्यक्ती, समाज, देश आणि जगाच्या हितासाठी आपल्या देशातील समृद्ध प्रतिभा आणि संसाधनांचा पुरेपूर वापर करण्याकरता उच्च दर्जाचे सर्वभौमिक शिक्षण हा भविष्यासाठी सर्वात चांगला मार्ग आहे. पुढच्या दशकात जगातील सर्वात मोठी युवकांची लोकसंख्या भारतामध्ये असेल आणि त्या सर्वाना चांगल्या गुणवत्तेच्या शिक्षणाच्या संधी पुरवण्याच्या आपल्या क्षमतेवर आपल्या देशाचे भवितव्य ठरेल.

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Role Of Communication Under Indian Knowledge System For Holistic Development Under Nep 2020

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Abstract

The National Education Policy 2020 (NEP2020) aims to transform India's education system by Emphasizing holistic development. One crucial aspect often overlooked is the role of communication within the Indian Knowledge System (IKS).

This article explores the significance of effective communication in promoting holistic development, drawing insights from ancient Indian wisdom and contemporary practices. Communication plays a pivotal role in the Indian knowledge system, serving as a conduit for the transmission and evolution of traditional wisdom, philosophical insights, scientific discoveries, and cultural practices.

Keywords: Communication, Indian Knowledge system, Holistic Development, NEP2020

Introduction

India's rich heritage of knowledge encompasses diverse domains including philosophy, mathematics, astronomy, linguistics and more. The Indian Knowledge System integrates spiritual wisdom and empirical understanding, emphasizing interconnectedness and balance. Communication both verbal and nonverbal plays a pivotal role in realizing holistic development. Communication serves as the lifeblood of the Indian knowledge system, acting as a conduit for the transmission, preservation, and evolution of traditional wisdom, cultural practices, and scientific insights. Rooted in old traditions of oral storytelling, textual transmission, and interpersonal dialogue, also in shaping our rich India's heritage.

Oral Tradition and Folk Knowledge:

The Indian knowledge system is deeply rooted in oral traditions and folk knowledge, where communication takes place through storytelling, folk performances, and community gatherings. These oral traditions serve as repositories of historical memory, ethical values, and local knowledge, embodying the collective wisdom of diverse communities.

Textual Transmission and Literary Heritage:

Texts occupy a central place in the Indian knowledge system, with ancient scriptures, philosophical treatises, and literary classics serving as repositories of knowledge and sources of inspiration. Textual communication facilitates the dissemination of intellectual discourse, the refinement of philosophical inquiry, and the preservation of cultural identity.

Digital Literacy:

digital technologies act as powerful tools for communication and knowledge distribution in changing the landscape of the Indian knowledge system. Digital communication bridges geographical divides, connects diverse communities, and facilitates the exchange of ideas on a global scale.

Interdisciplinary Dialogue and Cross-Cultural Exchange:

Communication acts as a catalyst for interdisciplinary dialogue and cross-cultural exchange within the Indian knowledge system, fostering innovation, creativity, and mutual understanding. communication lies at the heart of the Indian knowledge system, serving as a dynamic force that sustains tradition, stimulates intellectual inquiry, and catalyses social change. By examining the interplay between oral traditions, textual transmissions, digital innovations, and interdisciplinary dialogues, we can gain a deeper understanding of the transformative power of communication in shaping India's vibrant intellectual landscape.

Rationale for integrating Communication:

Communication plays a vital role in disseminating, preserving, and evolving traditional knowledge systems that have been included into Indian culture for centuries. Previous research has highlighted various aspects of this role, emphasizing its importance in the context of India's diverse linguistic, cultural, and socio-economic landscape.

One key aspect underscored by previous research is the oral tradition prevalent in Indian knowledge systems. Many indigenous practices, philosophical concepts, and scientific insights have been transmitted orally from generation to generation. Communication channels such as storytelling, folk performances, and interpersonal dialogue have served as primary mediums for preserving and transmitting this knowledge. Scholars like Kapila Vatsyayan (1990) have extensively studied the role of oral traditions in Indian culture, emphasizing their significance in maintaining continuity and fostering community cohesion.

Furthermore, the influence of written communication on the Indian knowledge system cannot be overstated. Ancient texts such as the Vedas, Upanishads, and the epics Ramayana and Mahabharata have been instrumental in shaping various domains of knowledge, including philosophy, spirituality, medicine, and astronomy. Scholars like Wendy Doniger (2009) and Sheldon Pollock (2001) have explored the textual traditions of India, elucidating their profound impact on the transmission and evolution of knowledge. Communication acts as a bridge connecting different domains of knowledge and fostering collaboration among scholars, practitioners, and communities.

Previous research underscores the multifaceted role of communication in the Indian knowledge system, encompassing oral traditions, textual transmissions, digital technologies, and interdisciplinary dialogue. By understanding and leveraging these communication channels, India

can continue to preserve its rich heritage of knowledge while also embracing the opportunities offered by globalization and technological advancements. Firstly, the oral tradition emerges as a cornerstone of communication in the Indian context. Scholars such as Kapila Vatsyayan (1990) have highlighted the significance of oral narratives, folk tales, and performative arts in the preservation and transmission of indigenous knowledge across generations. These oral traditions serve not only as repositories of cultural heritage but also as dynamic spaces for the negotiation and reinterpretation of traditional wisdom in contemporary contexts. Secondly, textual communication assumes paramount importance in the Indian knowledge system, as evidenced by the vast corpus of ancient scriptures, philosophical treatises, and literary classics. Wendy Doniger (2009) and Sheldon Pollock (2001) have conducted seminal research on the textual traditions of India, illuminating their role in shaping diverse domains of knowledge, from metaphysics and ethics to astronomy and medicine. Texts such as the Vedas, Upanishads, and epics like the Mahabharata and Ramayana serve as foundational texts that continue to inform scholarly discourse and societal practices.

Furthermore, the advent of modern communication technologies has revolutionized knowledge dissemination and exchange in contemporary India. Arul Scaria and Lawrence Liang (2011) have explored the intersection of technology and knowledge production, highlighting the transformative potential of digital platforms, social media, and open-access initiatives. These digital communication channels not only democratize access to information but also facilitate collaborative research, interdisciplinary dialogue, and cross-cultural exchange in the globalized world. Lastly, communication in the Indian knowledge system fosters interdisciplinary discourse and transcends disciplinary boundaries, as advocated by scholars like Shiv Visvanathan (1998). By promoting dialogue among diverse communities, practitioners, and scholars, communication acts as a catalyst for innovation, synthesis, and the emergence of new knowledge paradigms that reflect the rich tapestry of India's cultural heritage and contemporary realities.

Communication and Indian Knowledge System

Firstly, the oral tradition emerges as a cornerstone of communication in the Indian context. Scholars such as Kapila Vatsyayan (1990) have highlighted the significance of oral narratives, folk tales, and performative arts in the preservation and transmission of indigenous knowledge across generations. These oral traditions serve not only as repositories of cultural heritage but also as dynamic spaces for the negotiation and reinterpretation of traditional wisdom in contemporary contexts. Secondly, textual communication assumes paramount importance in the Indian knowledge system, as evidenced by the vast corpus of ancient scriptures, philosophical treatises, and literary classics. Wendy Doniger (2009) and Sheldon Pollock (2001) have conducted seminal research on the textual traditions of India, illuminating their role in shaping diverse domains of knowledge, from metaphysics and ethics to astronomy and medicine. Texts such as the Vedas,

Upanishads, and epics like the Mahabharata and Ramayana serve as foundational texts that continue to inform scholarly discourse and societal practices.

Emphasis on Communication under NEP 2020

Communication as a foundational competency essential for learners to effectively engage with different stakeholders, express ideas coherently, and collaborate in various contexts. Research by Kothari Commission (1964) and the National Curriculum Framework (2005) underscores the significance of communication skills in promoting critical thinking, creativity, and social-emotional learning.

Multilingualism and Language Proficiency:

The NEP 2020 emphasizes the importance of multilingualism and proficiency in regional languages, recognizing language as a crucial medium for communication, identity, and cultural expression. Studies by Mohanty (2019) and Pandey (2018) highlight the cognitive, social, and educational benefits of bilingualism and multilingual education in enhancing communication skills and inclusive learning environments.

Integration of Communication Across Disciplines:

The NEP 2020 advocates for an interdisciplinary approach to education that integrates communication skills across subject domains, fostering holistic development and real-world application. Research by Winkler (2013) and Byram (2008) on Content and Language Integrated Learning (CLIL) emphasizes the synergistic relationship between language proficiency and subject knowledge, enhancing learners' communication competencies and academic achievement.

Technology-Enhanced Communication:

The NEP 2020 emphasizes the integration of technology in education to enhance communication skills, digital literacy, and global connectivity. Research by Mishra and Koehler (2006) on Technological Pedagogical Content Knowledge (TPACK) underscores the importance of leveraging digital tools and platforms to facilitate interactive, collaborative, and authentic communication experiences in diverse learning environments.

Teacher Training and Pedagogical Practices:

The NEP 2020 emphasizes the importance of teacher training and professional development in nurturing effective communication skills among educators and students. Research by Darling-Hammond (2006) and Guskey (2002) on teacher effectiveness and professional learning communities highlights the role of supportive learning environments, reflective practices, and ongoing feedback in promoting communication competence and pedagogical innovation.

The Role of Communication for Holistic Development

Communication plays a pivotal role in fostering holistic development, encompassing social, economic, cultural, and environmental dimensions.

Social Cohesion and Inclusion:

Communication serves as a catalyst for social cohesion and inclusion by facilitating dialogue, collaboration, and community engagement. Research by Putnam (2000) on social capital underscores the importance of communication networks in building trust and reciprocity within communities, thereby fostering collective action and societal well-being.

Education and Knowledge Sharing:

Effective communication is essential for promoting education and knowledge sharing, which are foundational pillars of holistic development. Studies by UNESCO (2008) emphasize the role of communication technologies in expanding access to education, enhancing learning outcomes, and bridging knowledge gaps across diverse populations.

Economic Empowerment:

Communication plays a crucial role in empowering individuals and communities economically, enabling access to information, markets, and entrepreneurial opportunities. Research by Mansell and Wehn (1998) on ICTs and development highlights the transformative potential of communication technologies in fostering economic growth, innovation, and livelihood enhancement.

Cultural Exchange and Diversity:

Communication facilitates cultural exchange, dialogue, and appreciation, fostering respect for diversity and cultural heritage. Scholars such as Appadurai (1996) have examined the role of communication in mediating cultural flows and shaping identities in the context of globalization, emphasizing the need for inclusive communication practices that celebrate cultural diversity.

Environmental Sustainability:

Communication plays a vital role in promoting environmental awareness, advocacy, and sustainable practices. Research by Leichenko and O'Brien (2008) on climate change communication underscores the importance of effective messaging and public engagement in addressing environmental challenges and promoting sustainable development.

Communication acts as a link between holistic development, fostering social cohesion, facilitating education and knowledge sharing, empowering individuals economically, promoting cultural diversity, and advancing environmental sustainability.

Communication in Indian Knowledge system helps in the following:**Empathy and self-Awareness:**

KS recognise that effective communication begins with self-awareness and empathy. Empathy is the capacity to understand another person's feeling or state of mind. Being empathetic means that you recognise, understand, respond appropriately to the needs, wants, and emotional state. Empathy is a key component of effective communication. It involves understanding one's emotions and perspectives fosters better connections with others. Empathy helps to improve

communication by helping to reduce misunderstandings, conflicts and promotes effective collaboration. Empathizing with the listener enhances credibility and makes you more receptive to messages.

The Bhagavad Gita teaches the significance of empathy in understanding others and fostering harmonious relationships. Self-awareness is the ability to recognize and understand your own emotions, thoughts, and behaviors, as well as how they affect others. This can help you communicate more clearly, empathetically. Community wellness and quality of life are very important for any individual, especially in rapidly changing technology driven society

The Indian knowledge system promotes a balanced approach to Education, emphasizing both academic excellence and extra-curricular activities. Encouragement in different activities and fostering overall growth and wellbeing. It aims to nurture the physical, mental, spiritual aspect of the learner. It also focuses on ethics, moral values, character and life skills.

Interdisciplinary exchange:

Indian Knowledge System encourages interdisciplinary dialogue Under Ministry of education, Government of India has established an Indian Knowledge System division with a vision to promote interdisciplinary research on all aspects of Indian Knowledge System and disseminate Indian Knowledge System. Communication bridges gaps between different knowledge domains, allowing for holistic learning and problem solving. The Indian Knowledge system includes study of health and well-being, consciousness, art, culture. Indian Knowledge System aims to support and facilitate further research to solve contemporary societal issues. IKS is based on Vedic literature, the Vedas and the Upanishads.

Oral Traditions:

Education in ancient India relied heavily on oral transmission of knowledge, emphasizing the power of spoken words. Indian communication heritage is oral. It is because oral communication is more effective and personal. Effective communication preserved knowledge across generations. Knowledge was imparted through discussions, lectures, recitations, memorization and internalization took place

Sanskrit:

The language of ancient texts, Sanskrit, embodies precision and depth. Its grammar and structure promote clarity and nuanced expression. Sanskrit is considered the mother of all languages. It means other languages are dependent on Sanskrit. Language teaching must be improved to be experiential and to focus on the ability to converse and interact in the language and not just on the literature, vocabulary and grammar of language

NEP2020 and Communication Inclusion:

NEP2020 emphasizes inclusivity. Inclusive communication tells that people communicate in different ways but sharing is done in such a way that all understand. NEP2020 focusses on

revolutionary education and equipping necessary future skillset recognises that children not only learn but most important is how to learn. Pedagogy must evolve to make Education more Experiential, learner centred, flexible, enjoyable. By developing it, a person will be better equipped to tackle complex problems and challenges and this will engage in their lifelong learning and personal development.

Effective communication ensures that diverse voices are heard and understood, Healthy communication practices would create an atmosphere of fairness and equality, leading to mutual trust and cooperation. Communication helps to bring rapport with others. It also helps in bringing progression in life. Swami Vivekananda, after his historical Chicago speech in 1893, candidly created great positive impression in minds of West regarding potential of traditional knowledge, spiritual and other holistic practices of India. He envisioned India as Spiritual Guru and Vishwa Guru due to rich India knowledge system. be it in culture, tradition, medicine or consciousness practices.

Skill Development:

Communication skills are essential for employability and personal growth. Education plays a crucial role in building a strong foundation of knowledge, fostering critical thinking, developing social and emotional skills. These skills are key competencies that also reveal your personal qualities and value system apart from workplace related skills, your personal attributes like honesty, punctuality, sincerity, enthusiasm, dedication and sense of commitment can go long way in not just opening employment gateways for you, but ensuring that you take the high road to success in both your personal and professional lives. NEP2020 aims to enhance these skills through experiential learning. Proficiency in language will be included as one of employability skills. Creating synergy between education and skilling is vital for preparing India's workforce for the future world of work.

Challenges And Opportunities

Challenges:

Fragmentation and Loss of Traditional Knowledge:

Rapid urbanization, globalization, and modernization have contributed to the fragmentation and erosion of traditional knowledge systems in India. This loss of indigenous wisdom poses a significant challenge to the preservation and transmission of cultural heritage. Research by Vandana Shiva (1991) highlights the threat posed by intellectual property regimes and commercial exploitation to traditional knowledge systems.

Socio-Economic Disparities:

Socio-economic disparities, including unequal access to education and resources, bring challenges in implementing the Indian knowledge system. Marginalized communities, including indigenous tribes and rural populations, facing barriers to accessing and participating in formal

education systems. Scholars like Amartya Sen (1999) emphasize the importance of addressing these disparities to promote inclusive knowledge systems.

Opportunities:**Revival of Indigenous Knowledge:**

Despite the challenges, there is a growing recognition of the value of indigenous knowledge systems in addressing contemporary issues such as sustainable development, healthcare, and environmental conservation. Initiatives led by organizations like the National Innovation Foundation (NIF) and the Honey Bee Network, as documented by Anil K. Gupta (2016), highlight successful efforts to revive and promote traditional knowledge practices.

Interdisciplinary Dialogue and Integration:

There is an increasing emphasis on fostering interdisciplinary dialogue and integrating traditional wisdom with modern scientific approaches. Scholars such as Raghunath Mashelkar (2005) advocate for a convergence of indigenous knowledge systems with mainstream scientific research to address complex challenges facing society.

Policy Interventions and Community Engagement:

Policy interventions at the national and grassroots levels play a crucial role in promoting the integration of Indian knowledge systems into educational curricula, research agendas, and development initiatives.

By addressing issues of colonial legacy, promoting inclusivity, and fostering interdisciplinary collaboration, India can harness its rich heritage of traditional knowledge to address contemporary challenges and promote sustainable development.

Conclusion

The NEP 2020's vision of holistic development can be fully realized by recognizing communication as a cornerstone of the Indian knowledge system. Let us embrace ancient wisdom and modern practices to foster holistic growth in education and beyond.

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अष्टांग योग: सर्वांगीण आरोग्याचा राजमार्ग

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सारांश:

वर्तमान परिस्थितीत व्यक्तीला तिचे शारीरिक-मानसिक आरोग्य राखणे हे सर्वाधिक महत्त्वपूर्ण आव्हान आहे. यामध्ये कोविड नंतरच्या काळात सातत्याने प्रतिकार क्षमतेतील कमतरता, फळे आणि खाद्यपदार्थांवरील रासायनिक खतांचा मोठा वापर, वातावरणातील मोठ्या प्रमाणात होणारे फेरबदल या परिस्थितीजन्य कारणांबरोबरच धकाधकीच्या आणि ताणतणाव युक्त जीवनशैली कारणीभूत आहे. भारतीय संस्कृतीमध्ये म्हटल्याप्रमाणे “शरीर माद्यं खलु धर्म साधनम्” अर्थात स्वास्थ्यरक्षण हा परम धर्म आहे. याकरिता भारतीय योग हा उत्तम मार्ग प्राचीन काळापासून चालत आला आहे. भारतीय योग ही भारताने जगाला दिलेली अनमोल देणगी आहे दरवर्षी 21 जून हा दिवस आंतरराष्ट्रीय स्तरावर साजरा केला जातो याचाच अर्थ मोठ्या जागतिक समूहाकडून निरामय जीवनासाठी योग अंगीकारला गेला आहे. पतंजली ऋषींनी निरामय जीवनासाठी अष्टांग योग सांगितला आहे यामध्ये यम-नियम, आसन, प्राणायाम, प्रत्याहार, धारणा, ध्यान, समाधी या आठ सोपानांचा समावेश आहे. यामध्ये अहिंसा, सत्य, अस्तेय, ब्रह्मचर्य, अपरिग्रह या पाच यमांचा विचार केला आहे. शौच, संतोष, तप, स्वाध्याय, ईश्वरप्रणिधान या पाच नियमांचे पालन आवश्यक मानले आहे. या हे सर्व सोपानांच्या द्वारे निरामय जीवनाकडे वाटचाल करण्याचा मंत्र भारतीय योग दर्शनाच्या द्वारे मानवाला घालून दिला आहे.

अष्टांग योग: सर्वांगीण आरोग्याचा राजमार्ग

भारतीय ज्ञान परंपरेची पाळीमुळे विविध क्षेत्रात खोलवर रुजलेली आहेत ज्ञानाच्या विस्ताराचा हा व्यापक पट वर्तमान काळापासून ते इतिहासापर्यंत दूरवर खोलवर पसरलेला आहे या ज्ञानवृक्षाच्या विविध शाखाप्रशाखा परस्पर संबंध आहेत सर्वांगीण स्वास्थ्याच्या संदर्भात या ज्ञान परंपरेतील एक महत्त्वाचा दुवा म्हणजे भारतीय योग दर्शन वर्तमान परिस्थितीत संपूर्ण मानवी समाजासाठी सर्वांगीण स्वास्थ्य ही एक परवलीची गरज बनली आहे सर्वांगीण स्वास्थ्याचा विचार करताना भारतीय योग मार्ग केंद्रस्थानी समजायला हवा सामान्यतः योग हा शब्द पतंजली प्रणित अष्टांग योगासाठी वापरला जातो

"योगः कर्मसु कौशलम्" या सूत्रानुसार योगाद्वारे आपल्या कर्मात कुशलता येऊन आपण स्वावलंबी आणि आत्मनिर्भर भरण्याची प्रक्रिया संपन्न होते पातंजली प्रणित अष्टांग योग समजून घेताना अष्टांग योग म्हणजे या क्रमशः योगातील पायऱ्या आहेत, ज्यामध्ये क्रमबद्ध पद्धतीने प्रगती केली तर सर्वार्थाने योग अंगीकारता येईल, आणि त्याचा परिणाम म्हणून सर्वांगीण आरोग्य प्राप्त होईल. योगाची आठ अंगे पुढील प्रमाणे

यम (पाच सामाजिक नैतिकता)

नियम (पाच व्यक्तिगत नैतिकता)

आसन (शारीरिक मुद्रा)

प्राणायाम (श्वास- प्रश्वास तंत्र)

प्रत्याहार(इंद्रिय संयमन)

धारणा (ध्येय विषयाकडे मनाची एकाग्रता)

ध्यान (ध्येय वस्तूचे चिंतन, मनाची स्थिरता)

समाधी (ज्ञान ,आनंद, चित्ताची प्रसन्नता, मोक्षाचे साधन)

यम नियमास नैतिक संहिता अथवा सुयोग्य जीवन जगण्याच्या मार्गाच्या रूपात पाहिले जाते. आपल्या व्यक्तिगत आणि सामाजिक आयुष्यात ज्याप्रमाणे तत्वांना अनुसरून जीवन जगण्याचे नियम,,तत्वे आहेत ती म्हणजे यम- नियम. समाजात आणि व्यक्तिगत जीवनात सकारात्मक आणि नकारात्मक अशी ही मार्गदर्शक तत्त्वे आहेत.

यम :

नैतिक व्रतांच्या रूपातील या प्रतिज्ञा सार्वभौमिक आहेत व्यक्ती कोण आणि कुठली याचा काही विचार न करता प्रत्येकास लागू होतील अशीही तत्वे म्हणजे अहिंसा, सत्य ,अस्तेय, ब्रह्मचर्य आणि अपरिग्रह ही होत.

हिंसा करू नये, खोटे बोलू नये, चोरी करू नये, परस्त्री- परपुरुष अभिलाषा धरू नये व अकारण साठेबाजी करू नये इतकाच या यमांचा सीमित अर्थ नाही.

भगवान महावीर, भगवान बुद्ध आणि त्यानंतर महात्मा गांधीजींनी या तत्त्वांविषयी केवळ सांगितलेच नाही ,तर आजन्म यावर अनुसरण केले आहे. यातील प्रत्येक तत्त्वाच्या पालनातूनच योग मार्गातील रहस्य गाठणे शक्य होणार आहे निरामय जीवनासाठी यम पालन नितांत आवश्यक आहे.

अहिंसा :

विचार ,वचन, भावना आणि कर्माद्वारे कोणालाही हानी न पोहोचवणे म्हणजे अहिंसा होय.भगवान महावीरांनी "अहिंसा परमो धर्मः " असा मंत्र जगाला दिला. अर्थातच अहिंसा हा परम धर्म आहे. अहिंसा पालनातून कोणाही जीवाला कोणत्याही प्रकारे भीती, क्लेश याद्वारे पीडा न देण्याची गोष्ट म्हणजे अत्यंत सूक्ष्मतेच्या पातळीवर अहिंसेचे पालन होय.

वर्तमान परिस्थितीत कौटुंबिक ,सामाजिक, राष्ट्रीय आणि आंतरराष्ट्रीय पातळीवर हिंसेचे प्राबल्य दिसत आहे ,ज्यातून सर्व प्रकारची शांती- सद्भाव हरवल्याचे चित्र सर्वदूर आहे. सर्व संतांनी जो मार्ग मानवी समाजाला दाखवला आहे, त्यामध्ये परस्पर प्रेम, सद्भाव दिसून येतो. ज्ञानेश्वरांच्या "भूतां परस्परे जडो प्रेम जीवांचे" या ओळीतूनही त्याची प्रचिती येते. अहिंसेचे सामर्थ्य महात्मा गांधीजींनी प्रत्यक्ष अनुभवले आहे. याद्वारे बलाढ्य ब्रिटिश सत्तेशी लढा देऊन स्वातंत्र्य मिळवण्याचा एक अभिनव मार्ग शोधला आहे. याच प्रकारे अहिंसेचे सामर्थ्य सामाजिक-राष्ट्रीय-आंतरराष्ट्रीय जीवनाबरोबरच वैयक्तिक जीवनातही अत्यंतिक आहे.

सत्य :

नेहमी सत्याचा मार्ग अनुसरणे म्हणजे सत्य. सत्याचरणाला भारतीय संस्कृतीत महत्त्वपूर्ण स्थान दिले आहे. सत्यवचनी राजा हरिश्चंद्राचे उदाहरण आपल्या संस्कृतीतील महत्त्वपूर्ण आदर्श आहे.'सत्यमेव जयते'हे राष्ट्राचे ब्रीदवाक्य आहे. भगवान महावीर ,भगवान बुद्ध ,महात्मा गांधीजी यांनी सत्याचे महत्त्व

स्वतःच्या जीवन -कृती द्वारे प्रतिपादिले आहे. गांधीजींनी सत्याचा आधार घेतच 'सत्याग्रह' या नव्या साधनाचा अविष्कार भारतीय स्वातंत्र्यलढा अंतर्गत केला आणि तो अनुसरला. हे महत्त्व जाणून आपण आपले सर्वांचे जीवन सत्यमय बनवणे हे आपल्या निरामय जीवनासाठी उपयुक्त आहे.

अस्तेय :

कोणत्याही प्रकारचे चौर्य कर्म त्याज्य आहे या तत्वाचे सारं आहे. आज समाजात सर्वच क्षेत्रात सर्वच प्रकारची चोरी होताना आपण पाहतो पैसा हिरे अलंकार बँक बॅलन्स साहित्य लिखित साहित्य यांच्या चोरी बरोबरच वन्य प्राण्यांच्या अनेक प्रकारच्या अवयवांच्या चोरी मध्ये मोठा समाज गुंतला आहे असे आढळते. यातून समाज- स्वास्थ्य ,मनस्वास्थ्य आणि पर्यावरण- स्वास्थ्यही हरवताना दिसते .याकरिता अस्तेय या तत्वाचा सर्वांगीण स्वास्थ्यासाठी अंगीकार करणे जरीचे आहे.

ब्रह्मचर्य :

ब्रह्मचर्याचा अर्थ केवळ परपुरुष आणि परस्त्री गमन न करणे एवढाच नाही. तर संयमपालन करणे, महान ध्येय प्राप्तीसाठी आपल्या ऊर्जेचा सदुपयोग करणे असाही आहे. व्यापक अर्थाने याकडे नजर टाकल्यास व्यक्तिगत- सामाजिक जीवनातील अनेक समस्यांचे निराकरण याद्वारे करता येते.

अपरिग्रह :

अनावश्यक संग्रहापासून स्वतःला दूर ठेवणे म्हणजे अपरिग्रह. संत कबीर म्हणतात, "साई इतना दीजिये जामें कुटुंब समाय । मैं भी भूखा ना रहूं साधू न भूखा जाय।" अर्थातच संत कबीर आणि ईश्वराकडे कोणीही उपाशी राहू नये सर्वांची भूक भागली पाहिजे इतकीच अपेक्षा व्यक्त केली आहे. थोर संत- महात्मे आणि महापुरुषांच्या जीवन गाथेतून हे स्पष्ट होते की भौतिक सुखसंपदेचा अनाठायी हव्यास हा विनाशाकडे नेतो. संत तुकाराम यांच्या म्हणण्यानुसार 'चित्ती असू द्यावे समाधान' हा मंत्र जपला पाहिजे. महात्मा गांधी, लालबहादूर शास्त्री यांच्या जीवनाकडे पाहिल्यास आपणास या तत्वाची प्रचिती येते. भौतिक संपदेचा हव्यास गरजूंना त्यांच्या हक्कांपासून, सोयी सुविधांपासून वंचित ठेवतो. महात्मा गांधींनी तर सामान्य भारतीयांना अंगभर वस्त्र मिळत नाही म्हणून आजीवन पंचा आणि उपरणे इतकाच मर्यादित पोशाख ठेवला होता वर्तमानात आपल्याला याबाबत अत्यंत विरोधाभासी परिस्थिती जाणवते. एकीकडे 'आहे रे' यांची अगणित संपत्ती दुसरीकडे 'नाही रे' समुदायांच्या हक्कांचा संकोच इतका की एक वेळचे भोजनही पोटभर मिळत नाही. आज भारतातील आत्यंतिक विषमतेला आवर घालणं हे समाजस्वास्थ्य आणि संपूर्ण मानवजातीसाठी प्राधान्याने करण्याची बाब आहे.

योग तज्ज्ञ अय्यंगार गुरूजी यम आणि नियमांना आध्यात्मिक द्वार उघडण्याची गुरूकिल्ली मानतात. व्यक्तिगत जीवनात आवश्यक असलेले नैतिकतेचे नियम पुढे दिल्यानुसार.

नियम :

शौचः शरीर-मनाची शुद्धी.

संतोषः संतुष्ट आणि प्रसन्न राहणे.

तपः स्वतः अनुशासित राहणे.

स्वाध्यायः आत्मचिंतन करणे.

ईश्वर प्रणिधानः ईश्वराप्रती पूर्ण समर्पण, पूर्ण श्रद्धाभाव ठेवणे.

आसन:

योगासनाद्वारे शारीरिक नियंत्रण प्राप्ती, शरीर साधण्याचा मार्ग म्हणजे आसन होय. वास्तविक हठयोगाचा मुख्यविषय आसन आहे. योग सूत्रात म्हटल्यानुसार "स्थिर सुखमासनम्" म्हणजेच स्थिर, सुख पूर्वक बसण्याची क्रिया साधता आली पाहिजे. आसनाने शरीर-मनाची लवचिकता साधता येते. आसनाने शरीर-मनाची लवचिकता गाठता येते.

प्राणायाम:

आसनाच्या सिद्धी नंतर श्वास आणि प्रश्वास गती नियमित करणे म्हणजे प्राणायाम होय. प्राणायामाद्वारे मनाची चंचलता आणि क्षुब्धतेवर मात करून समतोल साधता येतो.

प्रत्याहार:

इंद्रिये चित्ताला चंचल करतात त्या इंद्रियांना विषयांपासून अलिप्त करून एकाग्रचिंताचे अनुसरण करणे म्हणजे प्रत्याहार. इंद्रिय विजयाचा मार्ग म्हणजे प्रत्याहार होय. अनेक बाह्य विषय चित्त उद्वेलित करत असतात. यापासून मनाला रोखणे, आणि संयमित करून अंतर्मुख करणे म्हणजे प्रत्याहार.

धारणा :

चित्ताला एखाद्या विचारांमध्ये बांधण्याच्या क्रियेला धारणा म्हणतात. यापूर्वीची योगाची अंगे- यम, नियम, आसन, प्राणायाम यांना बाह्य साधन मानले गेले आहे प्रत्याहार, धारणा, ध्यान व समाधी यांना आंतरिक साधन, सोपान म्हटले आहे. धारणा 'धृ'धातूपासून बनला आहे, ज्यायोगे चित्त स्थिर केले जाते. इंद्रियांना त्यांच्या विषयांपासून (रूप, रस, गंध, शब्द, स्पर्श) हटवून चित्त स्थिर केले जाते.

ध्यान :

एखाद्या वस्तूवर, बाबींवर निरंतर स्थिर होणे म्हणजे ध्यान. ध्यान ही एक आंतरिक साधना आहे, ज्यायोगे सर्व काही साधता येते. वर्तमान समाजातील, व्यक्ती जीवनातील ताण- तणावावर मात करण्यासाठी ध्यानाचे महत्त्व प्राधान्याने विचारात घेऊन अनुसरणे जरूरीचे आहे.

समाधी:

समाधी ही चित्ताची अशी अवस्था आहे, चित्त ध्येय वस्तूच्या चिंतनात पूर्णतः लीन होते. समाधीच्या दोन श्रेणी आहेत निर्विकल्प आणि सविकल्प समाधी. व्यक्तीच्या आंतरिक विकासामधली परमोच्च स्थिती आहे असं म्हणता येईल. मैस्लोच्या श्रेणी बद्ध मांडणी मधली 'Self Actualization'ची ही स्थिती म्हणता येईल.

सारांश रुपाने भारतीय योगदर्शनाचा हा मार्ग केवळ शारीरिक स्वास्थ्यासाठीच नाही तर व्यक्तीच्या सर्वांगीण विकासासाठी, सामाजिक आणि सर्व क्षेत्रात सर्वांचेच जगणे सुंदर होण्यासाठी अत्यंत उपयुक्त आहे. याकरिता भारतीय ज्ञान परंपरेतील योग शालेय, विद्यालयीन, महाविद्यालयीन आणि विद्यापीठीय स्तरावर अनुसरला पाहिजे.

संदर्भ:

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२. जीवनशैली : डॉ. हि. वि. सरदेसाई, श्रीविद्या प्रकाशन.
३. आरोग्य सर्वासाठी : डॉ. ह. वि. सरदेसाई, सकाळ पेपर्स. लि.

Promoting Inclusion through Indian Knowledge System

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Abstract:

Over thousands of years, the Indian subcontinent produced a vast and varied collection of knowledge, beliefs, and practices that make up the Indian Knowledge System. Its origins can be found in the ancient Vedas, Upanishads, and Puranas. Various civilizations and cultures have contributed to its evolution. Numerous topics are covered by this body of knowledge, such as physics, mathematics, astrology, philosophy, religion, and literature. Its foundation is a comprehensive strategy that unifies the mind, body, and spirit, among other facets of human existence. The Indian Knowledge System places a strong focus on the interdependence and connectivity of all living things and the universe, which is one of its main features. The idea that "Vasudhaiva Kutumbakam," or the entire world is one family, reflects this. Additionally, the Indian Knowledge System emphasizes inner development and self-realization heavily. This is accomplished by engaging in activities like yoga, meditation, and the search for wisdom and knowledge. The Indian Knowledge System is an essential component of Indian civilization, offering direction and motivation to both individuals and groups, even in the face of modernization. Its lessons on kindness, harmony, and balance have shaped Indian culture and are still having an impact on the world at large. The Indian Knowledge System has greatly benefited humanity via its philosophical discoveries, scientific breakthroughs, and spiritual practices; as such, it will leave a priceless and enduring legacy for future generations.

Keywords: Indian Knowledge system. Environment, National Education Policy 2020, Skill Based Programme, Opportunities, Employment, Literature.

Introduction:

Generation to generation systematic information transfer is called the Indian information System (IKS). Rather than being a custom, it is an organized system and a method of knowledge transfer. The Vedic literature, the Upanishads, the Vedas, and the Upavedas form the foundation of the Indian Knowledge System. As a guiding concept, the NEP-2020 acknowledges the rich legacy of ancient and everlasting Indian knowledge and thinking. The Jnan, Vignan, and Jeevan Darshan knowledge systems of India have developed from experience, observation, experimentation, and in-depth study. Our education, arts, administration, law, justice, health, manufacturing, and commerce have all been touched by this legacy of validating and putting into practice. This has

affected Bharat's classical and other languages, which were passed down through creative, oral, and literary traditions. It contains information about the achievements and difficulties of ancient India as well as an understanding of the country's future goals with regard to ecology, health, education, and basically every facet of existence.

They shed light on the Indian way of life and emphasize the value of harmony, balance, and cohesion in society (education.gov.in, 2023). Indian society and culture have been greatly impacted by the Indian knowledge system, which has shaped its values, traditions, and rituals. People now have a strong sense of belonging to a wider social fabric, thanks to it. As a result, there is now a great focus on ties to one's family, deference to elders, and social responsibility. Spirituality and religion are among the areas in which the Indian knowledge system has the most effects. At the heart of Indian spirituality is the idea of dharma, which is Sanskrit for righteousness or obligation. It highlights how important it is to lead a moral life and fulfill one's obligations to society, the universe, and oneself. As a result, India has seen the rise of numerous religions and spiritual traditions, including Sikhism, Buddhism, Jainism, and Hinduism, all of which have influenced the nation's culture and social structure (Senapaty, 2018). As a result, the ideas, customs, and practices that make up the Indian knowledge system are numerous and complex and they are deeply ingrained in Indian society and culture. It has been crucial in forming the Indian lifestyle, encouraging balance and harmony, and fostering a strong feeling of spirituality and community. It continues to have an impact on contemporary India, making it an essential part of the nation's history and identity.

Objectives of Indian Knowledge System:

The main objective of the IKS division is to encourage private sector organizations to get involved in IKS-based and related cross-disciplinary work being done by a variety of Indian and international institutions, including universities, national importance institutions, R&D labs, and various ministries.

- To establish research fellowships or fellowships for visiting professors, scientists, or scholars, including science and technology professors at Sanskrit universities and Sanskrit professors at IITs, IISERs, IIMs, and universities.
- To contribute financially to publications, workshops, seminars, and research projects that furthers the cause of IKS.
- To make recommendations for how to include IKS into modern disciplines of knowledge taught in school and higher education's reference and text books.
- To set up IKS cells in Sanskrit universities, general universities, and other MoE-affiliated establishments. In order to foster interdisciplinary study involving contemporary streams and ancient Shastras, it is necessary to establish collaboration and coordination between institutions under the MoE, other ministries, departments, independent researchers, NGOs,

and private institutions working in the subject of IKS.

- Whenever possible, investigate and implement a PPP model (e.g. establishing a full IKS portal and wiki-type platform)
- To form committees and expert groups to develop, carry out, and supervise the IKS division's goals.
- To begin any task, endeavor, project, or activity aimed at advancing IKS.
- To classify the main topics and identify academics and organizations that has worked in different IKS fields.
- To compile reports detailing the contributions made by each individual to IKS and to release new publications on a regular basis.
- To encourage IKS research in order to provide new knowledge, proof of concepts and successful multidisciplinary work that benefits society.
- To list academics and organizations that have worked in different IKS fields, as well as their works in those fields, and to classify the main fields.
- To open IKS branches in general universities, Sanskrit universities, and other MoE-affiliated establishments.

Scope & Limitation:

Traditional medicine, astrology, yoga, meditation, and other ancient wisdom are all included in the Indian Knowledge System (IKS). These systems, which have been passed down through the years, have had a big impact on the history and culture of India. It will be helpful to incorporate these IKS tools into lessons to enhance empathy, self-reflection, and emotional control. Through appropriate understanding and management of their emotions, students can make better decisions and maintain healthier relationships. This page only discusses the Ramayana, the Mahabharata, and the Bhagavad Gita because IKS is such a broad subject. Traditional medicine, astrology, yoga, meditation, and other ancient wisdom are all included in the Indian Knowledge System (IKS). These systems, which have been passed down through the years, have had a big impact on the history and culture of India. It will be helpful to incorporate these IKS tools into lessons to enhance empathy, self-reflection, and emotional control. Through appropriate understanding and management of their emotions, students can make better decisions and maintain healthier relationships. This page only discusses the Ramayana, the Mahabharata, and the Bhagavad Gita because IKS is such a broad subject.

The Significance of Emotional and Social Intelligence:

A person's overall development depends on the development of their socioemotional intelligence (SEI), which is essential for determining how they will live their personal, academic, and professional lives. Traditional educational institutions frequently place a strong focus on

cognitive competence, but socioemotional development is just as important. Crucial, if not more so, in developing well-rounded people. It gives people the tools they need to successfully negotiate and maintain social interactions.

Gaining these abilities enables people to relate to and comprehend the feelings and viewpoints of others, encouraging collaboration, understanding, and teamwork. An individual's mental and emotional health are also greatly impacted by their socioemotional development. People with developed socio-emotional intelligence are better able to manage stress, overcome hardship, and preserve a pleasant psychological state because they foster self-awareness and emotional regulation. Higher degrees of resilience, self-assurance, and general mental wellness can be attributed to these abilities. On the other hand, a lack of socioemotional development can result in emotional regulation problems, interpersonal disputes, and a higher risk of mental health problems. It is also essential for success and progress in the classroom. Studies have consistently demonstrated that academic achievement and socioemotional intelligence are positively correlated. Studies have consistently demonstrated that academic achievement and socioemotional intelligence are positively correlated. Students that possess greater socio-emotional abilities, for example, are more likely to be engaged, motivated, and behave well in the classroom. Additionally, they are more capable of managing academic difficulties, adjusting to shifting circumstances, and cooperating and communicating with peers and teachers in an efficient manner. Therefore, a person's socioemotional development is essential to their whole development. To raise well-rounded people who can thrive in a variety of spheres of their lives, education and personal development programs must acknowledge and prioritize socioemotional development.

Indian Knowledge System in Education:

The IKS will cover and include mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, governance, polity, and conservation. It will also incorporate indigenous and traditional learning methods in addition to tribal knowledge. There will also be specific courses offered in traditional (organic) crop cultivation, forest management, natural farming, and tribal ethno-medical practices. Secondary school pupils will also be able to choose an interesting option on Indian Knowledge Systems. The policy acknowledges that students should gain first hand understanding of India's vast variety. Simple activities like student trips to different parts of the nation would fall under this category.

This will serve to increase understanding of different regions of the country as well as awareness and appreciation of India's variety, culture, and customs. It will also boost tourism. In line with this directive under "Ek Bharat Shrestha Bharat," 100 popular tourist destinations across the nation will be chosen, and educational institutions will send students there to learn more about these places by studying their history, scientific contributions, customs, indigenous literature, and knowledge, among other things. Currently, 32 IKS Centers have been established to spur

innovative research, teaching, and IKS dissemination. There are about 75 high-end multidisciplinary research facilities under construction for programs including ancient rasayanshastra, ancient urban planning, ancient metallurgy, and water resource management.

There have been about 5200 internship opportunities at IKS. Conducted 50 workshops, national/international conferences, and initiatives for faculty development. Over 8000 higher education institutions have begun incorporating IKS into their curricula and have managed to digitize 1.5 lakh books. Leading academics and practitioners from a range of knowledge fields were assembled by the IKS Division to create Vision 2047, which outlines a strategy for creating a prosperous Bhāratīya Gnana Paramparā. Utilizing our extensive knowledge base would make it simpler to encourage and facilitate additional study aimed at addressing today's pressing issues. While maintaining the legacy of our educational systems, incorporating these courses into regular education will inspire students. Students can broaden their intellectual development, boost their confidence, and obtain a deeper grasp of their culture by being exposed to both classic and current notions.

Ministry and Regulatory Bodies Guidelines:

The Ministry, Regulatory Bodies like UGC & AICTE, and HEIs have all undertaken initiatives to meet the objectives of NEP 2020.

On June 13, 2023, the following guidelines for incorporating Indian knowledge into curricula for higher education were released. It places a strong emphasis on promoting Indian languages, arts, and culture and works to eliminate gaps in the Indian Knowledge System (IKS) by incorporating IKS into curricula across. The major discipline shall be the subject of at least 50% of the credits allotted to the IKS, and the credits assigned to the major discipline should be taken into consideration.

On August 5, 2023, the following guidelines for the appointment of artists and artisans-in-residence in higher education institutions were released. In order to synergize the artistic experience with the traditional education system and make it more fruitful and advantageous for the students, collaboration between artists and higher education institutions is needed. Additionally, an efficient structure for art education must be developed, and skilled Kala Gurus must regularly participate in research, to introduce individuals to India's rich cultural and intellectual legacy and to provide a short-term, multi-tier, credit-based modular course with many points of entry and departure based on Indian customs and heritage. The knowledge of various learning dimensions in the areas of universal human values, Vedic mathematics, yoga, Ayurveda, Sanskrit, Indian languages, sacred religious sites and monuments in the Indian subcontinent, Indian heritage, Indian literature, Indian sculpture, Indian music and dance forms, drama, visual arts, performing arts, crafts and craftsmanship, etc., are all included in the dissemination and imparting

of this knowledge. Students who complete 18–20 credits in IKS are eligible to receive a minor degree, according to the IKS.

Required Credit Component:

In order to instill traditional knowledge and pride in students across all fields, universities may add learner credits or IKS electives to all courses. It is already required by UGC that the curriculum for IKS courses account for 5% of the total credits. IKS is a new course that AICTE has instituted for first-year engineering college students.

Collaboration Scope:

Considering India's history of globalization, university-designed multidisciplinary courses may take into account the possibility of working abroad wherever feasible. For instance, NCERT is working to include historical connections between India and Indonesia into school curricula.

Online/ODL Courses:

Current IKS courses can be connected to online learning environments (like SWAYAM and NPTEL) and to learners worldwide via ODL.

Recruitment:

In order to develop a pool of specialist IKS professors and researchers, the entrance exam syllabus may be made available as a subject for testing under UGC-NET.

Regularized Faculty Training:

To raise the standard of instruction for IKS courses, training and orientation modules for teachers may be created. Creation of specialist teacher training facilities wherein IKS faculty members can instruct instructors in certain areas of the IKS..

Offer Experiential Learning Opportunities:

IKS Internships - Create possibilities for student internships and apprenticeships and offer guidance to IKS students in conjunction with BGSamvahan Karyakram, the internship initiative started by the MoE's IKS Division.

Academic Content Translation:

To engage different learners and protect indigenous identity, IKS Centers may translate teaching materials for all disciplines into local languages.

Encourage Innovation and Research in IKS:

Priority financing for research: In the future, NRF may propose dedicated research funds to support research ideas pertaining to IKS. Provide funds that act as catalysts to promote novel, thoughtful, and in-depth academic study in the IKS and revitalize IKS research in India.

International Collaborations:

For the purpose of undertaking research that is centered on India, institutions can access international collaborations through organizations like the Indian Council of Historical Research

(ICHR). Incorporate IKS as a theme into the ASEAN fellowships to encourage scholarly exchange and develop the next generation of scholars.

Encouraging Jan Bhagidari:

Engage the public through a variety of channels (such as MyGOV competitions, conferences, exhibits, radio and television shows, social media, etc.) to spread and make an authentic Indian Knowledge System to develop information and confidence. Involve people in various IKS initiatives through Jan Bhagidari Programme similar to citizen science initiatives.

Provide Job Possibilities:

Provide adolescents with employment options by means of skill-based, IKS-based programs, such as those that teach IKS-based cosmetics and beauty techniques, Ayurvedic dietetics, Gandhastra-based fragrance, and many other specifically IKS-based abilities. Encourage the use of technology to highlight Indian heritage to both Indians and the rest of the world. Target 10% of the global tourism sector and give our young people a ton of job chances.

Conclusion:

IKS contains information about the achievements and difficulties of ancient India as well as an understanding of the country's future goals with regard to the environment, health, education, and all other facets of daily life. The goal of the Indian knowledge system is to encourage and enable more study in a number of areas, including holistic health, psychology, neuroscience, nature, the environment, and sustainable development, in order to address current societal problems. The Indian Knowledge System (IKS) is a cutting-edge organization that was founded to support multidisciplinary study on all facets of IKS and to conserve and distribute IKS for future study and societal uses. It will actively work to disseminate traditional wisdom and our nation's rich legacy. The IKS will cover and include mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, governance, polity, and conservation. It will also incorporate indigenous and traditional learning methods in addition to tribal knowledge. This will not only encourage travel but also aid in raising awareness of and appreciation for India's variety, customs, and culture as well as knowledge of the country's numerous regions. The knowledge of various learning dimensions in the areas of universal human values, Vedic mathematics, yoga, Ayurveda, Sanskrit, Indian languages, sacred religious sites and monuments in the Indian subcontinent, Indian heritage, Indian literature, Indian sculpture, Indian music and dance forms, drama, visual arts, performing arts, and crafts are all included. This approach should include awareness campaigns, legislative reforms, funding allocation, and ongoing professional development for educators. To properly include socio-emotional development into the Indian educational system and guarantee that every kid has an equal opportunity to improve their socio-emotional abilities, it is imperative that these obstacles are overcome. UGC has previously mandated that the curriculum for IKS courses account for 5% of

the total credits. Create institutional support systems by establishing IKS centers, which will operate as hubs for the start of outreach, education, and research initiatives around the nation.

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Spiritual Perspective In Education

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ABSTRACT

Education is the process where every individual learns the things according to their ability and interest because every child has their own unique quality like strength, personality, inner talent and ability. For this unique quality we need to design the activity-based curriculum for the students. Syllabus is the important part in the process of child development and teaching-learning process. Child development is the prime part of education. When we look forward to this scenario, the level of competition is increasing day by day. For this purpose, we focus on the child's curriculum and co-curriculum activities inside and outside school and college also. Foremost requirement of the syllabus is to reduce the essential part according to subject and make wide space for critical thinking in subject content of training, make sure the curriculum should be holistic discovery based and discussion based. These curriculum parameters and aspects fulfill only one word that is holistic development. Holistic development is the overall development of a child that means social, emotional, physical, mental and intellectual growth of the person. In education it means focusing on the child's overall growth in various aspects. Holistic development promotes self-confidence, self-awareness and an increasing good sense of responsibility in each and every work. It's a process which will help to develop the strong critical thinking abilities and problem-solving attitude among students. Holistic development is the extensive approach in teaching where the objective is rich in the goal for developing multiple abilities in the human mind. It is the development of physical, emotional, intellectual, social development of students and promotes the learning style with higher order skill improvement. Holistic development is the combination of enhancing education models of empowering students' performance and teacher strategies in different areas. Its benefits are helpful to increase the standard of education and these standards will strengthen the nation building process of achievement.

Keywords: Spiritual perspective, Education

Introduction

The holistic approach to education develops a learner's social and academic maturity to accept education, and prepares a student for lifelong learning. The education focus moves toward the life skills, attitudes, and personal awareness the student will need in an increasingly complex

world. The holistic approach to education develops social –emotional understanding and gives opportunities for facing the challenges. NEP 2020 states that education should be focused on practical learning not on theoretical basis. Quality education is the requirement of the society and there is no gender bias or caste discrimination or any other things apart from education. In NEP 2020, Holistic education is overall development of human personality in all perspectives like **Cognitive, Emotional, Social, Intellectual, Spiritual.**



NEP 2020 will transform this model through a flexible curriculum that creatively combines various disciplines. Learners will be able to choose from language and also integrate Applied Science, Mathematics, Business Studies with humanities.

NEP 2020 has laid transformative ideas to reshape education. Teachers are central to the success of our education system. Education is the source of learning where the teacher is the eminent factor for brainstorming the learner ability. When it comes to connect with the real education pattern of practical cum theory-based learning it gives lots of benefit to the education system 'Conceptual Framework of Holistic Development, the ability to think creatively. In today's digital world life is going to be very fast and depends on a fully technology-based education system. Multiple skills necessary for multiple activities to perform in the school (curricular and co-curricular activities) Holistic education is based on the idea that children can be taught in a more Natural and engaging way. Rather than classifying school subjects, the holistic approach seeks to empower children to use their academic learning as a foothold for their emotional and social empowerment

A Holistic Approach

A Holistic approach motivates and inspires students to learn the subject in theoretical form as well as in practical. Holistic approach is helpful for developing curiosity and allows us to learn and understand the concept naturally, creatively and practically. It also helps in developing their skills and builds their confidence to be actively participating in school activities. Enhancing the quality of students so that they will find their way of connecting and developing their bridge between education in the Real world. Their creative skills rise to help in solving their problems in various directions. Holistic approach gives blessing to education and the process of development of mind, body and spirit.

Characteristics of Holistic Approach**Intellectual Ability Development**

It is also known as cognitive ability. Intellectual ability is where we get information and knowledge for holistic development. Intellectual development is all about learning skill enrichment. In this process how children use their mind ideas, thoughts and views for living in this environment. Language plays a very important role in intellectual development. It is an ability to grow and build a child so that they can solve their problem in a required area or field. Which is very much important to organize the mind and ideas in specific zones where needed.

Physical Ability Development

Physical development is related to motor skill activity, for example climbing, walking, running, pushing, pulling. This skill involves muscle coordination and also psychomotor domain which are related to holistic development through these activities. When an individual is physically fit that means he/she is mentally fit. When a Child is physically well developed then he/she learns new things, enjoys practical knowledge by observing the new situation with enthusiasm. In School we have to make physical activity compulsory. For e.g. yoga and sports. Physically fit children perform very strongly and confidently because they have sufficient energy to learn, to understand and to apply in the development process. Physical development plays a very important role.

Mind Ability Development

Nurturing and proper care of the mind is a sign of a healthy brain. Healthy brain is key to success and provides opportunities to every individual in their career. Stable and healthy mind plays a vital role in the workplace where it is needed. Mind ability raises the confidence in logical and reasoning areas where learners can enhance their quality and smartness in any professional world. Mind ability is to improve the conceptual framework of any content by their imagination and thought process. For good and positive response of mind more practice for mindfulness activity and positive environment. In education make the school environment stress and burden free and establish the respectful rapport between students and teacher.

Emotional Ability Development

It involves their emotion, feelings and caring about self-activities and work done by these feelings. For this, bringing up the social activities in part of community engagement and awareness programs and emotional sides of the mind needs observation, experience and evaluation for these learning to get closer for understanding the positive relationship, positive behaviour reaction from these acts. These positive behaviours develop their trust and faith towards their work and it's also part to increase the anger level, Self-discipline is very important to control the anger and social development necessary to teach them to control their emotions for that they will give anger management, dealing with changing behaviour, depress, stress management. These factors are responsible for good social development and these can be possible only in education Social Ability

Development Social Development is integral part of education to develop the social, spiritual, aesthetic and moral values among students. Every individual is a part of society and for this society we need to make good citizens for national integration. Due to this development we have to generate youth power and strength to build the reputation of the country and growth income and status of India. A good student is a good citizen. In holistic development social development plays a vital role in emerging the growth of education and economy of the country. Living for the nation and living for values is important in society.

Why is Holistic Development Important?

From the beginning of education, we always focus on the overall development of a child. From ancient, medieval and present era child development is necessary for students to enable to learn new things from different activities. In education purpose to actively participation of students in all perspectives of curriculum it means make sure to enhance the quality of physical and, mental ability. It is imperative for exposing children to opportunities to find and develop their strength to the best of their abilities as well as strengthen their weaker skills. Learning is the process of learning things in a simultaneous manner and it is interconnected to other parts of learning like What they See, what they observe and what they hear. In Teaching –learning process teachers can improve their audio-visual perception, language awareness and proficiency, fine motor skills, Listening and responding skills, focus and attention towards work. Academic skill builds only with the help of social, physical, mental and intellectual. Social emotional skills are very much important to learn to regulate one's own emotion and secure it. Express their emotion in a good, positive and healthy way in an accurate place. It is imperative for exposing children to opportunities to find and develop their strengths to the best of their abilities, as well as strengthen their weaker skills.

Significant Predictor of Holistic Development

It is the tool to enhance the results and outcomes of educational values and also create the instructional learning material. Improving the concept and traits of the learning.

Conclusion

We need to understand what children need to require from education not only academic growth but also keep growing other than curriculum like extra co-curricular activities. Every parent's motive to send their children in school and college for need to learn some specialized things and betterment of future and also grooming for holistic development(Social, Intellectual, Physical, Emotional and Mental) In all round development that means holistic development Education is the internal part for only education system can change the behaviors and help students and help students to understand his/her psychological pressure and teaching -learning process is only way to build up the healthy and powerful environment to understand the relationship between positive and negative environment. Also build up self-reliance and team spirit and true

communication in education, educationist, policymaker and stakeholder ensure that the curriculum is not only integrated with theory based but also with large no of activities (social and mental) and practice.

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Effectiveness of a Program Based on IKS (Indian knowledge system) for Enhancement of Critical Thinking Skill among Students

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Abstract:

Critical thinking is a vital skill for students to succeed in today's complex world. Science education has been identified as a key area for developing critical thinking skills. This study aimed to investigate the critical thinking skills of 8th-grade Marathi medium students in DNH. The researcher incorporated Indian knowledge systems, such as Nyaya and Vedanta, through science to develop a framework for critical thinking. The results show that students who received training in critical thinking using Indian knowledge systems performed better than those who did not. The researcher concluded that incorporating Indian knowledge systems into education can improve critical thinking skills among students.

Key words: Critical Thinking, Indian Knowledge system, science subject.

Introduction:

Critical thinking is a kind of thinking in which you question, analyse, interpret, evaluate and make a judgement about what you read, hear, say, or write. The term critical comes from the Greek word kritikos meaning “able to judge or discern” Critical thinking is a complex and multifaceted concept that has been defined and theorized by various researchers. Paul and Elder (2013) define critical thinking as the systematic evaluation and analysis of information and ideas to form a judgment or decision. Critical thinking involves the use of cognitive skills such as reasoning, problem-solving, and decision-making.

Literature Review:

Research has shown that critical thinking skills can be developed through practice and training (Paul & Elder, 2013). Indian knowledge systems offer a rich tradition of critical thinking, with Nyaya and Vedanta being two prominent examples. Nyaya emphasizes the importance of logical reasoning and argumentation, while Vedanta focuses on the nature of reality and knowledge.

Science Education and Critical Thinking:

Science education has been identified as a key area for developing critical thinking skills. Science education emphasizes the development of scientific literacy, which includes the ability to think critically about scientific information (AAAS, 1993). Research has shown that science education can improve critical thinking skills (Hmelo-Silver, 2004).

Several programs have been developed to improve critical thinking skills through science education. These programs include inquiry-based learning, problem-based learning, and project-based learning. Inquiry-based learning involves students in the process of scientific inquiry, where they develop questions, design investigations, and analyze data (Bybee, 2000). Problem-based learning involves students in the solution of real-world problems, where they develop critical thinking skills through the analysis of complex information (Hmelo-Silver, 2004). Project-based learning involves students in the development of long-term projects, where they develop critical thinking skills through the analysis of complex information and the development of solutions (Thomas, 2000).

Objectives:

- To investigate the critical thinking skills of 8th-grade Marathi medium students in DNH.
- To develop a framework for critical thinking using Indian knowledge systems, specifically Nyaya and Vedanta through science.
- To compare the critical thinking skills of students who received training in critical thinking using Indian knowledge systems with those who did not.
- To find out the effectiveness of a programme developed for enhancement of critical thinking.

Population:

- 8th-grade Marathi medium students in DNH.

Sample:

- 200 students selected from various Marathi medium schools in DNH.
- Divided into two groups: experimental group (100 students) and control group (100 students)

Sampling:

There are around 28 marathi medium schools in DNH. Schools are selected through purposive sampling method and Random sampling method was used for selection of students.

Methodology:

- Experimental group received training in critical thinking using Indian knowledge systems (Nyaya and Vedanta) for 6 weeks
- Control group did not receive any training
- Critical thinking skills were assessed using a standardized test before and after the training

Tools of Data collection :

Researcher developed critical thinking test ,which is used as pre test and post test for this study. This test mainly focuses on 4 elements of critical thinking i.e. Knowing Situation, Inference, Analysis & Evaluation.

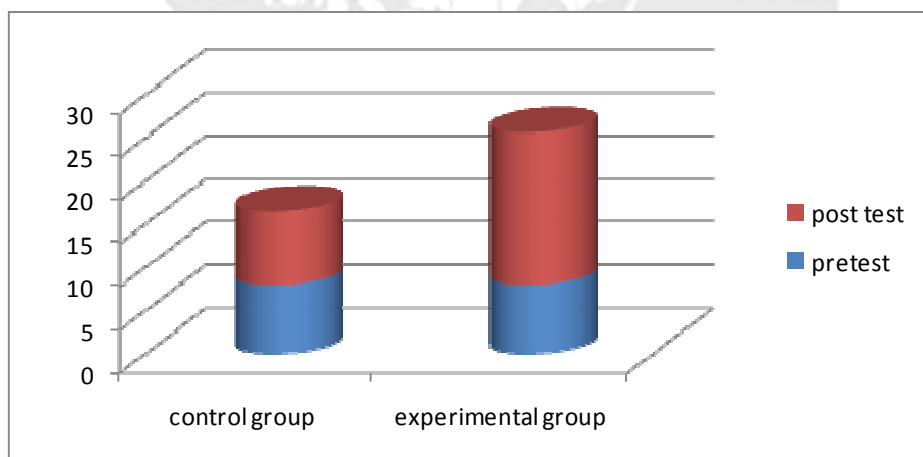
Statistical Analysis:

- Mean was used to compare the critical thinking skills of the experimental group and control before and after the training
- Independent t-test was used to compare the critical thinking skills of the experimental and control groups before & after the training

Graph:

- A bar graph showing the mean scores of the experimental and control groups before and after the training

	Pre test	Post test
Control group	8	8.5
Experimental group	8	17.6

**Results:**

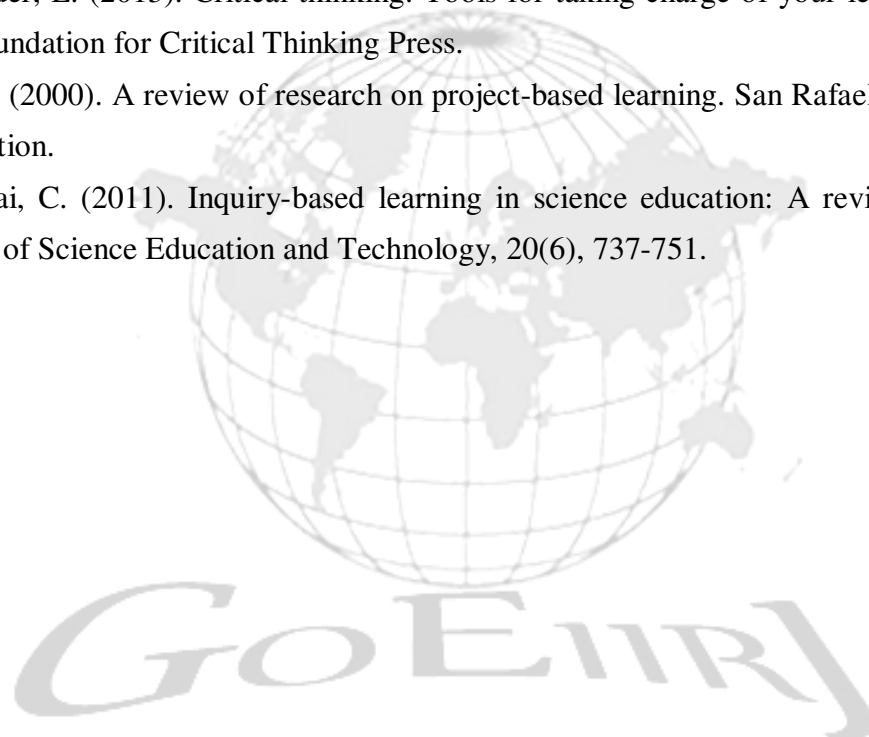
- Experimental group showed a significant improvement in critical thinking skills after the training ($p < 0.01$)
- Control group did not show any significant improvement in critical thinking skills ($p > 0.05$)
- Experimental group performed better than the control group in critical thinking skills after the training ($p < 0.01$)

Discussion:

- The results of the study demonstrate the effectiveness of incorporating Indian knowledge systems into education to improve critical thinking skills
- Nyaya and Vedanta offer valuable insights into critical thinking, and their incorporation into education can help students develop a more nuanced understanding of the world
- The study recommends that educators should incorporate Indian knowledge systems into their teaching practices to improve critical thinking skills among students

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Nalanda Mahavihara – An Ancient Inclusive University**Mr. Ketan Kamble***Assistant Professor,**Ponda Education Society's College of Education,**Farmagudi, Ponda– Goa*

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Abstract

This paper aims to study the inclusive nature of the Nalanda Mahavihara i.e. university which was established during the Gupta dynasty in 5th century CE in ancient kingdom on Magadha, which is present day Bihar state of India. It was a renowned center for learning, particularly Buddhist education. Its campus was well equipped with a library, lecture halls, classrooms, meditation halls, dormitories, and residential quarters for students and teachers respectively with diverse backgrounds and from different regions. Students from India and various parts of the world were admitted on the basis of merit through entrance exam with no preferences on the basis of their caste, religion, region, nationality, or economic class. It offered a wide range of subjects covering wide spectrum of knowledge domains and disciplines from Buddhist and Indian Hindu philosophy which showed diversity and inclusivity in subjects. Different teaching methods were used which catered needs of audio, visual and kinesthetic learners. Stakeholders from various strata like heads, senior scholars, council of teachers and other academic bodies to be part of decision making and governance which showcased inclusivity in the functioning of Mahavihara. In Mahavihara, Pali, Sanskrit and different regional languages of India and languages from central and Southeast Asia were used. Nalanda Mahavihara provided free education to its students along with four requisites i.e. food, clothing, bedding and medicine. Therefore, one can say that Nalanda Mahavihara was also economically inclusive. Therefore, it can be concluded that the infrastructure, admission process, subjects taught, teaching methods used, linguistic medium, free education and governance of Nalanda Mahavihara were inclusive in nature, promoting diversity and inclusivity in academics during those times.

Keywords: Nalanda Mahavihara, ancient university, inclusive, infrastructure, admission process, subjects taught, teaching methods, linguistic medium, free education.

Background:

The Nalanda Mahavihara i.e. university was established during the Gupta dynasty in 5th century CE. It was located in ancient kingdom on Magadha, which is present day Bihar state of India. Nalanda was situated between the capital places of Rajgriha and Patliputra (Kaur, 2017). Nalanda Mahavihara was a renowned center for learning, particularly Buddhist education (Singh, 2022).

Campus and Infrastructure

According to Kaur 2017 Nalanda Mahavihara's campus spread approximately 10 km in length and 5 km in breath, making it one of the biggest educational centers at that time. The campus was self-sufficient and very well governed and organized (Kumar, 2011). This huge campus was well equipped with a library, lecture halls, classrooms, meditation halls, dormitories, and residential quarters for students and teachers respectively. Tamrakar and Jadon, 2022 mentions that the dormitories during that time held capacity to accommodate 10,000 students and 2,000 teachers with diverse backgrounds and from different regions, this shows that living spaces were designed for a diverse population and was very inclusive in nature. Mahavihara's campus was designed such that there were separate designated areas for living, studying, worship and academic functions (Kaur, 2011). Nalanda University had a vast nine-floor library named Dharmaganj (Mart of Religion). The Mahavihara library was also known as "Chakla of Religion." The library had a huge collection of manuscripts, books and rear text, which comprised approximately 9 million manuscripts (Kaur, 2017). King Balaputradeva of Jawa and Sumatra patronized the manuscripts of this library, which means that during that time, this ancient university was funded by international agencies (Kumar, 2011).

This inclusive infrastructure welcomed scholars and students from various parts of the world, which resulted in a higher degree of knowledge exchange, making Nalanda Mahavihara's academic community and culture more diverse and vibrant.

Admission

According to Hiuen-Tsang, the admission process at Nalanda Mahavihara was solely merit based and there was no preferential treatment to any student. Admission was through an entrance test, which was considered very difficult as only 20% of the candidates who attempted the exam were successful. This reflects the emphasis on academic excellence and intellectual capability as criteria for admission in Mahavihara. The candidates seeking admission were tested by experts in religion and posed difficult problems to test the competencies of the perspective students. (Tamrakar& Jadon 2022; Tilak, 2019). Students came from various parts of the world like Mongolia, China, Korea and Tibet. Mahavihara admitted young Brahmacharis and Manavakas. Direct admission was available for internal regular students of the secondary education department without an entrance test. (Battacharrya& Guha, 2017). According to Singh, 2022 entrance exam

was of three tier. The admission process included interview which was conducted by Dwarapandit or gatekeepers who were experts in religious controversies and discussions, the interview also served as a medium to check loyalty and devotion of entrants (Kumar, 2011). The students who showed depth of knowledge in old and modern learning were admitted in Mahavihara. This shows that students were admitted only on the basis of merit and not on the basis of their caste, religion, region, nationality, or economic class, which itself reflects inclusivity in the admission process.

Subjects

Nalanda Mahavihara offered a wide range of subjects and disciplines for study. Mahavihara offered approximately 68 subjects covering wide spectrum of knowledge domains, the list of subjects is as follows theory and practice, atomic theory, astronomy, arithmetic, mathematics, philosophy, politics, law, Buddhism, Vedas, Puranas, accounts, commerce, agriculture, languages, magic, music, painting, dance, poetry, smithy, performing arts, astrology, futurology, Ayurveda, surgery, carpentry, cattle breeding, crafts, documentation, warfare, military arts, archery, hunting, elephant lore, the occult, mystical sciences, tantricism, Sankhya philosophy, agriculture and yoga among others (Tilak, 2019; Tamrakar & Jadon 2022).

Nalanda Mahavihara included broad spectrum of subjects from nearly all branches of Buddhism having Hinayana and Mahayana Buddhist scriptures, but it also included Indian philosophical systems like Chikitsavidya or Medicine, Astronomy, Geography, Mathematics, Hetuvidya or logic, Sabdavidya or Grammar, and other arts and science subjects of the day. (Battacharya and Guha, 2017). Sharma, n.d. mentioned that subjects to address environmental issues at local, regional, national and international level like Historical Studies, Environmental Ecology, Human Ecology, Hydrology/Hydro Ecology, Disaster Management, Agriculture and Food, Climate Change, Energy Studies, Asian Interconnections, Archaeology, Art History, Economic History, and Global History.

Inclusion of subjects from Buddhist and Indian Hindu philosophy along with wide range of subjects reflects diversity and inclusivity in subjects offered by Mahavihara.

Teaching Methods

Battacharya & Guha, 2017 says that lecture method was the most preferred teaching method in Mahavihara but apart from that various methods like tutorial, discussion and debate, preaching and seminars, defending Buddhist system, encyclopedia composition, observatory and practical learning, scriptural study, individual study and research, interactive learning environment, democratic decision making and multicultural exchange system were also used (Kumar, 2011; Kaur, 2017).

The tutorial session helps students deepen their understanding of the subject. Discussion and debate method helped students to test their intellectual capacity, challenge ideas and foster critical thinking. Preaching and seminars kept teacher and taught engaged throughout the year by listening to prudent scholars from different cities in the form of seminars followed by question answer sessions. (Kumar,

2011)

To defend the Buddhist system against other belief systems with a comprehensive understanding of Buddhist teaching and other principle systems and to engage students in critically understanding different philosophical perspectives, a teaching method was employed. Tattvasangraha i.e. encyclopedia composition was a method of repositing knowledge of subjects related to both Buddhism and non-Buddhism. This method helped teacher and taught to keep themselves updated of the latest developments in various fields. The observatory method was used in subjects like astronomy and practical learning as used in subjects like medicine, agriculture, performing arts, vocational studies, and defense studies etc. (Kumar, 2011)

For deeper understanding of complex concepts Acharyas, i.e. teacher employed oral lecture methods. The scriptural study method helped students to delve into scriptures to understand philosophical, religious, and literary works. Mahavihara encouraged students to investigate topics of their interest through individual study and research methods by conducting scholarly inquiries. There was an interactive learning environment in which students actively participated by exchanging ideas, sharing knowledge, and collaborating with teachers. (Kaur, 2017). The teaching methods used in Mahavihara catered needs of audio, visual and kinesthetic learners. Teaching methods were not only teacher centered but also student centric; therefore, we can say that teaching methods were not only diverse but also inclusive from students' perspective.

Teaching languages

In Nalanda Mahavihara Pali was the main medium of instruction. (Battacharyya & Guha, 2017). Kumar 2011 & Singh 2022 opined that the Sanskrit language was also essential for teaching and communication. Along with Sanskrit and Pali different regional languages of India were also used in Nalanda Mahavihara. Scholars and students from various parts of the globe brought text and scriptures in Chinese, Tibetan and other languages from central and Southeast Asia. This shows that Mahavihara was linguistically inclusive not only at the regional level but also at the global level.

Fees Structure

Nalanda Mahavihara provided free education to its students along with four requisites i.e. food, clothing, bedding and medicine. The central idea of this system was to immerse students wholeheartedly in their studies without any financial burden. (Battacharyya and Guha, 2017) Mahavihara believed in the principle that knowledge should not be exchanged in monetary terms. Nalanda was dependent on royal patronage and community support through voluntary donations for maintenance and sustenance. Students were required to beg for alms to practice simple and humble living for self-sustenance during their educational tenure. Free education for students accommodated students from poor financial backgrounds, which meant that being rich or poor did not matter for being a student in this Mahavihara. Therefore, one can say that Nalanda Mahavihara

was also economically inclusive.

Functioning of Mahavihara

Nalanda Mahavihara employed autonomy in their operations, and there was no external intervention from kings or other societal elements in the functioning of the institution. Singh, 2022, says that the entire university was managed by the chief acharya or vice chancellor, who overlooked the academic and administrative aspects of Mahavihara. The responsibility of education, curriculum work, and the financial system was the responsibility of the advisory committee. The heads and senior scholars were responsible for making decisions in Mahavihara. It had a decentralized and democratic internal governance system. (Tamrakar& Jadon, 2022; Tilak, 2019) The heads, council of teachers, and academic bodies were responsible for making decisions in Mahavihara. This decentralized governance structure not only fostered efficient, smooth and autonomous functioning of the institution but also provided an opportunity to be part of decision making and governance from various strata like heads, senior scholars, council of teachers and other academic bodies, reflecting inclusivity in the functioning of Mahavihara.

Conclusion

One can conclude that the infrastructure, admission process, subjects taught, teaching methods used, linguistic medium, free education and governance of Nalanda Mahavihara were inclusive in nature, promoting diversity and inclusivity in academics during those times.

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Harmony in Education: Exploring Anger Management Strategies for Teachers Using the Indian Knowledge System.

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Abstract:

In today's educational landscape, the teachers are considered the soul of any academic Institution, wherein there is a need to cultivate a powerful teaching workforce by assisting them to be psychologically and emotionally empowered. Teachers encounter many of the issues prevailing like frustrations, stress, anxiety, depression and anger. These issues are very common, but to deal with these issues is not so common. Many fail to manage these issues. Anger Management techniques resolve these issues effectively and to induce a positive learning environment. It contributes to fostering student success. The Indian Knowledge system is a treasure to find pearls to strategize the effective anger management techniques. The bridge of harmony in education could be possible by using the ancient philosophical traditions and its practical approach towards giving wisdom on the path.

Through this paper we would examine the philosophical foundations of the Indian Knowledge system. It would help us to regulate the emotional balance system in the educational context. The ethical behaviour can be tested through the parameters of Karma, Dharma and Ahimsa. These can be implemented by the teacher in the classroom environment for their own interpersonal relationship with their colleagues and students. This paper would investigate the application-based techniques such as Yoga, meditation, breathwork and mindfulness exercises. These tasks would definitely contribute towards maintaining emotional resilience, self-control and empathy. Use of these strategies can bring the classroom into a dynamic classroom with students' engagement and overall wellbeing. Cultural diversity is also considered while addressing these strategies. Professional development with the teacher's well-being is the main motto of this paper using the Indian Knowledge System (IKS). Emotional work life balance and harmony in Education is the sole purpose of this paper.

Key Words: Anger Management, Indian Knowledge (Bhagavad Gita) System, (IKS), Education, Teacher, strategies, work-life balance

Introduction:

“Anger is a momentary madness, so control your passion or it will control you.”

-Horace

In order to create harmony in education, the teacher educator needs to create a harmonious environment where he can foster the students to feel valued, supported and highly motivated to learn. The future of the country lies in the hands trained by such a miserable community of teachers. The term ‘miserable’ sounds odd but the huge expectations of NEP by 2030, under the pretext of inclusive education subsides the mental, emotional and psychological strata of the teacher motivator and mentor. When we look back, we come across the ancient knowledge system which can be the best remedy without side effects for handling the coping mechanism against anger and anger issues. The ancient Indian knowledge system offers us the wings of philosophy, spiritualism, Indian classical dance, drama, basic sciences mathematics, astronomy and astrology.

Objectives:

- To identify the common triggers of anger and frustrations faced by teachers in educational institutions
- To explore the current anger coping strategies used by teachers for anger management.
- To examine the principles and concepts which the teachers are familiar with in the IKS related to emotional regulation.
- To understand the effectiveness of the teachings of the Indian Knowledge system adopted by the teachers into the Anger Management Strategies.
- To assess the perceptions of the Indian Knowledge system compared to other approaches.

Literature Review:

Human behaviour, emotions and the nature of reality is well described with the illustrations in Vedas, Upanishads and Bhagavad Gita which are a treasure to us. Mishra, N., & Aithal, P. S. (2023). They focus on self-awareness, mindfulness, compassion and non-violence, which are nothing but effective anger management strategies.

The holistic development through environment creation by the teacher for the student is possible using these Anger Management Strategies, which are rooted in ancient wisdom. We create learning environments that nurture the holistic development of both educators and students. Hence, it's an attempt to bring the ancient wisdom through the strategies based on the Indian Knowledge System to promote harmony in Education.

The effective role of Indian Knowledge system in Anger Management:

The Indian knowledge system offers the Anger Management strategies through

1. Philosophical
2. Spiritual
3. Sciences
4. Classical Drama
5. Dances

Philosophical ways to deal anger

Mindfulness and meditation: One can observe their inner thought and emotions by practicing mindfulness and meditation.

Cultivating Virtues: Indian Philosophers like Mahatma Gandhi emphasized on the virtues like truth (Satya) non-violence (Ahimsa), self-discipline (Tapas) as the ways to overcome anger. Swami Vivekanand spoke about compassion to overcome anger. It can contribute towards a healthy community with humanity. (Mahesh, K. M., Aithal, P. S., & Sharma, K. R. S. (2023). Swami Chinmayananda speaks about self-control, purity of heart and service to others as the ways to deal with anger. Ramanuja Acharya speaks about devotion (Bhakti) and compassion (Karuna) are the tools to develop living relations with others as well as with the divine.

Spiritual ways to deal Anger:**Bhagavad Gita:**

Lord Krishna advises Arjuna to manage his emotions like anger through techniques like a) control of mind: Have control over your courses through sensory organs and Identify mind (Mann) which causes these emotions. He has related the past memorized with the present situations and the very happening of the present without anybody's control.

Detachment:

By detecting self and detaching fruits of one's action can reduce the intensity of anger that arises from unmet expectation.

Equanimity:

Krishna asked Arjuna to maintain equanimity Samatvam Yoga Vichyite in all the situation, whether it is pleasant or unpleasant. To have a balance mind helps in managing anger and other emotional disturbances.

Self-control-

Bhagavad Gita emphasizes the practice self-control (Indriyani Pramathini) Which means these senses are so mad that it may go out of my mind control i.e., to overcome anger. (Bhagavad Gita 3:40)

Upanishads:

This emphasis on Self-reflection (Atma Vichara), the introspection of self-thoughts, words and feelings can gain insight into their triggers and it helps.

Practicing virtues –

The virtue like patience, compassion and forgiveness can help in managing anger and promoting inner peace.

Self-Knowledge-

This can help us to realize the influence of anger and to convert into positive emotions.

Ancient Indian Sciences:

Ancient Indian Sciences, such as Ayurveda and Yoga offer holistic approaches to managing anger by addressing the interconnectedness of mind, body and spirit. (Khalsa, S. B. (2007)

Ayurveda:

It suggests us to have a balanced diet. The elements of Tamas, Tatva can be reduced by consuming and cooking foods and herbs. It helps in anger management. **“When diet is wrong, medicine is of no use; When diet is correct medicine is of no need”** Ayurvedic proverb.

Yoga:

It teaches various techniques for managing anger, including asana (physical postures) examples, Uttanasana- standing forward Bend and Bal asana'- child's pose, can release tensions and reduce anger. (Roy, B., Chatterjee, S., & Mondal, S. Yoga and Vyayam)

Jyotish: It suggests that planetary influences can affect emotion tendencies, including anger. It offers remedies to mitigate negative planetary effects.

Dance, Drama and Music:

Anger Management can be effectively done through these ancient forums of dance, drama and music.

Therapeutic Expressions:

One can express his/her emotions, anger in a safe and constructive manner through various dance, drama and music. (Nizami, S. H., & Tikka, S. K. (2014)

Emotional Regulations:

While performing dance, drama or music one needs to concentrate or focus on it. It automatically regulates anger or emotions.

Cultural and spiritual connections:

Many traditional dance forms and musical compositions narrate the epic stories like Ramayana and Mahabharata, which imparts moral lessons and insights of human emotions including anger. It helps to manage anger in accordance with ethical principles.

Scope Of The Study:

When we are emerging in the world of science and technology through education, we must eradicate the hindrances caused during the pedagogy of education. The factors which mostly affect the goal of education is the educational psychology of parameters of anger and its management. In the speedy world where the responses and reflexes are of grave concern, which triggers the mental and emotional balances of the person. Teachers being the main elements of imparting education often develop anger due various attacks of the society and today's unethical approaches towards them. Through these treasures of Indian knowledge system, we get ways and strategies, to develop a solid coping mechanism, to deal with anger and the anger management strategies which can be followed by the teachers for effective teaching learning pedagogy of education. Hence the Indian Knowledge system and its pivotal role for handling anger and to design anger management strategies is covered through this research paper.

Data Collection:

This paper considers both primary and secondary data

1. Primary data was collected by using a structured questionnaire. Survey method was adopted in which the data was collected on educators' experiences with anger management, including their perceptions of anger triggers, coping strategies and the effectiveness of the current support system.
2. Secondary data is collected from books, internet articles and newspapers.

Sample size

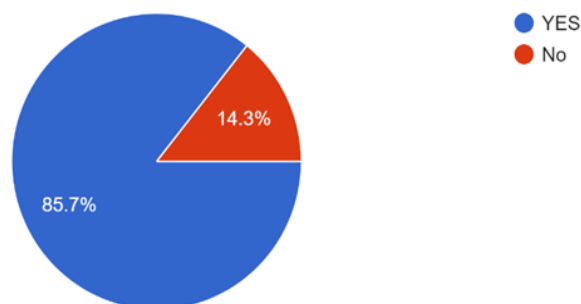
The sample size for present study was seventy-one teachers.

The random sampling technique was adopted for the purpose of research.

Data Analysis

Have you ever experienced anger or frustration while teaching?

70 responses

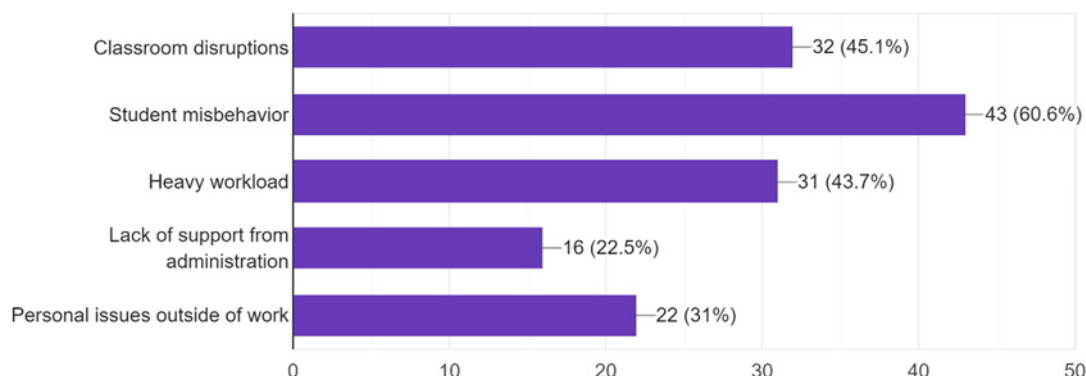


85.7% teachers have experienced anger or frustration while teaching. Whereas 14.3%

teachers said that they do not have Anger issues.

What are some common triggers of anger or frustration for you as an educator?

71 responses



45.1% teachers have classroom disruption as a cause of Anger triggers or frustrations.

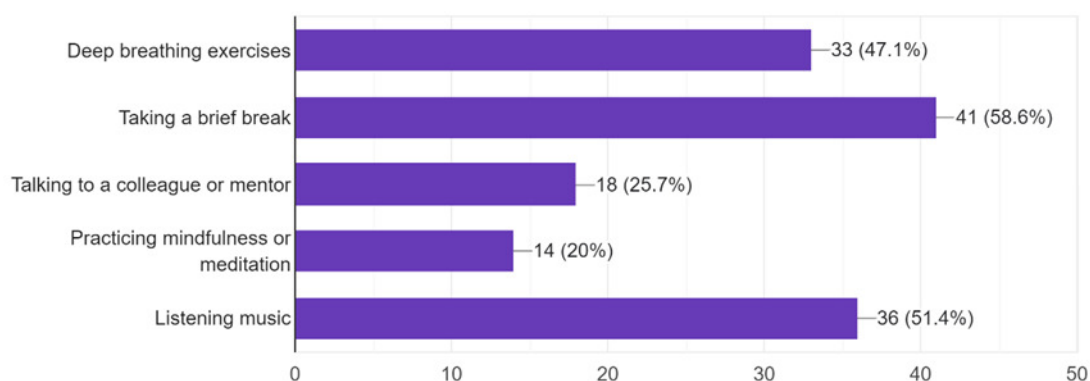
60.6% teachers anger and frustration erupts due to student's misbehaviour.

43.7% teachers are frustrated and suffering with anger issues due to heavy workload.

22.5% teachers are helpless to deal with anger issues because of the lack of support from the Administration.

How do you typically cope with anger or frustration in the moment?

70 responses



47.1% teachers use deep breathing exercises as one of the strategies to cope with Anger.

58.6% teachers take brief breaks from work to resolve Anger related issues.

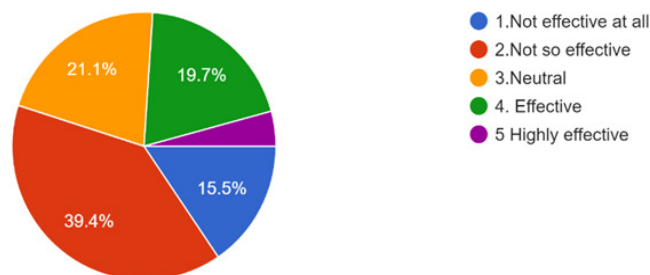
25.7% teachers like to talk to the college mentors to deal with Anger issues.

20% teachers practice mindfulness and Yoga to deal with Anger.

Whereas 51.4% of people listen to Music.

On a scale of 1 to 5, how effective do you find your current anger management strategies?

71 responses



15.5% teachers find the current Anger management strategies not effective at all.

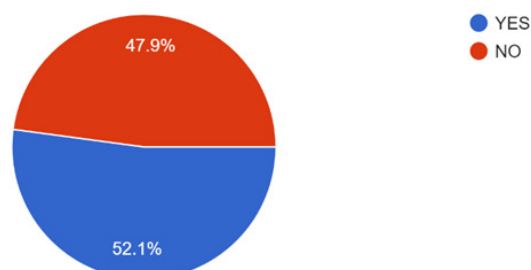
39.4% teachers said that it is not so effective.

21.1% teachers were neutral in giving their opinion.

19.7% teachers find these Anger management strategies effective.

Are there any anger management programs or resources available to you through your educational institution?

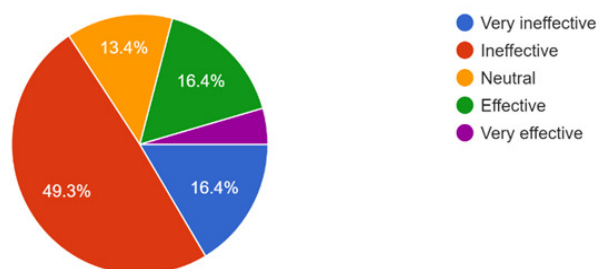
71 responses



52.1 % teachers said that they have anger management resources at their educational Institutes. Whereas 47.9% Teachers do not have such privilege at their Institutions.

If yes, please rate the effectiveness of these programs or resources in supporting your anger management needs:

67 responses



16.4% teachers said that the Anger management programme conducted at their workplace is very ineffective.

49.3% teachers condemn these programmes by calling them ineffective.

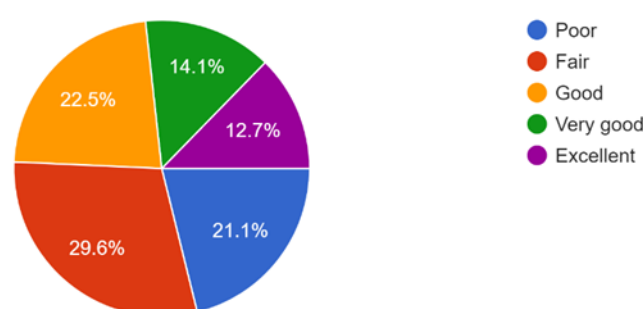
13.4% of teachers do not register their opinions.

16.4% teachers find it effective.

4.5% teachers find it very effective.

How would you rate your overall well-being as an educator?

71 responses



21.1% teachers find their overall wellbeing as poor because of not being able to manage their Anger.

29.6% teachers find it fair to manage their Anger.

22.5% teachers think that they are good at managing their Anger.

13.1% teachers are very good at managing Anger.

Whereas 12.7% teachers are excellent at managing Anger.

Interpretations:

85.9 % teachers have experienced anger or frustration while teaching in the class. Students' misbehaviour was the more prime factor of triggers of anger and frustration. Most of the teachers take brief breaks to deal with these situations. Most of the teachers find the present anger management strategies used by them is not effective. Some of the Institutions are trying to provide anger management programmes. More number of anger management programmes are needed to be conducted for self-control, mindfulness, and the creation of a healthy atmosphere.

Suggestions:

Teacher needs to be clearer with his/her communications. Teachers need more collaborative planning amongst themselves, they need to shade some time for their own professional development. They must have the temperament to create an inclusive atmosphere in the class, they need to have different learning strategies to handle the diversity in the class. They must be able to manage the work life balance, they must manage their workload, schedules and

find opportunities for their self-care. Above all they must avoid conflicts between the co-teachers, students, parents and management.

All these things are possible only when the teacher reduces or handles their anger. They are able to have anger reduction mechanisms or anger strategies. The Teacher educator can implement these Anger management strategies to create a harmonious environment that promotes learning, growth and success for all the stakeholders in the education process.

20 Point Strategies of Anger Management using the Indian Knowledge System

1. To deal with Emotional Anger, Teachers need to cultivate mindfulness techniques such as, deep breathing, meditation and mindfulness. To increase awareness of their thoughts and emotions one must check over their body reflexes during Anger situations (body sensations).
2. Teachers can recognise their triggers and patterns of Anger by self-awareness or introspection of their thoughts and talks.
3. Teachers must cultivate a calm state of their mind without emotional imbalances while facing the challenges situations (Equanimity). They must practice detachment and non-attachment in their personal lives in their personal and professional upgrades and promotions.
4. Teachers should have Work-Life Balance which can be done by prioritizing their daily routine which will bring effectiveness in Time Management.
5. Teachers must have empathy towards each one of them who is around them with their own struggle and challenges.
6. Teachers must foster gratitude towards others by encouraging the work of others and their achievement of success. They must practice more polite words of gratitude.
7. Teachers need to have a large volume of acceptance in their mind. They must let go of the resistance and loosen their need for control.
8. The most important part of Anger management for teachers is to take self-care by doing regular exercises, healthy eating, having adequate rest and must cultivate hobbies that can bring joy to their life and relaxation.
9. Teachers must daily perform Yoga for promoting self-well-being and releasing tensions.
10. Teachers must practice Pranayama regularly, which is a breathing exercise. It will calm their nervous system and reduce Anger.
11. In their personal life they must access to their Ancient Indian Text like- Bhagavad Gita, Upanishads or Yoga Sutras etc. Whatever and whichever help them to manage their emotions and to achieve inner peace.
12. Teachers can seek guidance from the Anger management mentor of Educator to have

mastery over their emotions.

13. Teachers must practice Non-violence (Ahimsa) in their thoughts, words, actions which will lead to kindness, compassion and harmony in education.
14. Teachers must not expect the desired outcomes with high expectations in their personal and professional life.
15. Teachers must be ready to give SEWA or self-service in order to focus on their personal concerns into the well-being of others.
16. Teachers must always give the lesson of forgiveness and togetherness as they forgive themselves.
17. Teachers must stop overthinking; they must spend some time with their friends and relatives to shed their worries
18. Teachers must find time to get connected with nature in order to rejuvenate their spirit and peace to self. They can walk in a garden or in a park or even sit simply outdoors.
19. The most difficult part for a teacher is to practice silence (Mauna) after a loud day. The teacher can connect to their inner selves and rejuvenate peace and introspect themselves.
20. Teachers must work on interpersonal and intra-personal relations by becoming more social. They can do this by celebrating all kinds of festivals with more zeal and enthusiasm.

Conclusion:

In the meticulous study of anger, frustration, stress and triggering factors, the wellbeing of teachers is at grave situations. Many teachers, those who are considered as a nation builder and the stakeholders of the education system, find themselves at the attacks of workload, improper work life balance, lack of coping mechanisms, with misbehaving of students leads to anger issues causing mental and physical disruptions of the teacher's life.

In the course of deliverance of effective education to the youthful country of India, we have forgotten our roots deepen into the soil of the busy work life of the teacher and lost harmony in education. This paper wildly introspective the dying and grave concerns of the teachers and the need of the hour to resolve these conflicts of anger, frustration, stress and heavy workload.

Through this treasure the Indian Knowledge system evoked the precise 20 points programme of anger management strategies devised after considering the basic practices of the Indian Knowledge system such as Philosophical, spiritual, sciences, dance, drama, music and aspects of it. This paper will surely bring the insights of teachers' anger issues to coping up mechanisms and achieve the 2030 goals of NEP-2020.

With a buffeting outcome of wholesome development of the youths with complete mindfulness, self-sufficient, self-dependant and the guiding light for others in the path of progress and development as a Vishwaguru.

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इयत्ता आठवीच्या विद्यार्थ्यांच्या बोधात्मक अध्ययन कौशल्य स्तराच्या सद्यस्थितीचा शोध - एक अभ्यास.

शितल काळूराम तुपे

विद्यार्थी संशोधक,

एस.एन. डी. टी. कॉलेज ऑफ एज्युकेशन, पुणे

डॉ. नलिनी पाटील

प्राचार्य,

एस.एन. डी. टी. कॉलेज ऑफ एज्युकेशन, पुणे

वैदिक काळी विद्यार्थी गुरुच्या सानिध्यात राहून ज्ञान प्राप्त करत असे. विद्यार्थ्याने स्वतःहून ज्ञान प्राप्त करावे यासाठी प्रत्यक्ष अनुभव, चर्चा, वादविवाद, तर्क, अनुमान काढणे व प्रश्नोत्तरे या ज्ञान प्राप्तीच्या पद्धतींचा वापर केला जात असे. गुरुने सांगितलेल्या मौखिक ज्ञानाचे श्रवण करून त्यावर विचार करणे, मनन करणे आणि शेवटी विचारातून प्राप्त ज्ञानाचा सतत ध्यास घेणे म्हणजे निदिध्यास अशी ज्ञान निर्मितीची प्रक्रिया चाले. शैक्षणिक धोरण 2020 मध्ये देखील विद्यार्थ्यांच्या बोधात्मक अध्ययन कौशल्यांना किंवा उच्च विचार कौशल्यांना महत्त्व दिले असून विद्यार्थ्यांच्या मानसिक विचार प्रक्रियांचा म्हणजे विश्लेषण, मूल्यमापन, निर्मिती अथवा सर्जनशीलता, चिकित्सक विचार, समस्या विमोचन इत्यादी बोधात्मक अध्ययन कौशल्यांचा विकास शिक्षणाने व्हावे अशी अपेक्षा व्यक्त केली आहे.

परंतु प्रचलित शिक्षण प्रक्रियेमध्ये विद्यार्थी हा केवळ पोपटपंची करणारा झाला असून त्याचे विचार कौशल्य पूर्णपणे क्षीण झाले आहे असे अनेक संशोधनांमधून दिसून आले आहे. प्रस्तुत संशोधनात संशोधिकेने इयत्ता आठवीच्या मराठी विषयासंदर्भात बोधात्मक अध्ययन कौशल्य स्तराच्या सद्यस्थितीचा शोध घेण्यासाठी पुणे जिल्ह्यातील सात तालुक्यांमधील एकूण 28 शाळांमधील 846 विद्यार्थ्यांचे सुगम यादृच्छिक नमुना निवड पद्धतीने संशोधक रचित पंचबिंदू श्रेणी द्वारे ऑनलाइन पद्धतीने सर्वेक्षण करून माहितीचे विश्लेषण व अर्थनिर्वचन केले आहे.

प्रस्तावना:

उपनिषद तत्त्वज्ञान आणि आदर्श वादामध्ये आत्मसाक्षात्कार हे शिक्षणाचे महत्त्वाचे उद्दिष्ट सांगितले गेले आहे आणि 'आत्मसाक्षात्कार' होण्यासाठी शरीर व चारित्र्य या दोन्हीच्या विकासाला महत्त्व दिले गेले आहे. सुदृढ शरीर आणि नीती मूल्यांनी युक्त असलेल्या मनुष्यास आत्मसाक्षात्कार या उच्च ध्येयाची प्राप्ती होत असते. 'Education' या मूळ लॅटिन शब्दाचा अर्थ 'To draw out from within' म्हणजेच, 'व्यक्तीच्या अंतरंगातील सुप्त स्थितीत असलेल्या ज्ञानाला बाहेर काढणे.' असा होतो. प्लेटो या तत्त्वज्ञाने देखील शिक्षणाची व्याख्या वरील प्रमाणेच केली आहे. 'व्यक्तीच्या अंगी असणाऱ्या सुप्त शक्तींचा परिपूर्ण विकास करणे म्हणजे शिक्षण होय.'

वरील प्रमाणे आत्मसाक्षात्कार हे उद्दिष्ट वा व्यक्तीच्या अंगी असणाऱ्या सुप्त शक्तींचा परिपूर्ण विकास हे उद्दिष्ट साध्य करण्यासाठी व्यक्तीमध्ये आवश्यक गुण निर्माण व्हावेत यासाठी गुरुजन प्रयत्न करीत असत. या आत्मसाक्षात्काराचा अनुभव घेण्यासाठी विद्यार्थ्याने गुरुच्या मार्गदर्शनाखाली स्वतः प्रयत्न करणे, अनुभव घेणे महत्त्वाचे होते, यावरून असे म्हणतात येईल की, ज्ञान घेण्यासाठी अथवा ज्ञानाची रचना करण्यासाठी विद्यार्थ्याला जे सक्षम बनविते ते शिक्षण होय.

परंतु सध्या मात्र काहीसे वेगळे चित्र दिसत आहे. क्रमिक पाठ्यपुस्तकात समाविष्ट असलेली माहिती म्हणजेच ज्ञान असा दृष्टिकोन ठेवून शिक्षक पुस्तकातील माहिती विद्यार्थ्यांना देतात. विद्यार्थी निष्क्रिय पणे ती माहिती स्मरणात ठेवतात व मूल्यमापनाच्या वेळी स्मरणात ठेवलेली माहिती उत्तरादाखल लिहून येतात. केवळ विद्यार्थ्याला विशिष्ट घटकाची माहिती करून देणे या स्मरण पातळीवरील बोधात्मक कौशल्याच्या वरील उच्च बोधात्मक अध्ययन कौशल्यांचा अध्यापन प्रक्रिये वेळी विचारही होत नाही.

ज्ञान मिळविण्यासाठी विद्यार्थ्याने प्रथम माहिती मिळविणे, मिळविलेल्या माहितीचा अर्थ लावणे, त्यातील साम्य भेद ओळखणे, माहितीचा उपयोग व्यवहारात करता येणे, तसेच उच्च विचार प्रक्रियांचा वापर करून समस्या सोडविता येणे, नवीन सृजनात्मक विचार करता येणे इत्यादी बौद्धिक प्रक्रियांचा समावेश होतो. परंतु सध्याच्या काळात केवळ 'ज्ञान' म्हणजे माहिती मिळविणे इतकाच विचार केला जातो त्यामुळे अशा पद्धतीने शिक्षण घेतलेला विद्यार्थी स्वतः योग्य-अयोग्य याचा विचार करू शकत नाही, स्वतःचे निर्णय स्वतः घेऊ शकत नाही. पहिली ते दहावी केवळ माहिती स्मरणात ठेवत असलेला विद्यार्थी वयाच्या 10 सोळाव्या वर्षी देखील पुढे काय करायचे हा विचार करू शकत नाही, तसेच स्वतःच्या बाबतीत निर्णय देखील घेऊ शकत नाही.

हे सगळे बदलायचे असेल तर मुळातच शिक्षकाला बदलावे लागेल. 'ज्ञान मिळविणे' म्हणजे काय, ज्ञानी विद्यार्थी निर्माण करायचा असेल तर अध्यापनामध्ये, स्वतःच्या भूमिकांमध्ये कोणते बदल करावे लागतील याचा विचार करावा लागेल.

- **समस्या विधान** - इयत्ता आठवीच्या विद्यार्थ्यांच्या बोधात्मक अध्ययन कौशल्य स्तराच्या सद्यस्थितीचा शोध घेणे.
- **संशोधन समस्येचे स्पष्टीकरण**- सध्याची शिक्षण पद्धती ही विद्यार्थी केंद्रित असल्यामुळे विद्यार्थ्यांनी ज्ञानग्रहण करण्यासाठी, ज्ञानरचनेसाठी जास्तीत जास्त बोधात्मक अध्ययन कौशल्यांचा वापर करणे आवश्यक झाले आहे. प्रस्तुत संशोधन हे पी.एच.डी. स्तरावरील आहे. संशोधकाला उच्च प्राथमिक स्तरावरील इयत्ता आठवीच्या विद्यार्थ्यांची बोधात्मक अध्ययन कौशल्यांची सद्यस्थिती जाणून घेणे ही या संशोधनाची प्रारंभिक पायरी आहे.
- **संशोधन समस्येतील महत्त्वाच्या शब्दांच्या कार्यात्मक व्याख्या-**
कार्यात्मक व्याख्या-

अ. बोधात्मक अध्ययन कौशल्य -

बुद्धीशी संबंधित विचार कौशल्य म्हणजे बोधात्मक कौशल्य होय. ही कौशल्य दोन प्रकारची असतात.

1. निम्नस्तरीय बोधात्मक अध्ययन कौशल्य - ज्ञान, आकलन, उपयोजन.
2. उच्चस्तरीय बोधात्मक अध्ययन कौशल्य- विश्लेषण, संश्लेषण, मूल्यमापन, तर्क, सृजनशीलता.

ब. इयत्ता आठवीचे विद्यार्थी -

1986 च्या राष्ट्रीय शैक्षणिक धोरणामध्ये उल्लेख केलेल्या 10+ 2+3 या आकृतीबंधामधील

उच्च प्राथमिक स्तरावरील शेवटच्या इयत्तेत शिकणारे मराठी माध्यमाचे विद्यार्थी.

• **संशोधन प्रश्न:**

इयत्ता आठवीच्या विद्यार्थ्यांची मराठी विषयासंदर्भात बोधात्मक अध्ययन कौशल्याची सद्यस्थिती काय आहे?

• **संशोधनाचे उद्दिष्ट-**

इयत्ता आठवीच्या मराठी विषयासंदर्भातील बोधात्मक अध्ययन कौशल्य स्तराच्या सद्यस्थितीचा शोध घेणे.

संशोधनाची व्याप्ती व मर्यादा -

व्याप्ती-

प्रस्तुत संशोधन हे महाराष्ट्र राज्यातील सर्व मराठी माध्यमाच्या शाळांमधील इयत्ता आठवीच्या विद्यार्थ्यांसाठी व्याप्त आहे.

मर्यादा-

प्रस्तुत संशोधन हे पुणे जिल्ह्यातील मराठी माध्यमाच्या शाळांमधील इयत्ता आठवीच्या विद्यार्थ्यां पुरते मर्यादित आहे.

संबंधित साहित्य व संशोधनाचा आढावा -

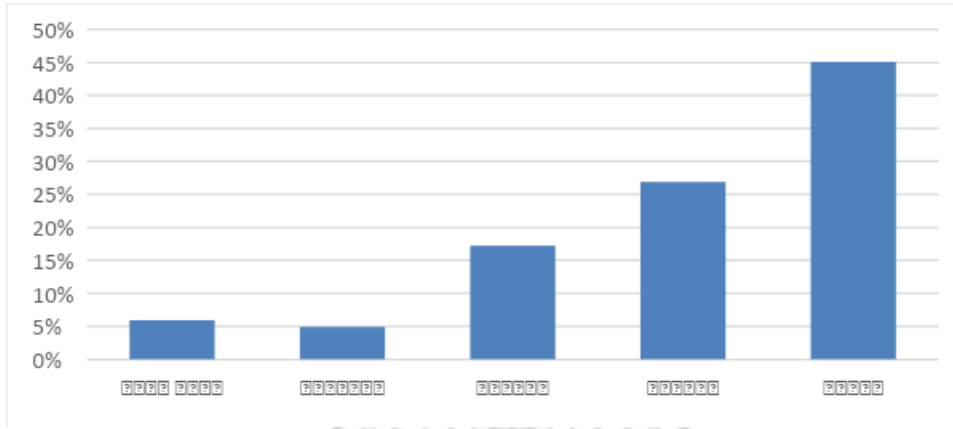
प्रस्तुत संशोधनासाठी खालील प्रमाणे आढावे घेण्यात आले .

संबंधित संशोधन साहित्याच्या आढाव्यासाठी दहा संदर्भ ग्रंथांचा वापर केला. त्याचप्रमाणे पीएच. डी. स्तरावरील 10 संशोधन प्रबंध, एम. फिल. स्तरावरील 2 संशोधन प्रबंध व एम.एड. स्तरावरील 2 संशोधन अहवालांचा तसेच पुस्तके, नियतकालिके व शासनाच्या विविध अहवालांचा आढावा घेण्यात आला आहे.

संशोधन पद्धती -

सदर संशोधनासाठी संशोधकाने सर्वेक्षण पद्धतीचा वापर केला आहे . त्यासाठी गुगल फॉर्म या सॉफ्टवेअरची मदत घेऊन स्वनिर्मित पंचबिंदू श्रेणी तयार करण्यात आली.

- **संशोधन नमुना -** प्रस्तुत संशोधनासाठी पुणे जिल्ह्यांमधील समाविष्ट 14 ालुक्यांमधील 7 ालुक्यांची सुगम ादृच्छिक पद्धतीच्या लॉटरी पंत्राने निवड करून स्तर निहाळ व माध्यम निहाळ एकूण 28 शाळांची लॉटरी पंत्राने निवड करून समाविष्ट सर्व 846 विद्यार्थ्यांची नमुना म्हणून निवड करण्यात आली .
- **संशोधनाची साधने-** सदर संशोधनामध्ये सर्वेक्षण पद्धतीचा अवलंब केला असून स्वनिर्मित पंचबिंदू श्रेणीचा वापर केला आहे .सदर पंचबिंदू श्रेणीची वैधता व विश्वसनीयता तपासली आहे.. प्रतिसादकांना ऑनलाइन पद्धतीने आपली मते नोंदविण्यास प्रवृत्त केले होते .
- **संख्याशास्त्रीय विश्लेषण -** गुगल फॉर्म द्वारे जी ऑनलाईन शेकडेवारी उपलब्ध झाली त्यानुसार प्राप्त सामग्रीचे विश्लेषण करण्यात आले. विश्लेषण व अर्थनिर्वचन करण्यासाठी शेकडेवारी या संख्याशास्त्रीय साधनांचा वापर करण्यात आला .
- **उद्दिष्टानुसार निष्कर्ष -** इयत्ता आठवीच्या मराठी विषयासंदर्भातील ज्ञान, आकलन, उपयोजन, विश्लेषण, मूल्यमापन, निर्मिती व चिकित्सक विचार या बोधात्मक अध्ययन कौशल्यांची सद्यस्थिती शोधणे.

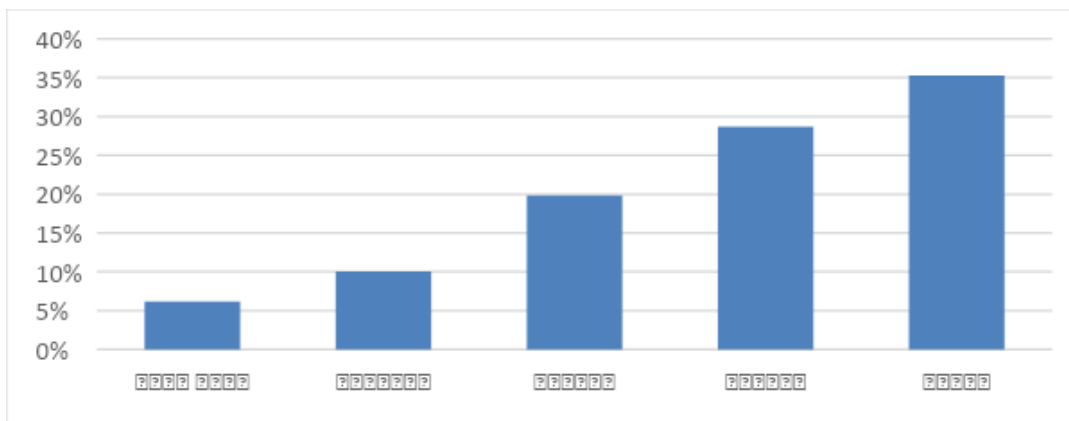
आ.क्र. 1.1 इयत्ता आठवीच्या विद्यार्थ्यांचे 'ज्ञान' या बोधात्मक अध्ययन कौशल्या बाबतचे विश्लेषण –**आ.क्र. 1.1**

आ.क्र. 1.1 इयत्ता आठवीच्या विद्यार्थ्यांचे 'ज्ञान' या बोधात्मक अध्ययन कौशल्यबाबतची सद्यस्थिती.

निरीक्षण व अर्थनिर्वाचन :

आ.क्र. 1.1 वरून असे दिसून येते की , पुणे जिल्ह्यातील सात तालुक्यांमध्ये मराठी माध्यमाच्या शिक्षण देणाऱ्या 28 शाळांमध्ये इयत्ता आठवीच्या 846 विद्यार्थ्यांच्या बोधात्मक अध्ययन कौशल्य चाचणी द्वारे 'ज्ञान' या बोधात्मक अध्ययन कौशल्याचा शोध घेतला असता 'ज्ञान ' या बोधात्मक अध्ययन कौशल्याची पातळी 0-1 म्हणजे नगण्य असणारे सरासरी विद्यार्थी 50 (6%) , 1.1 -2 पातळी म्हणजे निम्न असणारे सरासरी विद्यार्थी 42 (5%) , पातळी 2.1-3 म्हणजे मध्यम असणारे सरासरी विद्यार्थी 146 (17%) ,पातळी 3.1 - 4 म्हणजे उच्च असणारे सरासरी विद्यार्थी 228 (27%) तर पातळी 4.1- 5 म्हणजे अतिउच्च असणारे सरासरी विद्यार्थी 381 (45%) इतके आहेत .

आ.क्र. 1.1 वरून असे स्पष्ट होते की, इयत्ता आठवीच्या विद्यार्थ्यांमध्ये 'ज्ञान' या बोधात्मक अध्ययन कौशल्याची पातळी अतिउच्च आहे.

आ.क्र. 1.2 इयत्ता आठवीच्या विद्यार्थ्यांचे 'आकलन' या बोधात्मक अध्ययन कौशल्या बाबतचे विश्लेषण**आ.क्र. 1.2**

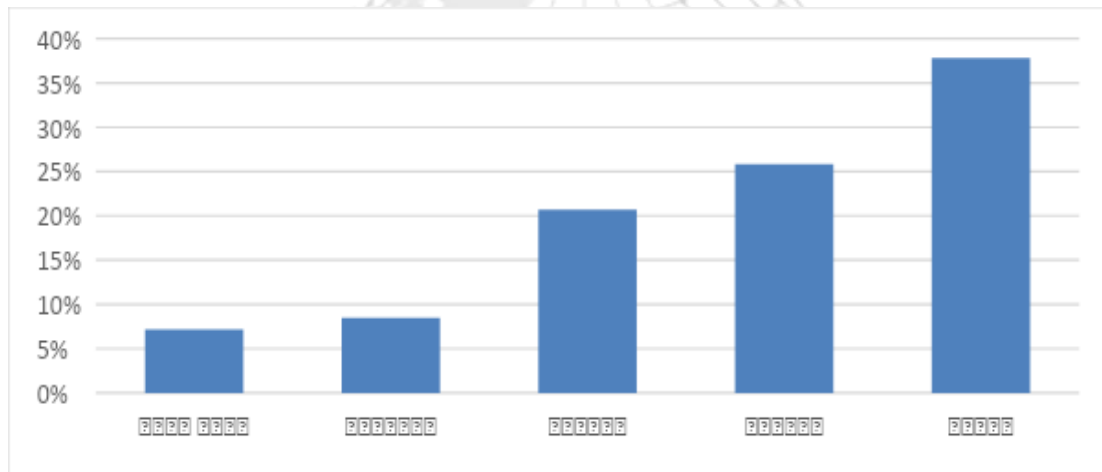
आ.क्र. 1.2 इयत्ता आठवीच्या विद्यार्थ्यांचे 'आकलन' या बोधात्मक अध्ययन कौशल्यबाबतची सद्यस्थिती

निरीक्षण व अर्थनिर्वाचन सारणी :

आ.क्र. 1.2 वरून असे दिसून येते की , 'आकलन' या बोधात्मक अध्ययन कौशल्याची पातळी 0-1 म्हणजे नगण्य असणारे सरासरी विद्यार्थी 52 (6%) , 1 .1 - 2 पातळी म्हणजे निम्न असणारे सरासरी विद्यार्थी 85 (10%) , पातळी 2.1- 3 म्हणजे मध्यम असणारे सरासरी विद्यार्थी 168 (20%) ,पातळी 3.1 - 4 म्हणजे उच्च असणारे सरासरी विद्यार्थी 243 (29%) तर पातळी 4.1- 5 म्हणजे अतिउच्च असणारे सरासरी विद्यार्थी 298 (35%) इतके आहेत .

आ.क्र. 1.2 वरून असे स्पष्ट होते की, इयत्ता आठवीच्या विद्यार्थ्यांमध्ये 'आकलन' या बोधात्मक अध्ययन कौशल्याची पातळी अतिउच्च आहे.

आ.क्र. 1.3 इयत्ता आठवीच्या विद्यार्थ्यांचे 'उपयोजन' या बोधात्मक अध्ययन कौशल्या बाबतचे विश्लेषण.



आ.क्र. 1.3

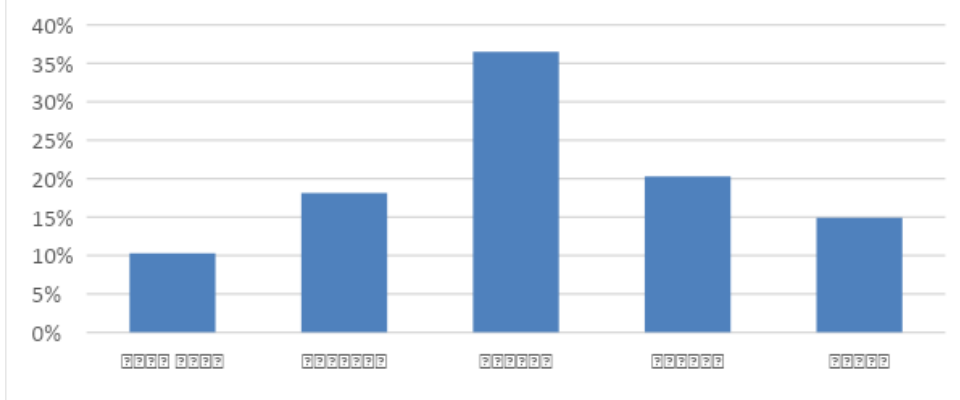
आ.क्र. 1.3 इयत्ता आठवीच्या विद्यार्थ्यांचे 'उपयोजन' या बोधात्मक अध्ययन कौशल्यबाबतची सद्यस्थिती.

निरीक्षण व अर्थनिर्वाचन :

आ.क्र. 1.3 वरून असे दिसून येते की , 'उपयोजन' या बोधात्मक अध्ययन कौशल्याची पातळी 0-1 म्हणजे नगण्य असणारे सरासरी विद्यार्थी 61 (7%) , 1 .1 - 2 पातळी म्हणजे निम्न असणारे सरासरी विद्यार्थी 72 (8%) , पातळी 2.1-3 म्हणजे मध्यम असणारे सरासरी विद्यार्थी 175 (21%) ,पातळी 3.1 - 4 म्हणजे उच्च असणारे सरासरी विद्यार्थी 219 (26%) तर पातळी 4.1- 5 म्हणजे अतिउच्च असणारे सरासरी विद्यार्थी 320 (38%) इतके आहेत .

आ.क्र. 1.3 वरून असे स्पष्ट होते की, इयत्ता आठवीच्या विद्यार्थ्यांमध्ये 'उपयोजन' या बोधात्मक अध्ययन कौशल्याची पातळी अतिउच्च आहे.

आ.क्र. 1.4 इयत्ता आठवीच्या विद्यार्थ्यांचे 'विश्लेषण' या बोधात्मक अध्ययन कौशल्या बाबतचे विश्लेषण.



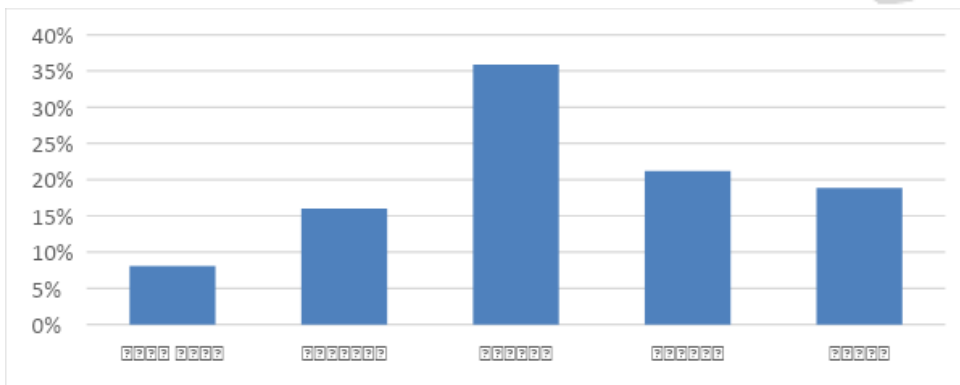
आ.क्र. 1.4

आ.क्र. 1.4 इयत्ता आठवीच्या विद्यार्थ्यांचे 'विश्लेषण' या बोधात्मक अध्ययन कौशल्यबाबतची सद्यस्थिती निरीक्षण व अर्थनिर्वाचन सारणी :

आ.क्र. 1.4 वरून असे दिसून येते की , 'विश्लेषण' या बोधात्मक अध्ययन कौशल्याची पातळी 0-1 म्हणजे नगण्य असणारे सरासरी विद्यार्थी 87 (10%) , 1.1 - 2 पातळी म्हणजे निम्न असणारे सरासरी विद्यार्थी 153 (18%), पातळी 2.1-3 म्हणजे मध्यम असणारे सरासरी विद्यार्थी 309 (36%) ,पातळी 3.1 - 4 म्हणजे उच्च असणारे सरासरी विद्यार्थी 172 (20%) तर पातळी 4.1- 5 म्हणजे अतिउच्च असणारे सरासरी विद्यार्थी 126 (15%) इतके आहेत .

आ.क्र. 1.4 वरून असे स्पष्ट होते की, इयत्ता आठवीच्या विद्यार्थ्यांमध्ये 'विश्लेषण' या बोधात्मक अध्ययन कौशल्याची पातळी मध्यम आहे.

आ.क्र. 1.5 इयत्ता आठवीच्या विद्यार्थ्यांचे 'मूल्यमापन' या बोधात्मक अध्ययन कौशल्या बाबतचे विश्लेषण



आ.क्र. 1.5

आ.क्र. 1.5 इयत्ता आठवीच्या विद्यार्थ्यांचे 'मूल्यमापन' या बोधात्मक अध्ययन कौशल्यबाबतची सद्यस्थिती

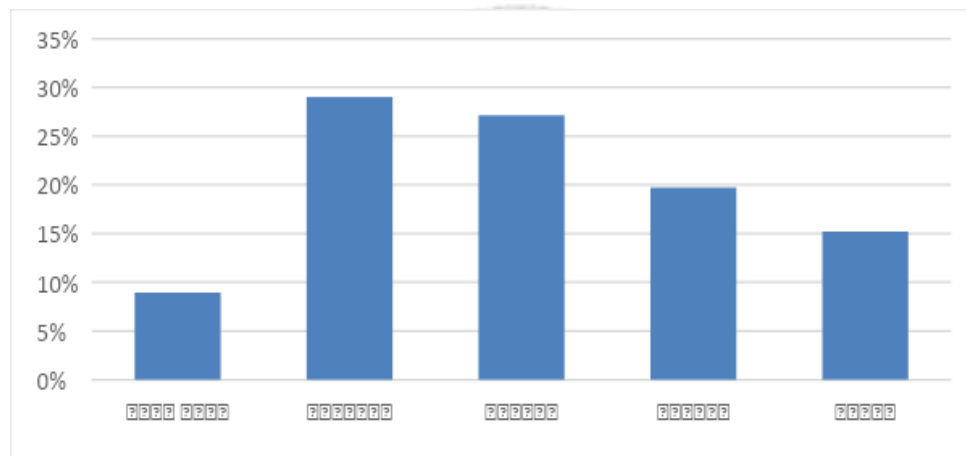
निरीक्षण व अर्थनिर्वाचन :

आ.क्र. 1.5 वरून असे दिसून येते की , 'मूल्यमापन' या बोधात्मक अध्ययन कौशल्याची पातळी 0-1

म्हणजे नगण्य असणारे सरासरी विद्यार्थी 69 (8%) , 1 .1 - 2 पातळी म्हणजे निम्न असणारे सरासरी विद्यार्थी 135 (16%) , पातळी 2.1-3 म्हणजे मध्यम असणारे सरासरी विद्यार्थी 304 (36%) ,पातळी 3.1 - 4 म्हणजे उच्च असणारे सरासरी विद्यार्थी 179 (21%) तर पातळी 4.1- 5 म्हणजे अतिउच्च असणारे सरासरी विद्यार्थी 160 (19%) इतके आहेत .

आ.क्र. 1.5 वरून असे स्पष्ट होते की, इयत्ता आठवीच्या विद्यार्थ्यांमध्ये 'मूल्यमापन' या बोधात्मक अध्ययन कौशल्याची पातळी मध्यम आहे.

आ.क्र. 1.6 इयत्ता आठवीच्या विद्यार्थ्यांचे 'निर्मिती' या बोधात्मक अध्ययन कौशल्या बाबतचे विश्लेषण.



आ.क्र. 1.6

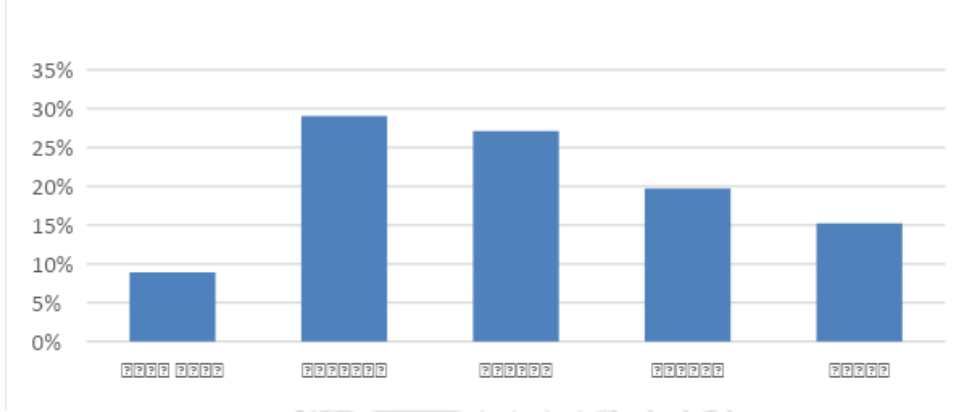
आ.क्र. 1.6 इयत्ता आठवीच्या विद्यार्थ्यांचे 'निर्मिती' या बोधात्मक अध्ययन कौशल्यबाबतची सद्यस्थिती

निरीक्षण व अर्थनिर्वाचन :

आ.क्र. 1.6 वरून असे दिसून येते की , 'निर्मिती' या बोधात्मक अध्ययन कौशल्याची पातळी 0-1 म्हणजे नगण्य असणारे सरासरी विद्यार्थी 76 (9%) , 1 .1 - 2 पातळी म्हणजे निम्न असणारे सरासरी विद्यार्थी 246 (29%), पातळी 2.1-3 म्हणजे मध्यम असणारे सरासरी विद्यार्थी 230 (27%) ,पातळी 3.1 - 4 म्हणजे उच्च असणारे सरासरी विद्यार्थी 167 (20%) तर पातळी 4.1- 5 म्हणजे अतिउच्च असणारे सरासरी विद्यार्थी 129 (15%) इतके आहेत .

आ.क्र. 1.6 वरून असे स्पष्ट होते की, इयत्ता आठवीच्या विद्यार्थ्यांमध्ये 'निर्मिती' या बोधात्मक अध्ययन कौशल्याची पातळी निम्न आहे.

आ.क्र. 1.7 इयत्ता आठवीच्या विद्यार्थ्यांचे 'चिकित्सक विचार' या बोधात्मक अध्ययन कौशल्या बाबतचे विश्लेषण



आ.क्र. 1.7

आ.क्र. 1.7 इयत्ता आठवीच्या विद्यार्थ्यांचे 'चिकित्सक विचार' या बोधात्मक अध्ययन कौशल्यबाबतची सद्यस्थिती

निरीक्षण व अर्थनिर्वाचन :

आ.क्र. 1.7 वरून असे दिसून येते की , 'चिकित्सक विचार' या बोधात्मक अध्ययन कौशल्याची पातळी 0-1 म्हणजे नगण्य असणारे सरासरी विद्यार्थी 68 (8%) , 1.1 - 2 पातळी म्हणजे निम्न असणारे सरासरी विद्यार्थी 255 (30%), पातळी 2.1-3 म्हणजे मध्यम असणारे सरासरी विद्यार्थी 228 (27%) ,पातळी 3.1 - 4 म्हणजे उच्च असणारे सरासरी विद्यार्थी 168 (20%) तर पातळी 4.1- 5 म्हणजे अतिउच्च असणारे सरासरी विद्यार्थी 127 (15%) इतके आहेत .

आ.क्र. 1.7 वरून असे स्पष्ट होते की, इयत्ता आठवीच्या विद्यार्थ्यांमध्ये 'चिकित्सक विचार' या बोधात्मक अध्ययन कौशल्याची पातळी निम्न आहे.

समारोप -

वरील अर्थनिर्वचनावरून असे दिसून येते की , उच्च प्राथमिक स्तरावरील इयत्ता आठवीच्या विद्यार्थ्यांच्या ज्ञान, आकलन व उपयोजन या बोधात्मक अध्ययन कौशल्यांची पातळी अतिउच्च असून विश्लेषण व मूल्यमापन या बोधात्मक अध्ययन कौशल्याची पातळी मध्यम आहे , तर निर्मिती व चिकित्सक विचार या बोधात्मक अध्ययन कौशल्याची पातळी निम्न आहे.

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Historical Perspective of Indian Knowledge System

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Abstract

Indian civilization has always attached great value to knowledge, witness its amazingly large body of intellectual texts, the world's largest collection of manuscripts, its attested tradition of texts, thinkers and schools in so many domains of knowledge. In Shrimatmadbhagvada-Gita, 4.33,37-38, Lord Krsna tells Arjuna that knowledge is the great purifier and liberator of the self. As we had noted in our Panjab University Endowment lecture,¹ India's knowledge tradition is ancient and uninterrupted like the flow of the river Ganga, from the Vedas (Upanishads) to Sri Aurobindo, knowledge or jnana has been at the center of all rational and speculative inquiry in India.

Keywords – Knowledge system, Vedas, Rational Jnana, Traditional Smriti

Introduction

The Indian Knowledge System is a rich and diverse collection of knowledge, beliefs, and practices developed over thousands of years in the Indian subcontinent. It is rooted in the ancient texts of Vedas, Upanishads, and Puranas, and has evolved through the contributions of various civilizations and cultures. In the tradition, knowledge has been constituted, stored and maintained in the framework of the oral culture. According to Bhartrhari, knowledge is constituted in our inner self. There is the antartata, constituted by the input of the senses (indriys), processed by the mind {mana} and the intellect (buddhi), and finally constituted knowledge exists as our transformed, alert self, Therefore, while both perception and inference are given primacy as epistemologies, tarka (argumentation) is also accorded an important place; the Indian mind has not relied completely on mind and senses and has accorded the central role in knowledge formation to meditation and deep reflection, Chintana and manana. Also, Shabda Pramana (verbal testimony) has always enjoyed authority with major systems of thought. Seeing with "mind's eye" is the typical epistemology of Indian thought. The Jaina thinkers, interestingly, define perception as

Atma-pratyaksa — what is present to the inner self and not as what is present to the senses. To put it in contemporary vocabulary, Indian mind has depended more on hypothetico-deductive methodology than on observational inductive methodology. Just as knowledge is by and large constituted in the mind, it is also stored in the mind, not outside the mind. This is another requirement of oral culture. This requirement, we noted earlier,⁴ has determined the structure and style of the texts. As oral texts, they are constituted to facilitate memorization as they have to be held in the mind and transmitted orally in the guru-sisya mode. So even the dictionaries, Amarakosa for example, are metricalized. Other features of speech are also employed both to help memorization and to communicate meaning — thus, for example, Panini employs pitch variation to mark the change of topic in his grammar Astadhyayi. They are highly structured, are necessarily brief and are composed in abbreviated, sutraic, mnemonic style — a highly nominalized style with the language replete with technical vocabulary.

This metalanguage, with its other complex devices of abbreviated expression, such as anuvrtti, reading parts of earlier statements into subsequent statements, adds to the density of the texts. The oral texts, we said, are highly structured. The Indian mind is acutely taxonomic and the layered structure of the texts reflects the structured analysis of the domain of knowledge. Overt organizers such as adhikarana and prakarana signify the inter-relationships and the order of treatment of subjects. Such embedding may extend up to four layers. This enables the identification of statements through a four-point reference to their location in the over-all text down to the particular sutra and karika as is the case with the Rigveda, Mahabharata and Arthashastra, for example.

One notices then that though the texts are oral, they have a high degree of complexity and stability. The complexity of organization and the density of statements are the causes of the need to abbreviate them so that they can be held in the mind along with other texts of all the contending schools in that domain of knowledge. A different philosophy of knowledge and of cognitive processes informs this mode of orality. Knowledge in this mode is simultaneous, not sequential/linear — as is the case in the scriptal traditions. It is important to note that oral culture is an alternative culture of knowledge and not a default culture, one that is there because writing systems are unknown as is often alleged. Nobody could say this of India where there is evidence of the existence of a script in the ancient Mohenjo-Daro civilization and where Anoka's inscriptions (fourth century BC) come in three scripts — Brahmi, Kharosthi and proto- Dravid. In the oral culture of knowledge, the scholar has a library in his mind and the speed of information processing is very high, much higher than in the scriptal mode where the information is first transferred to the mind through senses. In this case the mind-memory is loaded with large bodies of data — remember that the mind has a much larger capacity to store data than the hard disk of a modern computer — and there is direct visualization of data with the eyes shut This explains the puzzling

requirement in the scholastic tradition for a scholar to be the master of fourteen disciplines, puzzling because how can one master so many disciplines? It is not possible in the time consuming, linear mode of written texts that can be of inordinate length. But it certainly appears possible in the mode in which the texts are highly abbreviated and are capable of being stored in the mind. Orality thus as a specific mode of knowledge formation and knowledge storage determines both the structure and the use of the texts.

Great value has always been attached to knowledge and tremendous intellectual effort has gone into maintaining the texts of knowledge. As we have noted elsewhere even though the Hindu culture is not bibliolatry, it has accorded a special status to certain texts, the texts of knowledge, and made them perennial objects of study. The difference, however, is that there has been a complete freedom to interpret and come up with competing interpretations, a freedom that is not always present in other cultures. But it has not been simple, this successful maintenance of texts. Various processes have been employed in this experience of loss, recovery and renewal. Dynamic communities do not allow their systems of thought to die. As we have described elsewhere,¹⁰ oral cultures have in-built mechanisms for the recovery of texts. A culture may, therefore, employ one or any other like Recension (a critical revision) , Reduction (a re-arrangement) and Translation.

Adi Sankara talks of visuddha jnana (purified knowledge) which is isolated from senses and located in the self. He also sets up an opposition between jnana (knowledge) and karma (action) saying that action {karma} leads only to sattva-suddhi (purification of instrumentalities). Some Advaita thinkers later sought to transcend jnana-karma opposition¹⁶ and talked of totality of knowledge and action. The Jaina thought also makes a distinction between pratyaksa jnana which is knowledge present to the self and paraksa jnana which is present to the senses and the mind. The Nyaya contribution is to postulate validity as a parameter of kinds of knowledge. They distinguish between knowledge based on memory (smṛti) and knowledge based on experience (anubhava) which is then sub-classified as either yathārtha (valid) and a-yathārtha non-valid.

Knowledge is an instrument of power in this conflict model, an instrument to handle the "adversary." In the Old Testament, we have already noted, man is given dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth. . ." (Genesis, 1.26) The Western man has been granted this dominion and treated it as a matter of his right to maintain and extend this dominion. Therefore, at the Renaissance, the whole project of knowledge is to bend nature to man's purpose, his purpose being to achieve life of comfort, something that has been promised to him by his God as a birthright. This explains the rise of sciences and the retreat of Christian ontology before the advancing empirical science which rendered much of Christian dogma indefensible and led finally to the collapse of faith with drastic intellectual and spiritual consequences for the Western Christendom in the nineteenth century.

The first thing to note is the constructivist dimension of Indian thought. At one time in its

intellectual history, from 1000 BC to almost AD 600, the Indian mind, it appears, was deeply involved in empire-building, both of the terra firma and of the terra cognita. Few cultures can show such wide ranging, structured systems of ideas in almost all spheres of human life as was witnessed in India during this long phase. This system building has left behind a great stock of ideas and has deeply impacted the Indian mind and made it naturally reflective and ideational.

The Indian knowledge systems show remarkable tolerance for the other, the purva paksa, which is always represented in the tradition of disputation, Veda Parampara with great deal of truth and accuracy before it is contested. This tolerance also takes the form of respect for both the earlier and the dissenting thinkers. This also explains why the Indian thinkers, including the most original among them, all disclaim originality. Also, it is very clear that they all aim at happiness, not comfort, and enable a harmony between man and man and between man and nature.

Conclusion: -

The Indian knowledge system is deeply rooted in a reverence for nature and a deep understanding of the interconnectedness of all living beings. It promotes sustainable living practices, mindful consumption, and a harmonious relationship with the environment. Despite its immense contributions and relevance, the Indian knowledge system has faced challenges and criticism in recent times. However, there has been a revival of interest in this ancient knowledge, both within India and globally, as people recognize the value and applicability of its teachings in today's world.

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Empowering Holistic Development: Integrating Soft Skills with Indian Knowledge Systems under NEP 2020

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Abstract:

The following paper explores the synergies between soft skills development and traditional Indian knowledge systems within the framework of the National Education Policy (NEP) 2020, focusing on empowering holistic development. This topic is significant as it addresses the need to blend contemporary skills with indigenous wisdom to foster comprehensive growth among learners.

The NEP 2020, a landmark policy in India, emphasises holistic education that encompasses cognitive, social, emotional, and ethical development alongside academic achievement. Central to this approach is the integration of soft skills, like communication skills, creativity, and interpersonal abilities, into the curriculum. Furthermore, it delves into the potential of incorporating Indian knowledge systems, which encompass diverse disciplines like Ayurveda, yoga, arts, and traditional crafts, into mainstream education. This integration enriches the curriculum, instills pride in indigenous heritage, and fosters a deep understanding of sustainable living practices.

This research article examines practical strategies for implementing this integration. It advocates for interdisciplinary teaching methods combining soft skills training with lessons from Indian knowledge systems. For instance, students could develop teamwork and communication skills through collaborative projects rooted in traditional crafts or explore critical thinking by analysing ancient texts or philosophies. Moreover, referencing secondary data thematically highlights the role of educators in facilitating this integration. Teachers are encouraged to undergo professional development to incorporate these holistic approaches into their teaching practices effectively.

In conclusion, this research paper advocates for a paradigm shift in education under NEP 2020, emphasising the seamless integration of soft skills and traditional Indian knowledge systems to nurture well-rounded individuals capable of meeting the demands of the 21st-century world while honouring their cultural heritage.

Keywords: Soft skills, Indian Knowledge System (IKS), NEP 2020

Introduction

The National Education Policy (NEP) 2020 in India aims to transform the education system by moving away from rote learning towards holistic education. It focuses on multidisciplinary learning, emphasising physical, emotional, and ethical development alongside academics. To prepare students for a changing world, NEP 2020 promotes experiential learning, critical thinking, and creativity (Edke, 2022). It reduces reliance on board exams, encourages continuous evaluation and skills (communication, teamwork, problem-solving) into education and incorporates Indian knowledge systems (traditional, local, indigenous) to preserve cultural heritage and provide diverse perspectives. This integration aims to foster comprehensive development, prepare students for global challenges while rooted in their culture, and promote inclusive and sustainable education in India.

The objectives include understanding how soft skills align with traditional Indian knowledge systems and how this integration can contribute to holistic development among learners. The scope of the research encompasses analysing the potential impact of incorporating soft skills into education based on Indian cultural and philosophical foundations, as outlined in the NEP 2020 guidelines. This study provides insights into the practical implementation and implications of such integration within India's contemporary educational landscape.

Soft Skills in Education

Soft skills are a collection of character traits and social skills necessary for success in today's workforce and educational environments. These skills go beyond technical knowledge and include communication, teamwork, problem-solving, adaptability, creativity, and emotional intelligence. Soft skills are essential in today's fast-paced workplace as they help people prepare for the challenges of the working world.(Alex, 2012) They enable effective collaboration, leadership, and navigating complex situations. The National Education Policy (NEP) 2020 of India emphasises cultivating specific soft skills to foster holistic development among learners. NEP 2020 underscores the importance of communication skills for effective expression and interaction, teamwork for collaboration and collective problem-solving, critical thinking and creativity for innovation and adaptability, and ethical and emotional capabilities for personal and social well-being. These highlighted soft skills are integral to developing well-rounded individuals who can thrive academically and professionally in diverse and rapidly evolving settings. NEP 2020 aims to enhance learners' overall capabilities by integrating these skills into educational curricula, preparing them for success in a competitive and interconnected world.

Indian Knowledge Systems (IKS)

Indian Knowledge Systems (IKS) encompass a rich tapestry of traditional knowledge and practices that have evolved over millennia. This includes Ayurveda, the ancient system of holistic

medicine focusing on the balance between body, mind, and spirit; yoga, a discipline for physical, mental, and spiritual well-being; diverse arts and crafts like classical dance, sculpture, and traditional handicrafts; and profound philosophies such as Vedanta and Jainism, exploring deep questions about existence and consciousness (Lazar et al., 2019). These systems have deep cultural and historical significance, serving as foundational pillars of Indian civilisation. They reflect India's holistic worldview and interconnectedness of various aspects of life (Gandhi, n.d.). Today, the relevance of IKS in contemporary education lies in their multidimensional approach, fostering a more comprehensive understanding of human health, well-being, creativity, and spirituality. Integrating IKS into education can enrich modern disciplines with ancient wisdom, promoting sustainable and harmonious living in our rapidly changing world (Chatterjee et al., 2022).

Synergies between Soft Skills and IKS

The potential connections between soft skills development and Indian knowledge systems (IKS) are intriguing and rich in possibilities. IKS encompasses diverse traditional knowledge, practices, and philosophies deeply rooted in Indian culture, often emphasizing holistic and interpersonal approaches to learning and living. The acquisition of these skills can be greatly enhanced by integrating IKS into soft skills development, particularly through communication via storytelling and creativity via arts. In Indian knowledge systems, storytelling is a powerful means of communication, fostering empathy, emotional intelligence, and effective expression—key elements of strong interpersonal skills (Swargiary, 2024). Similarly, arts in IKS, such as dance, music, and visual arts, promote creativity, innovation, and problem-solving abilities, crucial components of soft skills. Integrating these elements into modern soft skills training can offer a culturally resonant and effective approach, bridging traditional wisdom with contemporary learning methodologies, ultimately enriching individuals with a holistic skill set necessary for success in today's interconnected world (Singh, 2011).

Strategies for Integration

Integrating soft skills with Indigenous Knowledge Systems (IKS) in curriculum design requires thoughtful methodologies that bridge cultural wisdom with contemporary educational needs. One practical approach is to embed interpersonal skills like communication and collaboration within IKS-based subjects, where students learn from indigenous narratives, traditions, and community-based practices. This can foster empathy, respect, and understanding of diverse perspectives. Additionally, interdisciplinary teaching methods can merge soft skills training with IKS by encouraging students to explore connections between traditional knowledge and subjects like environmental science, social justice, or arts. For instance, storytelling in IKS can enhance narrative skills and deepen cultural awareness. Successful integration initiatives often involve community partnerships, such as co-designing curricula with Indigenous elders or

incorporating experiential learning through fieldwork. One compelling case study is the inclusion of IKS in health education, where soft skills like empathy and cultural competence are integrated with indigenous healing practices, promoting holistic wellness and cross-cultural understanding among learners (OpenAI, 2022).

Educator's Role and Professional Development

Educators are crucial in implementing integrated approaches by incorporating soft skills and Indigenous Knowledge Systems (IKS) into their teaching practices. They serve as facilitators who can blend academic subjects with essential life skills and cultural perspectives. Advocating for comprehensive educator training and ongoing professional development is essential to achieve this effectively. Such programs should emphasise strategies for seamlessly integrating soft skills (communication, critical thinking, and teamwork) and IKS into curriculum design and classroom instruction. Through targeted training, educators can enhance their ability to nurture well-rounded, academically proficient learners and equipped with the interpersonal and cultural competencies needed for success in diverse environments (Kumar & Wiseman, 2021).

Challenges and Solutions

Integrating soft skills with the Indian Knowledge system poses several challenges that need careful consideration. First, careful restructuring is needed to modify the current curriculum to include traditional topics like maths and physics alongside soft skills like communication, critical thinking, and creativity. This integration may face resistance due to the entrenched nature of the current syllabus and assessment systems. Secondly, teacher readiness is crucial. Many educators may require training and support to effectively teach and assess these soft skills within the Indian educational framework. Educators must be provided with the necessary pedagogical tools and resources to incorporate these abilities into their teaching methods easily. To address these challenges, several solutions and recommendations can be implemented. Firstly, there should be a collaboration between curriculum developers, educational experts, and policymakers to redesign the curriculum with a focus on holistic development (OpenAI, 2022). This can involve introducing interdisciplinary modules that foster soft skills while teaching core subjects. Secondly, teacher training programs should be revamped to include modules incorporating soft skills into teaching methodologies. Continuous professional development and workshops can empower teachers to implement these new strategies effectively. Additionally, peer learning and mentorship programs can provide ongoing support and guidance. Lastly, leveraging technology can be instrumental in this integration. Educational technology platforms can offer interactive tools and resources that facilitate experiential learning of soft skills. Digital assessment methods can also be developed to evaluate students' progress in these areas alongside academic achievements (Jadhav, 2020). In conclusion, successfully integrating soft skills with the Indian Knowledge system requires a multi-

faceted approach involving curriculum redesign, teacher empowerment, and technological innovation. By addressing these challenges systematically and collaboratively, the education system can better prepare students for the complexities of the modern world.

Implications and Future Directions

Integrating soft skills (communication, teamwork, adaptability) with Indigenous Knowledge Systems (IKS) can significantly enhance student outcomes and holistic development. By incorporating IKS, which encompasses traditional knowledge, values, and practices of indigenous communities, alongside soft skills training, students gain a deeper understanding of diverse perspectives, cultural sensitivity, and community engagement. This integration fosters empathy, respect, and appreciation for different worldviews, enriching students' personal growth and social competencies. Future research could explore the effectiveness of specific soft skills development within the context of IKS, identifying key mechanisms and best practices. Policy implications should prioritize culturally responsive education frameworks that value indigenous perspectives, embedding IKS and soft skills training into curricula to promote inclusive and holistic student development (Swargiary & Roy, 2023). This approach supports educational equity and contributes to building more culturally competent and socially aware citizens.

Additional Considerations

In exploring additional considerations for integrating soft skills into the Indian Knowledge system, it is crucial to examine empirical evidence and case studies from educational institutions leading this charge. For instance, institutions like the Indian Institute of Management Bangalore (IIMB) have incorporated comprehensive soft skills training within their curriculum. Dr Anurag Behar, CEO of Azim Premji Foundation, emphasises that "soft skills are essential for holistic education, fostering critical thinking and empathy." Such viewpoints underline the importance of integrating skills like communication, teamwork, and adaptability alongside academic subjects. Visual frameworks, like competency matrices linking soft skills to career success, can offer educators practical tools for implementation. A diagram illustrating this connection could reinforce the significance of holistic education, fostering a well-rounded workforce equipped for the challenges of the 21st century. Through these efforts, educational institutions in India are redefining success beyond academics, nurturing students' abilities to excel in a rapidly evolving global landscape (OpenAI, 2022).

Conclusion

Integrating soft skills with Indian knowledge systems is crucial to achieving holistic education, as the National Education Policy (NEP) 2020 outlines. One of the key findings supporting this integration is the recognition that traditional Indian knowledge systems emphasise the development of a well-rounded individual, encompassing not only academic prowess but also

interpersonal skills, emotional intelligence, and ethical values. Soft skills such as communication, critical thinking, empathy, and teamwork are integral to these systems, encouraging a holistic approach to education and development. By integrating soft skills with Indian knowledge systems, education can cater to the broader needs of students, preparing them for professional and personal success. This integration supports the goal of NEP 2020, which is to generate well-rounded people who can successfully navigate the challenges of the contemporary world by highlighting the significance of promoting students' total development. Holistic education, through the amalgamation of soft skills and traditional Indian knowledge, offers a comprehensive framework that not only imparts knowledge but also cultivates essential qualities essential for success and fulfilment in the 21st century. Therefore, this integration is a cornerstone of NEP 2020's objectives, aiming to transform education into a transformative experience that equips learners with the skills and values necessary for holistic development and societal contribution.

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Challenges in Implementing Indian Knowledge System for Human Well-being

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Abstract:

The implementation of the Indian Knowledge System (IKS) poses both challenges and opportunities in enhancing human well-being. This research paper examines the hurdles faced in effectively integrating traditional Indian knowledge for the betterment of society. The paper explores the complexities of preserving and adapting IKS in the context of contemporary health, social, and environmental challenges. It addresses the importance of cultural sensitivity, community engagement, and interdisciplinary collaboration in successfully implementing IKS for promoting human well-being. By analysing barriers such as limited institutional support, awareness gaps, and globalization pressures, this paper highlights the need to balance traditional wisdom with modern demands for sustainable development. Through in-depth research and case studies, this paper aims to provide insights and strategies for overcoming the challenges in implementing the Indian knowledge system to enhance human well-being and societal progress.

Key Words: Challenges, Opportunities, Human Well-Being, Indian Knowledge System, Indian Culture.

Introduction:

India is a country with a rich heritage of traditional knowledge systems that have been passed down through generations. The Indian knowledge system encompasses various disciplines such as Ayurveda, Yoga, Vedas, and traditional agricultural practices, among others. These systems are deeply rooted in Indian culture and have played a significant role in shaping the lives of its people for centuries. However, despite the potential benefits of integrating traditional knowledge systems into modern society for human well-being, there are several challenges in implementing these practices effectively.

India boasts a rich and ancient knowledge system that has contributed significantly to human well-being for centuries. However, despite its profound wisdom and relevance, implementing the Indian knowledge system poses various challenges in today's dynamic world. This article will explore the obstacles hindering the effective integration of Indian traditional knowledge for enhancing human well-being and offer insights on how to address these challenges.

Literature Review:

- (1) Dr. Rajesh Timane, Dr. Priyanka Wandhe (2024), Indian Knowledge System, The wealth of information found in the Indian knowledge system never ceases to inspire and direct innumerable people. The tenets and methods of this antiquated system can point the way toward a more mindful and balanced way of life as we head toward a world that is faster and more connected. Let's keep embracing and appreciating this rich heritage and use it to build a better, more enlightened future for ourselves and future generations.

- (2) Dr. Pavan Mandavkar (2023), Indian Knowledge System (IKS)

IKS combines ancient Indian knowledge, future aspirations, and success in education, health, environment, and societal issues, facilitating research in holistic health, psychology, neuroscience, nature, environment, and sustainable development.

- (3) Vijaya Laxmi K, Dr. Shripati Kallurava (2023), Indian Knowledge System.

India's new education policy aims to promote cultural heritage, independence, and appreciation, fostering students into "true global citizens" who can contribute to human rights, sustainable development, and global well-being by acquiring necessary skills and values.

- (4) Dr. Sandhya Tiwari (2023), Indian Knowledge System as a significant corpus of Resources useful for personal and professional development.

Emotional intelligence, or socio-emotional development, is crucial for personal and professional success in India due to its diverse social fabric. Educational initiatives aim to promote these qualities and enhance students' socio-emotional skills, fostering harmonious coexistence and cooperation. Incorporating Indian epics and the Bhagavat Gita into education can foster appreciation for diverse cultures and ancient wisdom, enhancing students' emotional resilience and social skills.

- (5) Soumitro Bnerjee (2022) Indian Knowledge System: The Central plank of the new education policy

The New Education Policy 2020 aims to introduce unscientific ideas and pseudo-science in Indian curricula, aiming to change Indian history and intellectual contributions. The policy seeks to push back Vedic India's history by 10,000 years. Science-loving individuals should protest.

- (6) Dr. Govindaiah Godavarthi (2020) Indian Knowledge System in Indian English and Literature: A Critical Analysis of National Education Policy 2020.

The India nation and its citizens both benefit from the promotion of Indian art, culture and languages. In this context, the NEP 2020 comes as guiding force to promote Indian art, culture and languages through a pan-India network of educational institution.

- (7) Dr. Senapati Nayak, Dr. Sambit Kumar Padhi (2020) Curriculum and Pedagogy in Indian

Knowledge System: A Relevance Educational Practice for Today's Educational Scenario.

The Indian Knowledge System (IKS) for Sustainable Development promotes interdisciplinary research and dissemination of Indian heritage and traditionalism. It includes tribal knowledge, indigenous education, and various fields like mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, governance, politics, and conservation. Institutional support is established through IKS Centres.

Challenges in Implementing Indian Knowledge Systems:

The challenges in implementing the Indian Knowledge System (IKS) for human well-being have garnered increasing attention in recent years. The rich and diverse heritage of Indian knowledge encompassing traditional practices in areas such as medicine, agriculture, and spirituality has much to offer in improving human well-being. However, the integration of IKS into mainstream practices faces various hurdles that need to be addressed. This literature review aims to explore the challenges associated with implementing IKS for human well-being.

1. Lack of Integration with Modern Science and Technology:

One of the primary challenges in implementing Indian knowledge systems for human well-being is the lack of integration with modern scientific and technological advancements. While traditional knowledge systems have proven efficacy in certain domains, there is a need to bridge the gap between ancient wisdom and contemporary research to validate and enhance the effectiveness of these practices.

2. Limited Awareness and Acceptance:

Another challenge is the limited awareness and acceptance of Indian knowledge systems among the general population. In a rapidly changing world dominated by Western ideologies, there is a growing disconnect between traditional practices and modern lifestyles. Educating people about the benefits of Indian knowledge systems and dispelling misconceptions is crucial for their widespread adoption.

3. Commercialization and Misappropriation:

The commercialization of traditional knowledge systems poses a significant challenge to their preservation and authenticity. With the increasing interest in alternative medicine, yoga, and spiritual practices, there is a risk of misappropriation and exploitation of these traditions for commercial gains. Protecting the integrity of Indian knowledge systems while making them accessible to a wider audience is a delicate balance that needs to be maintained.

4. Lack of Institutional Support and Recognition:

Indian knowledge systems often lack institutional support and official recognition, leading to their marginalization in mainstream education and healthcare systems. The absence of formal

accreditation and regulatory frameworks hinders the integration of traditional practices into modern healthcare and educational settings, limiting their potential impact on human well-being.

5. Socio-economic Factors:

Socio-economic factors such as poverty, lack of access to resources, and cultural biases also present challenges in implementing Indian knowledge systems for human well-being. Individuals from marginalized communities may not have the means to access traditional healing practices or may face discrimination based on their cultural beliefs, hindering their ability to benefit from these systems.

6. Resistance to Change:

Resistance to change and preconceived notions about the efficacy of Indian knowledge systems can impede their adoption and implementation. Scepticism towards traditional practices, combined with a preference for Western medicine and lifestyle choices, creates barriers to embracing indigenous knowledge for holistic well-being.

7. Sustainability and Environmental Concerns:

Many Indian knowledge systems are deeply connected to the environment and natural resources, making them vulnerable to the impact of climate change and unsustainable practices. As traditional healing herbs and plants become endangered due to overexploitation, there is a risk of losing vital components of Indian knowledge systems that contribute to human well-being.

8. Recognition and Acceptance:

One of the primary challenges is the recognition and acceptance of the Indian Knowledge System in a modern context. There may be scepticism or resistance to adopting traditional practices and beliefs.

9. Education and Awareness:

There may be a lack of awareness and understanding of the Indian Knowledge System among the general population. Educating people about the benefits and principles of this system is essential for its successful implementation.

In conclusion, the challenges in implementing the Indian Knowledge System for human well-being are multifaceted and require coordinated efforts from various stakeholders. By addressing issues such as recognition, preservation, education, policy advocacy, and research, the integration of IKS into mainstream practices can be facilitated. Embracing the rich legacy of traditional Indian knowledge and combining it with modern innovations holds the potential to enhance human well-being and create a more holistic approach to health and wellness.

Opportunities in Implementing Indian Knowledge Systems:

Implementing the Indian Knowledge System can bring numerous opportunities for enhancing human well-being in various aspects of life. The Indian Knowledge System, with its

rich history and diverse practices, offers a holistic approach to well-being that can complement and enrich existing systems. Here are some key opportunities in implementing the Indian Knowledge System for human well-being:

1. Health and Wellness:

The Indian Knowledge System, which includes Ayurveda, Yoga, and meditation, offers valuable insights into holistic health and well-being. By incorporating these practices into healthcare systems, individuals can achieve better physical and mental health outcomes. Ayurveda emphasizes personalized medicine and a focus on prevention rather than just treatment, which can lead to sustainable well-being.

2. Environmental Sustainability:

Traditional Indian knowledge systems have long emphasized the interconnectedness of all living beings and the environment. By integrating traditional ecological knowledge with modern techniques, we can create sustainable practices that not only benefit human well-being but also protect the environment for future generations. This approach can help address issues such as climate change, deforestation, and loss of biodiversity.

3. Education and Learning:

The Indian Knowledge System, with its focus on wisdom passed down through generations, can offer alternative education models that prioritize holistic development and critical thinking. By incorporating traditional Indian knowledge in educational curricula, we can nurture well-rounded individuals who are not only academically successful but also emotionally and socially aware.

4. Community and Social Well-being:

Indian knowledge systems emphasize the importance of community, relationships, and social harmony. By fostering a sense of community and belonging through traditional practices such as festivals, rituals, and social gatherings, we can strengthen social bonds and support systems that enhance overall well-being.

5. Ethics and Values:

The Indian Knowledge System is rooted in ethical principles such as ahimsa (non-violence), dharma (duty), and seva (selfless service). By incorporating these values into everyday life and decision-making processes, we can create a more compassionate and empathetic society that values the well-being of all individuals.

6. Cultural Preservation:

Implementing the Indian Knowledge System can help preserve and promote traditional arts, crafts, languages, and practices that are integral to Indian culture. By supporting traditional artisans and practitioners, we can not only preserve cultural heritage but also create economic opportunities that contribute to human well-being.

7. Innovation and Creativity:

The Indian Knowledge System encourages creativity, innovation, and out-of-the-box thinking through practices such as yoga, meditation, and creative arts. By fostering an environment that values creativity and innovation, we can empower individuals to explore new ideas and solutions that enhance human well-being.

8. Mind-Body Connection:

Indian knowledge systems recognize the interconnectedness of the mind and body and the impact of mental well-being on physical health. By promoting practices such as yoga, meditation, and mindfulness, we can cultivate mental resilience and emotional well-being, leading to overall improvements in human well-being.

In conclusion, implementing the Indian Knowledge System offers a unique opportunity to enhance human well-being in various aspects of life, including health and wellness, environmental sustainability, education, community, ethics, culture, innovation, and the mind-body connection. By drawing on the wisdom of traditional Indian knowledge systems and integrating them with modern practices, we can create a more holistic and sustainable approach to well-being that benefits individuals, communities, and the planet as a whole.

How to Overcome Challenges in Implementing Indian Knowledge Systems:

While implementing the Indian Knowledge System for human well-being offers numerous opportunities, there are also challenges that need to be addressed to ensure its successful integration into modern society. Here are some strategies to overcome challenges in implementing the Indian Knowledge System for human well-being:

1. Awareness and Education:

One of the key challenges in implementing the Indian Knowledge System is the lack of awareness and understanding among the general population. To overcome this challenge, there is a need for educational initiatives that promote the principles and practices of the Indian Knowledge System. This can be done through public awareness campaigns, school curricula, and community workshops that highlight the benefits and relevance of traditional Indian knowledge for human well-being.

2. Interdisciplinary Collaboration:

Another challenge is the interdisciplinary nature of the Indian Knowledge System, which encompasses various fields such as Ayurveda, yoga, philosophy, and spirituality. To overcome this challenge, there is a need for collaboration between different disciplines, including healthcare professionals, educators, policymakers, and community leaders. By fostering interdisciplinary collaboration, we can ensure a holistic and integrated approach to implementing the Indian Knowledge System for human well-being.

3. Research and Evidence-based Practices:

In order to gain wider acceptance and recognition, it is important to support research that validates the efficacy of traditional Indian practices in promoting human well-being. By conducting scientific studies and clinical trials, we can generate evidence-based data that demonstrates the effectiveness of practices such as Ayurveda, yoga, and meditation. This can help build trust and credibility among sceptics and mainstream institutions.

4. Integration with Modern Systems:

Integrating the Indian Knowledge System with modern healthcare, education, and social systems requires strategic planning and implementation. To overcome this challenge, there is a need for policy interventions that support the inclusion of traditional Indian practices in mainstream institutions. This can involve training programs for healthcare professionals, curriculum development in schools, and policy reforms that recognize the value of traditional knowledge systems.

5. Cultural Sensitivity and Respect:

The Indian Knowledge System is deeply rooted in culture, traditions, and values that may differ from Western paradigms. To overcome cultural barriers and ensure respect for diverse knowledge systems, it is essential to approach implementation with sensitivity and inclusivity. This can involve consulting with indigenous communities, respecting traditional practices, and acknowledging the contributions of different cultures to human well-being.

6. Accessibility and Affordability:

One of the challenges in implementing the Indian Knowledge System is ensuring that practices and resources are accessible and affordable to all individuals, regardless of socio-economic status. To overcome this challenge, there is a need for community-based initiatives, government support, and partnerships with local organizations to make traditional practices more widely available. This can involve setting up community centres, offering subsidized services, and providing training programs for practitioners in underserved areas.

7. Quality Control and Regulation:

Ensuring the quality and safety of traditional Indian practices is essential to protect the well-being of individuals. To overcome challenges related to quality control and regulation, there is a need for standardization, certification, and regulation of practitioners and products. This can involve establishing guidelines, accreditation processes, and monitoring mechanisms to uphold ethical standards and best practices in the field.

8. Sustainability and Adaptability:

The Indian Knowledge System has evolved over centuries and is deeply connected to the natural environment. To ensure its sustainability and adaptability in the modern world, it is important to strike a balance between preserving traditional wisdom and adapting to changing

times. This can involve promoting sustainable practices, integrating modern innovations with traditional knowledge, and fostering a spirit of innovation and creativity within the Indian Knowledge System.

9. Empowering Local Communities:

Empowering local communities to sustain their traditional knowledge systems through capacity building, skills training, and resource support is essential. By enabling communities to preserve and practice their indigenous wisdom, their well-being can be enhanced while preserving cultural diversity.

10. Fostering Innovation:

Encouraging innovation that blends traditional knowledge with modern technologies can open new avenues for enhancing human well-being. By fostering a culture of innovation that respects traditional practices, novel solutions can be developed to address complex societal issues.

11. Ensuring Ethical Considerations:

Respecting the intellectual property rights and ethical considerations associated with traditional knowledge is paramount. Safeguarding the rights of traditional knowledge holders and ensuring fair benefit-sharing mechanisms can promote trust and collaboration between different stakeholders.

12. Creating Incentives for Preservation:

Implementing policies and incentives that recognize and reward the preservation of traditional knowledge can motivate communities to safeguard their cultural heritage. By acknowledging the importance of traditional practices, governments can encourage their conservation and transmission to future generations.

13. Integrating Traditional Knowledge in Policy:

Incorporating traditional knowledge systems into public policies related to health, agriculture, environment, and other sectors can ensure their mainstream integration. By recognizing the relevance of traditional practices, policymakers can harness their potential for addressing contemporary challenges.

In summary, the successful implementation of the Indian Knowledge System for human well-being necessitates a multifaceted approach that includes awareness-building, research, collaboration, integration with contemporary systems, cultural sensitivity, accessibility, quality regulation, and sustainability promotion. By taking proactive measures to solve these issues, we may fully utilize the Indian Knowledge System to improve human well-being and build a more inclusive and holistic society.

Conclusion:

The challenges in implementing Indian knowledge systems for human well-being are

multifaceted and require a collaborative effort from various stakeholders to overcome. By fostering dialogue between traditional practitioners, researchers, policymakers, and the general public, it is possible to address the gaps in knowledge, awareness, and acceptance of indigenous practices. Developing supportive policies, investing in research and education, and promoting sustainable practices are essential steps towards harnessing the potential of Indian knowledge systems for the benefit of human well-being. Embracing the wisdom of the past while adapting to the needs of the present can pave the way for a more holistic and integrated approach to health and wellness in contemporary society.

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Effectiveness of Family-Implemented Screen Detox Initiatives on Adolescents' Screen Addiction: A Quasi-Experimental Study

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1.0 Abstract:-

This study delves into the effectiveness of a 21-day digital detox challenge designed to mitigate screen addiction among 9th-grade students at Mumbai Public School. Participants were tasked with abstaining from electronic devices, including mobile phones, laptops, televisions, and LCD screens, between 7 pm and 11 pm daily. Parental involvement played a crucial role, with parents overseeing implementation and offering regular feedback. Data collection centered on monitoring adherence to detox guidelines and capturing qualitative insights into behavioral changes. Results revealed significant adherence to the intervention, accompanied by notable improvements in students' sleep patterns. Parental engagement emerged as a key factor in promoting adherence and cultivating healthier screen habits. Furthermore, this study underscores the constructive impact of parental involvement in addressing prevalent issues like screen addiction among students.

1.1 Introduction:-

The concept of dopamine detox has garnered attention in recent years as a strategy to temporarily abstain from activities that trigger dopamine release, such as social media use, video gaming, recreational drug use, and other compulsive behaviors. This detox process aims to take a break from stimuli that activate the brain's reward system through dopamine response, allowing individuals to reset their neural pathways and reduce dependency on these stimuli for pleasure and satisfaction.

Implementing dopamine fasting for adolescents, with parental support, can foster healthy digital habits and mitigate the negative effects of excessive screen time. This approach, inspired by cognitive behavioral therapy and introduced by neuroscientist Dr. Christopher Sepah, involves reducing reliance on dopamine-triggering activities such as gaming, heavy internet use, and excessive social media consumption. By encouraging adolescents to take breaks from these activities and engage in alternative pursuits like outdoor activities, hobbies, and spending quality time with family, parents can help them regain control over their digital habits. Additionally,

parents can provide guidance, set boundaries, and serve as positive role models for healthy screen usage. Together, adolescents and parents can work towards creating a balanced and sustainable approach to technology use, promoting overall well-being and fostering healthier relationships with digital devices.

A "**digital detox**" refers to a deliberate and temporary period where individuals reduce or eliminate their use of electronic devices, such as smartphones, computers, and tablets, to break free from the constant stimulation and distractions of digital technology. This detox aims to reset one's relationship with technology, promote mindfulness, and encourage healthier habits by focusing on real-world interactions, hobbies, and activities.

The term "digital screen addiction" refers to the condition where individuals exhibit compulsive and excessive reliance on digital screens, leading to detrimental effects on their mental and physical well-being. It characterizes a state where the use of digital devices, such as smartphones, computers, and tablets, becomes pervasive and disruptive to daily life activities. This dependency on digital screens can result in various negative consequences, including social isolation, impaired sleep patterns, decreased productivity, and heightened levels of stress and anxiety.

Children and adolescents are increasingly immersed in electronic screen media (ESM), utilizing media for learning, communication, information retrieval, social support, self-expression, and entertainment. Screens have become an omnipresent aspect of daily life, influencing various facets such as social relationships, physical health, emotional well-being, and productivity (World Health Organization, 2014).

The neurological patterns seen in individuals struggling with screen addiction closely resemble those observed in other addictive behaviors. This addiction is characterized by six key components: salience, mood alteration, tolerance, withdrawal symptoms, conflict, and relapse. Such behaviors, meeting these criteria, are classified as addictive. Screen addiction is also viewed as a chronic, recurring brain disorder stemming from prolonged exposure to digital stimuli, leading to uncontrollable use and misuse.

Screen addiction shares similarities with other forms of addiction in its impact on the brain's reward circuitry. Dopamine, a neurotransmitter, plays a critical role in reinforcing pleasurable experiences associated with screen use, driving motivations and behaviors. Over time, individuals may experience a loss of control over their screen consumption, leading to compulsive use despite negative consequences and cravings for continued engagement. Dysfunction in neural networks, particularly in the prefrontal cortex, underlies core symptoms of addiction, including impaired response inhibition and salience attribution. Socially, screen addiction may lead to disinterest in real-world activities, social withdrawal, and mental health challenges. Dopamine release in key brain regions, such as the nucleus accumbens, contributes to addiction development

by reinforcing screen-related behaviors. Understanding the transition from initial pleasure to dependence involves studying habit formation, increasing tolerance, and withdrawal symptoms. Despite diminishing attractiveness, individuals may continue engaging in screen-related activities due to automatic and habitual behaviors. Cheung et al. (year)found that greater use of digital screens is linked to shorter sleep duration. Specifically, their study revealed that for every extra hour of tablet usage, individuals experienced a reduction in total sleep time by approximately 15.6 minutes.

Screen addiction among adolescents is a pressing concern in today's digital age, characterized by excessive and compulsive use of electronic screens, such as smartphones, computers, and tablets, leading to negative consequences in various aspects of life. Key components of screen addiction in adolescents include:

- **Salience:** This refers to the situation where online activities become overwhelmingly significant in an adolescent's life, often overshadowing other responsibilities and activities. It leads to a dominance of thoughts and behaviors focused on digital interactions, sometimes to the detriment of real-world engagements.
- **Mood Modification:** Adolescents may undergo mood changes, feeling positive and engaged while using screens, but experiencing negative emotions when offline or unable to access digital devices. This highlights the emotional dependency that can develop with excessive screen time, wherein screens become a means of regulating mood.
- **Tolerance:** This describes the increasing need for more screen time to achieve the same level of satisfaction or enjoyment. It indicates a reduced sensitivity to screen-related stimuli, necessitating prolonged exposure to maintain the desired level of engagement or pleasure.
- **Withdrawal Symptoms:** Adolescents may display signs of distress or discomfort when unable to access screens, such as irritability, anxiety, or restlessness. These symptoms underscore the addictive nature of screen use, with withdrawal effects mirroring those of substance dependence.
- **Conflict:** Screen addiction can lead to conflicts in relationships with family members, friends, or peers, as well as interfere with academic performance, extracurricular activities, and overall well-being. It highlights the detrimental impact of excessive screen time on various aspects of an adolescent's life, including social interactions and academic pursuits.
- **Deterioration:** Over time, excessive screen use can contribute to a decline in physical health, mental well-being, and social functioning, negatively impacting an adolescent's quality of life. This deterioration encompasses both physical and psychological aspects, reflecting the comprehensive toll of screen addiction on overall well-being.

1.2 Rationale of The study:-

The rationale behind this research is to tackle the rising issue of screen addiction among adolescents, recognizing its negative consequences on their overall well-being. As electronic devices and digital media become increasingly ingrained in the lives of young people, it becomes crucial to explore interventions that can address this concern effectively. Through the implementation of a 21-day digital detox challenge, this study aims to evaluate the practicality and effectiveness of such interventions in combating screen addiction among secondary school students.

1.3 Aim:- The primary objective of this study is to foster healthier study habits among secondary school students through the implementation of a 21-day digital detox challenge intervention aimed at reducing screen addiction.

1.4 Objectives:-

- To evaluate the baseline level of screen addiction among secondary school students prior to the commencement of the 21-day digital detox challenge.
- To organize and execute a structured 21-day digital detox challenge, during which students are required to abstain from using electronic devices for a specified duration.
- To monitor and assess students' adherence to the digital detox guidelines throughout the 21-day intervention period, ensuring compliance with the prescribed restrictions on electronic device usage.
- To analyze the impact of the digital detox intervention on students' study habits, sleep patterns, leisure activities, and overall well-being, thereby assessing the broader implications of the intervention on their daily lives.
- To identify any challenges or barriers encountered during the implementation of the digital detox challenge and propose recommendations for addressing them in future interventions, aiming to improve the efficacy and sustainability of similar initiatives.

1.5 Null Hypothesis:

- There will be no significant difference in screen addiction levels between male and female students participating in the 21-day digital detox challenge intervention. The digital detox intervention does not influence students' study habits or overall well-being.
- Digital Detox 21-Day Intervention:

1.6 Operational Definition:-

- Digital detox Intervention

The digital detox 21-day intervention is operationally defined as a structured program aimed at reducing screen addiction among participants, specifically secondary school students.

During the intervention, participants are required to abstain from using electronic devices, including but not limited to mobile phones, laptops, tablets, televisions, and gaming consoles, for a designated period each day spanning 21 consecutive days. The intervention period, referred to as the "golden hours," typically ranges from 7 pm to 11 pm daily. Participants are encouraged to engage in alternative activities during these hours, such as reading, exercising, socializing with family or friends, or pursuing hobbies. Parental involvement is integral to the intervention, with parents or guardians overseeing the implementation, monitoring adherence to guidelines, and providing support and encouragement to participants throughout the duration of the intervention. Data collection methods may include self-reported adherence logs, parental observations, and qualitative feedback to assess the effectiveness of the intervention in reducing screen addiction levels and promoting healthier screen habits among participants.

1.7 Methodology:-

The study employs a quasi-experimental basic time-series design to evaluate the effectiveness of the digital detox intervention, focusing specifically on the time frame between 7 pm and 11 pm. This design allows for a detailed examination of screen addiction levels and associated behaviors during the designated intervention hours. Parents play a vital role as observers in this intervention, actively overseeing and monitoring their children's adherence to the digital detox guidelines. Their observations provide valuable insights into their children's behavior and contribute to the qualitative data collected for the study. By actively engaging parents as observers, the study ensures a comprehensive understanding of the intervention's impact and fosters a supportive environment for promoting healthy screen habits among students.

1.8 Sample Selection:

To ensure a representative sample of secondary school students, the study employs a purposive sampling technique, selecting 38 students from the 9th grade of Mumbai Public School. This approach allows for the deliberate selection of participants who are most likely to provide valuable insights into the effectiveness of the digital detox intervention. By focusing on this specific grade level and school, the study aims to capture diverse perspectives while maintaining relevance to the target population.

1.9 Limitations:-

The study acknowledges certain limitations, including the possibility of confounding variables and the reliance on self-reported data to assess screen addiction levels and associated behaviors. These limitations suggest that the findings should be interpreted with caution, as factors beyond the scope of the study may influence the results. Additionally, self-reported data may be subject to biases or inaccuracies, highlighting the need for supplementary objective measures to validate the findings. Despite these limitations, the study provides valuable insights into the

effectiveness of the digital detox intervention and underscores the importance of further research to address these methodological challenges and strengthen the evidence base in this area.

1.10 Intervention Implementation:-

The intervention involves instructing students to abstain from screen usage during the "golden hours," which span from 7 pm to 11 pm. During this timeframe, students are encouraged to participate in alternative activities rather than solely relying on electronic screens for entertainment or engagement. Specifically, the selected students engage in a 21-day digital detox challenge. Throughout this duration, they are directed to refrain from using electronic devices, such as mobile phones, laptops, televisions, and other screens, for a specified period each day. Parents or guardians assume a crucial role in overseeing the implementation of the intervention and providing support to the students. They are responsible for monitoring their children's adherence to the digital detox guidelines and offering encouragement and assistance as required. By involving both students and their parents or guardians in the intervention process, the goal is to establish a supportive environment conducive to reducing screen addiction and cultivating healthier habits. This collaborative approach enhances the effectiveness of the intervention and facilitates lasting behavior change among the participants.

1.11 Analysis:-

Evaluation of Adherence to Digital Detox Guidelines: The study evaluates the degree to which students adhered to the prescribed digital detox guidelines over the 21-day intervention period. This evaluation encompasses both quantitative self-reported data and qualitative insights gathered from students and parents/guardians. Self-reported data provides quantitative measures of adherence, allowing researchers to quantify the extent to which participants followed the guidelines. Additionally, qualitative data collected from students and parents/guardians offers valuable insights into behavioral changes observed during the intervention. This qualitative analysis focuses on identifying shifts in leisure activities, sleep patterns, and overall screen usage habits among participants. By triangulating both quantitative and qualitative data, the study aims to provide a comprehensive understanding of adherence to the digital detox guidelines and its impact on participants' behaviors and habits.

1.12 Result And Interpretation:-

The data collected from the study, represented in the graph below, illustrates the adherence levels of students to the 21-day screen addiction challenge. As shown in the graph, 76.32% of students completed the challenge for up to 7 days, with fluctuations in adherence observed over the intervention period. Additionally, 23.68% of students successfully completed the challenge for more than 7 days. However, none of the students managed to complete all 21 days of the challenge

successfully. These findings underscore the varying levels of adherence among the students and the challenges associated with maintaining prolonged abstinence from screen usage. Further exploration into factors influencing adherence to screen detox challenges is warranted, along with the development of strategies to support sustained behavior change in reducing screen addiction among adolescents.

1.13 Significance of The Study:-

This study's significance extends to the broader context of integrating digital well-being practices within the framework of the National Education Policy 2020 (NEP 2020) and its emphasis on fostering a holistic approach to education. By aligning with the objectives outlined in NEP 2020, which advocates for the integration of technology in education while prioritizing students' mental and emotional well-being, this research contributes to the realization of India's educational goals.

NEP 2020 emphasizes the integration of technology in education to enhance learning outcomes and prepare students for the demands of the digital era. However, alongside technological integration, the policy also recognizes the importance of promoting digital well-being and healthy screen habits among students. By implementing a 21-day digital detox challenge and emphasizing parental involvement, this study exemplifies the practical implementation of NEP 2020's objectives in addressing screen addiction among secondary school students.

1.14 Conclusion :-

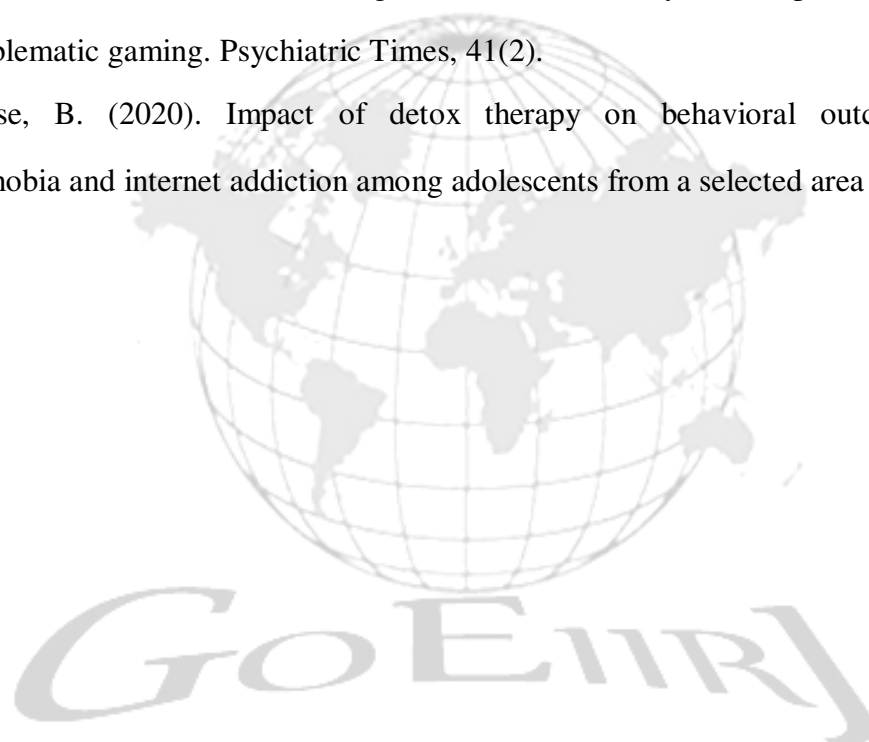
Moreover, the study's alignment with the objectives outlined in the National Education Policy 2020 (NEP 2020) underscores its relevance in the context of India's educational reforms. By promoting digital well-being and integrating Indian knowledge systems within the digital education landscape, the research contributes to the holistic development of students and the realization of NEP 2020's objectives.

Moving forward, further research is warranted to explore factors influencing adherence to screen detox challenges and to develop strategies for supporting sustained behavior change in reducing screen addiction. Additionally, ongoing efforts are needed to integrate digital well-being practices within educational policies and curricula, ensuring that students are equipped with the necessary skills to navigate the digital world responsibly while preserving and promoting India's rich cultural heritage and indigenous knowledge systems.

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Indian knowledge System and Contemporary Societal issues**Ashish Prakash Kute***Research Scholar**Rabindranath Tagore University, Bhopal.*

Abstract:

The NEP 2020 has been launched to transform the Indian Education System, using Holistic Development of the students. The framework provides a comprehensive and integrated strategy for the growth of the Education System. Indian knowledge System is one of the significant aspects of NEP 2020 curriculum. We have rich heritage of Indian knowledge which is diverse and great. The Indian knowledge covers various subjects such as Science and Technology, Literature, Philosophy, medicine, culture, Art, Ayurveda, Yoga. From the prehistoric period to the present period, the Indian knowledge System covers the Knowledge assets. The integration of IKS will help to understand the underlying Contemporary Societal issues and carry out further research on these issues.

Key Words: Indian knowledge System, Contemporary, Societal, global, Issues

Introduction:-

Indian knowledge System under NEP 2020, recognizes the rich heritage of ancient and eternal Indian knowledge and thoughts as a guiding Principles. The Indian knowledge System comprises Jnan, Vignan, and Jeevan Darshan that has evolved out of experience, Observations, Experiments and rigorous analysis.

The current status of the Indian knowledge System is also included under the vision 2047 for Bharatiya Rasayanshastra.

The NEP 2020 envisions a massive transformation in Education through an Education System rooted in Indian Ethos that contributes directly to the transforming India. That is BHARAT, sustainably into an equitable and vibrant knowledge society by providing quality education to all.

Objectives of Indian knowledge System.

- 1) Development of Research
- 2) Sustainable development
- 3) Overcome Societal issues
- 4) Holistic Development of learners.

The Role of NEP 2020:-

The Role of NEP 2020, is to transform Indian society into a Knowledge based Society. The

new National Education policy aims to transform Indian Education by 2030. The aim is to delineate the Education imparted to children according to the age of the child. The emphasis is given on the child's mother tongue. One of the major reforms in the policy is to replace the 10+2+3 school pattern with a new 5+3+3+4 Structure at school education.

The Importance of Indian knowledge System in Education:-

The Indian knowledge System is at present thoroughly studied by the Government. It embodies a holistic and culturally rooted approach to Education. Our rich heritage of Indian traditional knowledge and its rich ancient wisdom integrates traditional values with contemporary knowledge. Indian knowledge System fosters a comprehensive understanding of the world. We have to investigate and conduct critical studies to highlight the strength of the Indian knowledge System. As it has rich heritage and rich ancient culture, we have to use its fullest potential for the Holistic Development of learners. We have to create a sustainable environment, love for Nature, holistic ways of living, health conscious through Yoga. All such resources and activities lead to Quality of life for each and every citizen of India.

The Indian knowledge System is rooted in India, is a profound concept, which goes beyond mere geographical and political issues.

The teachers have to correlate a deep connection to the Indian culture, Indian tradition, Indian value system, Indian Knowledge System, Spirituality, Sense of belonging that transcend time and space. Indian knowledge System aims to support and facilitate research to solve Contemporary Societal issues. The Indian knowledge System is based on Vedic literature, the Vedas and the Upanishads.

Recommendations to overcome the contemporary societal issues:-

1. Existing Indian knowledge System may be synced to digital learning platforms.
2. Modules for orientation need to be prepared.
3. Training for teachers, orientation of educators need to be designed.
4. Special training centres need to be set up.
5. Awareness of the Indian knowledge System under NEP 2020, needs to be created.
6. The responsibility of training needs to be allotted to various agencies, which will maintain Quality of education.
7. Funds, grants need to be provided to the young, innovative research scholars.
8. Public support need to be taken for preservation of Indian knowledge System
9. Authentic Indian knowledge System to develop and confident citizenry.

Indian knowledge System will promote heritage technology by bringing technology solutions to showcase the Indian heritage to Indians and the world.

We can do the systematic transmission of knowledge from one generation to the next generation. This is the most important system of transfer of knowledge..

The contemporary use of Indian knowledge System in school Education:-

Inclusion of the Indian knowledge System as a critical element of Indian Education is reflected in the fundamental principle of rootedness and Pride in India. Its rich, diverse, ancient and modern culture and knowledge Systems and tradition is also reflected in NEP 2020.

The NEP 2020 is founded on the five guiding pillars of Access, Equity, Quality, Affordability, Accountability. It will prepare our youth to meet the various diverse national and global challenges of the present and the future.

NEP 2020 has tried to put an end to the discontinuity in the Indian knowledge System by integrating them into curriculum at all levels. Rejuvenation of the Indian knowledge System requires a multiple approach such as Capacity building at all levels. That's why, We have to preserve, strengthen and promote the rich cultural heritage, art and language of India.

Social Ethos are the guiding principles and ideals of any community. so our students have to correlate their knowledge with practical day to day experience. We human being, Nature and Holistic Development are not water tight compartments. The Syllabus frame makers, policy makers should accept and acknowledge the interdependence of these factors. Now it's time to look back to our ancient traditional values, knowledge, introspect and have to take proper measures to rectify the problems. Materialistic and extravagant approaches to living should be replaced by holistic and spiritual approaches for better living.

The Indian knowledge System could play a significant role and show the way for Sustainable development. So by documenting, preserving and managing this Indian knowledge System, better communities and developed Nation can be possible.

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Echoes of Innovation: Rekindling Indian Knowledge System in CBSE Science Curriculum for Grade Eighth

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Abstract

The Indian Knowledge System (IKS) with its rich oral tradition spanning over 5,000 years, embodies immense knowledge and power relevant for today's world. However, India's tumultuous past, marked by invasions and exploitation, threatened to obscure this heritage. Recognizing this potential, the National Education Policy (NEP) 2020 emphasizes integrating IKS into the curriculum. Little is known in the field of science and math about our ancient Vedic knowledge. This study is aimed to identify specific science content within the CBSE school curriculum where IKS could be effectively integrated.

By incorporating these elements, one would be able to achieve a two-fold objective: fostering a sense of national pride in students and equipping future generations with this valuable resource. To facilitate seamless integration of IKS knowledge, the paper also highlights the emphasis on teacher training workshops. These workshops can equip teachers with the necessary knowledge and pedagogical skills to effectively "transact the glorious information of IKS" into the curriculum. This integration can be further strengthened by adopting a transdisciplinary approach, fostering collaboration with social science, mathematics, yoga and Sanskrit disciplines. Social science perspectives can illuminate the historical and cultural contexts of IKS practices, while Sanskrit expertise can unlock the vast storehouse of knowledge contained within classical Indian texts.

Key words: Indian Knowledge System, National Education Policy (NEP) 2020, CBSE, science curriculum, transdisciplinary

Introduction

The Indian Knowledge System (IKS) encompasses a vast repository of traditional knowledge accumulated over millennia. It covers diverse fields like medicine (Ayurveda), philosophy (Vedanta), agriculture, literature, and more. This paper explores how IKS can be leveraged to promote inclusion in Indian society through curriculum transactions.

While historical interpretations sometimes downplayed IKS as mythology, there's a growing recognition of its scientific merit. Efforts are underway to rediscover and integrate IKS knowledge into contemporary fields. This renewed focus not only acknowledges India's intellectual heritage but also holds the potential to enrich scientific understanding through the exploration of diverse knowledge systems.

The NEP 2020's vision to include IKS in the modern curriculum and to make the future generations aware of our rich past cultural heritage is a great initiative. The present curriculum is focused more on the western ideas and the history of these findings in the field of science by our indigenous scholars has been long forgotten.

Certain days, such as Aryabhata Day or the celebration of modern indigenous scholars like CV Raman, are marked on the school calendar. However, while these events honor significant contributions to science and scholarship, there is often a notable absence of recognition for the wisdom and knowledge from Vedic times. Indeed, the rich heritage of ancient Vedic knowledge has, regrettably, faded into obscurity over time.

The NEP 2020 document under 4.27. "Knowledge of India" (page16) mentions "to include knowledge from ancient India and its contributions to modern India and its successes and challenges and a clear sense of India's future aspirations with regard to education, health, environment, etc."

Review of literature

On looking for research done in the field of IKS and science pedagogy and vedic literature, we find that upon delving into ancient Vedantic literature, scholars have unearthed a treasure trove of knowledge that holds the potential to revolutionize contemporary teaching practices. The timeless wisdom encapsulated within Vedic texts offers profound insights into scientific principles and phenomena, providing a holistic understanding that transcends conventional boundaries.

The proponents of IKS mean to include in the school and college curricula as components of the knowledge that existed in ancient India.

The essence of the paper "Indian Vedic Science and Mathematics Education" by Dr. Brojogopal Chand and Dr. Kaushik Das likely centers on exploring the ancient Indian Vedic texts and their relevance to contemporary science and mathematics education. The authors may emphasize how insights from these texts can enrich students' understanding of mathematics and science when integrated into modern educational curricula.

However, there is a gap in understanding how exactly these insights can be effectively incorporated into modern curricula. This gap highlights the need for further exploration into practical strategies for integrating Vedic knowledge into educational practices to enhance student learning experiences.

On the other hand, the paper "Elaborating Indigenous Knowledge in the Science Curriculum for Cultural Sustainability" by Rifiati Dina Handayani, Insih Wilujeng, and Zuhdan K Prasetyo presents theoretical viewpoints on science education and indigenous knowledge. It advocates for an inclusive and culturally responsive approach to science education, emphasizing the importance of honoring indigenous perspectives to promote cultural sustainability.

The paper argues that integrating indigenous science into the science classroom can support meaningful learning and contribute to cultural sustainability. By incorporating indigenous knowledge, students can develop a deeper understanding of sustainability concepts and learn to advocate for the preservation of nature and culture. The study serves as a valuable reference for researchers and educators interested in advancing the integration of indigenous knowledge into science education for sustainable development.

A paper on 'Teachers' conception of indigenous knowledge in science curriculum in the context of Mberengwa district, Zimbabwe' by Daimond Dziva¹, V. Mpofu¹, L. P. Kusure suggests that "teachers have a limited conception of Indigenous Knowledge and do not perceive it as useful science content. Furthermore, it emerged that the teachers' conception and perception of IK is greatly influenced by the covert nature of secondary school science syllabi on IK".

However, in the paper "Modern Science and Native Knowledge: Collaborative Process That Opens New Perspective for PCST" by Yuwanuch Tinnaluck, the collaborative contributions of modern science and native knowledge are recognized. The paper suggests that integrating these perspectives can lead to a more nuanced and culturally responsive communication of scientific information to the public.

Overall, these papers collectively highlight the importance of integrating diverse knowledge systems into science education to foster a more holistic understanding of scientific concepts and promote cultural sustainability. They call for further research and practical implementation strategies to bridge the gap between traditional knowledge and modern science for the benefit of education and society as a whole.

In addition to the previously mentioned papers, the integration of indigenous knowledge through teachers' training and technological innovation is highlighted in the work by Dr. Satish Kumar in September 2023. Dr. Kumar's research underscores the pivotal roles of teachers and technology in effectively integrating valuable indigenous knowledge systems into mainstream education.

By focusing on these key drivers, Dr. Kumar advocates for a comprehensive approach to incorporating indigenous knowledge into educational practices.

Furthermore, the study of scientific attitudes among secondary-level students, as examined by Dr. Yogeshchandra K. Barot, underscores the significance of cultivating a scientific mindset. The paper emphasizes how scientific attitudes not only contribute to individual development but

also serve as a foundation for various aspects of life. Dr. Barot's research underscores the importance of fostering scientific attitudes among students to promote systematic thinking and a vision for a better future.

Moreover, "Measuring Learner Satisfaction of an Adaptive Learning System" by Lyndon Lim, Seo Hong Lim, and Rebekah Wei Ying Lim highlights the importance of adaptive learning strategies in assessing learner satisfaction. The paper emphasizes the necessity of continually improving these systems to better meet the diverse needs of learners. By focusing on learner satisfaction, the authors advocate for the ongoing development and refinement of adaptive learning systems to enhance the learning experience.

Additionally, Dr. Pavan Mandavkar's work on Indian Knowledge Systems (IKS) emphasizes the multidisciplinary nature of indigenous knowledge and its potential to address contemporary societal issues. Dr. Mandavkar's research highlights the role of IKS in fields such as holistic health, psychology, neuroscience, and sustainable development. By recognizing the relevance of indigenous knowledge across various disciplines, Dr. Mandavkar advocates for further research and exploration of IKS to address pressing societal challenges.

Gap in review

Given the recent launch of NEP 2020, there is a dearth of research on its implementation and effective strategies for integration. Similarly, there is limited existing research on how to incorporate Indian Knowledge Systems (IKS) into school curricula. Recognizing the significance of IKS in fostering a sense of pride, nurturing scientific attitudes, and stimulating scientific curiosity, the researcher aims to address these gaps through an experimental study. This study will explore methods for integrating IKS into the curriculum that can be used to assess its impact on students' attitudes and curiosity towards science and contribute to the broader understanding of effective educational practices in alignment with NEP 2020 objectives.

Rationale of the study

As an experienced science educator with 13 years of teaching middle school students in the CBSE curriculum, the researcher possesses a robust understanding of the subject matter and effective pedagogical techniques. Drawing upon this wealth of experience, the researcher recognizes the transformative potential of integrating Indian Knowledge Systems (IKS) into the curriculum. This proposal marks a new chapter in the teaching community, urging educators to delve deeper into the exploration of IKS and prepare for its seamless integration into educational practices.

By leveraging firsthand knowledge of teaching methodologies and content delivery, the researcher is poised to spearhead efforts to incorporate IKS into the curriculum effectively. This initiative aims to enrich students' learning experiences, foster cultural appreciation, and align with the evolving educational landscape outlined in NEP 2020.

Statement of the problem

The current curriculum for CBSE class eighth lacks integration of Indigenous Knowledge Systems (IKS), as evidenced by gaps identified in existing literature. This research aims to bridge this gap by not only identifying relevant IKS topics but also devising effective strategies for incorporating them into the existing curriculum. This integration of IKS will enrich the learning experience and provide a more holistic educational foundation for students.

Objectives

1. To review the literature in order to explore the possible areas or topics correlating the IKS science CBSE curriculum of eighth standard.
2. To develop lesson plans for the experimental group correlating IKS with science education for eighth standard.
3. To establish face validity of the experimental treatment /intervention programme of IKS with science education.
4. To establish the content validity of the experimental treatment / intervention programme of IKS with science education.

Research Methodology

This paper is a part of experimental study that the researcher has undertaken for developing the programme for creating awareness of the Indian Knowledge system among the students of class eighth to promote their scientific curiosity and engagement for a holistic learning.

With a rich history spanning over 5,000 years, the Indian Knowledge System (IKS) offers a unique perspective informed by local environmental conditions. Notably, IKS encompasses diverse fields, including astronomy documented in the Samhitas, agricultural treatises within the Yajurveda, and fundamental principles of physics and chemistry found in the Vedas and Upanishads. Additionally, references to metallurgy can be found in the Rigveda, Mahabharata, and Rasaratrangini, while medical surgery, plant consciousness, engineering, technology, military science, environmental studies, herbalism, and organism classification are also represented within IKS. This vast knowledge base presents a compelling opportunity to integrate IKS into science education, fostering student awareness of India's remarkable cultural heritage and the sophistication of its scientific understanding in ancient times.

Face validity has been ensured through consultation with the research guide, whose guidance and mentorship underscore the research endeavor. Additionally, content validity was established through validation from four experts specializing in science education. Their insights and expertise contribute to the robustness of the research design.

The researcher has meticulously planned twelve one-hour lessons, each focusing on different dimensions such as agriculture, metallurgy, architecture, ayurveda, yoga, astronomy,

health and nutrition, as well as fundamental physics concepts like magnetism and light. These dimensions were carefully selected to provide students with a comprehensive understanding of Indian Knowledge Systems (IKS) and their relevance in various fields.

To inform the development of the curriculum, a thorough review of literature was conducted. This review encompassed various sources, including websites, online papers, journals, NCERT textbooks, and Delhi state board materials. This comprehensive approach was deliberate, aiming to ascertain the suitability and age-appropriateness of the content for eighth-grade students. By drawing from diverse sources, the researcher ensures that the curriculum meets the educational needs and maturity levels of the target audience.

The Programme integrating IKS with Science Education for Grade Eighth:

The methodology chosen by the researcher to transact the above-mentioned themes are

1. Interactive Storytelling to serve as a good way to involve students' attention.
2. Use of Pictionary quiz to identify famous Indian scholars, or architectural marvels.
3. Use of artifacts presented through presentation using ICT.
4. Role play/drama to re-interpret the medical procedures mentioned in the treatises.
5. Designing assembly plays to highlight the important aspects or anecdotes.
6. Case study where modern scholars have implemented vedic knowledge to present day problems.
7. Project work given to students to carry out research on certain topics later to be presented to peers.

The researcher's objective in designing the lesson plan is to implement the 5 E's model, comprising engaging, exploring, and incentivizing students to take ownership of their learning process. This approach aims to foster active engagement among students and cultivate scientific curiosity. Additionally, the lesson plan incorporates adaptive learning strategies tailored to accommodate diverse learning styles, departing from traditional teaching methods.

The overarching goal of the research is to instill a sense of pride in students as they develop an appreciation for Indian Knowledge Systems (IKS) and recognize their relevance in modern contexts. This newfound knowledge is envisioned to inspire further exploration and innovation in science and technology among the future citizens of the country.

To assess the effectiveness of the lesson plan, pre- and post-assessment tests will be administered, focusing on students' awareness and comprehension levels. These assessments will be designed by the researcher, incorporating varying difficulty levels corresponding to knowledge acquisition, understanding, and application of the concepts.

Student engagement will be evaluated using a scientific attitude scale, serving as an indicator of increased curiosity and active participation in science-related activities. The emotional skill tool will assess students' ability to regulate their emotions and adapt to new learning styles,

thereby enhancing their knowledge acquisition and awareness.

In summary, the research aims to validate the hypothesis of increased scientific curiosity and student engagement in science through the implementation of the 5 E's model and adaptive learning strategies. The emotional skill assessment will complement these measures by gauging students' emotional regulation abilities, contributing to a comprehensive understanding of the impact of the lesson plan on student learning outcomes.

The researcher also aims to foster the development of essential life skills by integrating the holistic knowledge passed down by our ancestors with the scientific mindset it embodies. To ensure the effectiveness of this integration, the researcher sought guidance from the research guide, incorporating suggestions on language, construction, and integration into the content. Modifications were made based on the Research Guide's input, and approval was sought. Items that did not receive unanimous approval from the experts were either modified or rejected. With these preparatory steps completed, the researcher is now ready to proceed with the experiment in the school setting.

Delimitations

The researcher is working in a full-time capacity at a school. Due to time constraints imposed by the semester bound completion of the dissertation within a stipulated time frame and other external factors beyond the researcher's control, certain limitations are acknowledged. As a result, the scope of research is restricted. The focus of the research is the observation of the immediate impact of successful implementation and integration of Indian Knowledge Systems (IKS) within the educational context. However, the study does not extend to long-term assessments of sustained impact over extended periods to secondary level classes or for cohort studies.

Recommendations

The research presents an opportunity for extension into a transdisciplinary approach, enriching its holistic nature. Exploring Sanskrit texts and delving into Indian Knowledge Systems (IKS) within the realms of social sciences, arts, and literature can yield valuable insights. By integrating IKS across various disciplines, educators can cultivate a more comprehensive understanding of cultural heritage and its implications for diverse fields of study.

Furthermore, there is a pressing need for additional experimental research endeavors to further understand the effective implementation of IKS through a transdisciplinary model. This approach aligns with the evolving educational landscape, where the integration of diverse knowledge systems is increasingly recognized as essential for delivering a modern curriculum. By conducting such research, educators can refine strategies for seamlessly incorporating IKS into interdisciplinary contexts, fostering holistic learning experiences for students across different subject areas.

Conclusion

This urgent call to action must be heeded by educators across the board. The already available IKS program courses offered through Swayam portal serves as valuable resources for teachers seeking professional development opportunities to effectively understand and integrate IKS into the curriculum. The research aims to shed light on how such initiatives can significantly enhance student engagement in science and cultivate the scientific mindset necessary to tackle contemporary challenges. As we stand at the cusp of implementing the NEP 2020, teachers must prepare themselves to embrace this new educational paradigm.

The scope for the research is immense and it can inspire more researchers to practically observe the implications it holds in the education field.

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GOEIIRJ

माध्यमिक स्तरावरील विद्यार्थ्यांसाठी संमिश्र अध्ययन कार्यक्रम विकसित करणे व त्याच्या परिणामकारकतेचा अभ्यास

संशोधक

मार्गदर्शक

श्री. अमरदीप अशोक रामराजे

डॉ. लता सुभाष मोरे (सुरवाडे)

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१.१ प्रस्तावना

आज माहिती संप्रेषण तंत्रज्ञानामध्ये विविध प्रकारचे शोध लागलेले दिसतात. या शोधांचा सकारात्मक परिणाम विविध क्षेत्रात चांगल्या पद्धतीने होताना दिसतोय. यामध्ये शिक्षण क्षेत्र ही मागे नाही या शिक्षण क्षेत्रात माहिती संप्रेषणाचा तंत्रज्ञानाचा वापर प्रभावीपणे होताना दिसतो. आज विद्यार्थ्यांपर्यंत माहिती पोहोचवण्यासाठी विविध संप्रेषण तंत्रज्ञानाचा वापर केला जातो. त्याचा परिणाम म्हणजे स्थळ, काळ याची मर्यादा आता राहिलेले नाही. अध्यापन आणि अध्ययन प्रक्रिया यांचे स्वरूप बदलेले दिसून येते या माहिती संप्रेषण तंत्रज्ञानामुळे पारंपरिक अध्यापन अध्ययनाला तंत्रज्ञानाची जोड दिल्यामुळे शिक्षक आणि विद्यार्थी यांच्यातील दूरी कमी होऊन ज्ञानाची देवाण घेवाण परिणामकारकतेने होताना दिसते. पूर्वी अध्यापनामध्ये तंत्रज्ञान म्हटले तर फक्त फिल्मस्ट्री, ओवर हेड प्रोजेक्टर, एलसीडी प्रोजेक्टर हेच डोळ्यासमोर यायचे परंतु बदलत्या काळानुसार बदलत्या तंत्रज्ञानाच्या शोधामुळे इंटरनेटचा प्रभावी वापर होऊन अध्यापन अध्ययन कार्याला गती प्राप्त झालेली दिसून येते.

१.२ गरज

प्रस्तुत संशोधन हे पारंपारिक अध्ययन प्रक्रिया व ऑनलाईन अध्ययन प्रक्रिया यांच्या एकात्मिकरणाच्या धर्तीवर आधारित आहे. आज वर्गात शिक्षकांनी अध्यापन करणे आणि विद्यार्थ्यांपर्यंत माहिती पोहोचणे एवढीच मर्यादा राहिली नाही तर त्यासोबत बदललेल्या माहिती संप्रेषण तंत्रज्ञानाच्या सहाय्याने विद्यार्थ्यांनी ऑनलाईन पद्धतीने अध्ययन कार्य करणे अपेक्षित ठरते आज इंटरनेटमुळे मोठ्या प्रमाणात माहितीचा साठा ऑनलाईन पद्धतीने संगणकावर उपलब्ध झालेला दिसून येतो त्यामुळे हा उपलब्ध साठा विद्यार्थ्यांनी आपल्या विकासासाठी व प्रगतीसाठी ग्रहण करावा हे गरजेचे ठरते.

१.३ महत्त्व

बदलत्या काळानुसार शिक्षण शिक्षक केंद्रित न राहता, बालक केंद्रित किंवा त्यालाच आपण म्हणतो विद्यार्थी केंद्रित शिक्षण सुरू झाले आहे. विद्यार्थ्यांची सर्वांगीण प्रगती होण्यासाठी त्यांच्या ज्ञानात मोठ्या प्रमाणात आणि चांगली अचूक योग्य माहिती पोहोचवणे गरजेचे ठरते. यासाठी तंत्रज्ञानाचा आधार घेणे गरजेचे ठरते, तसेच कोरोना या महामारीमुळे अध्यापन आणि अध्ययन प्रक्रियेमध्ये बदल झालेला दिसून येतो पारंपारिक अध्ययनासोबतच तंत्रज्ञानाद्वारे अध्ययन सुरू झालेले दिसून येते याचा परिणाम म्हणजे वेळेची स्थळाची त्याला मर्यादा राहिलेली दिसून येत नाही. प्रस्तुत संशोधनामध्ये संशोधकाने संमिश्र अध्ययन

या संकल्पनेचा विचार केलेला आहे ही संकल्पना म्हणजे पारंपारिक पद्धतीने अध्ययन व तंत्रज्ञानाद्वारे म्हणजेच ऑनलाइन पद्धतीने अध्ययन यांचे एकात्मिकरण होय. या दोघांच्या एकत्रितपणे केलेल्या अध्ययनामुळे विद्यार्थ्यांना आशयाचे आकलन चांगल्या प्रकारे होण्यास मदत होते तसेच त्यांना स्वयं अध्ययनाची सवय लागते त्यांच्यामध्ये जिज्ञासा निर्मित होण्यास मदत होते आणि त्यासोबतच चिकित्सक विचार प्रक्रियेला चालना प्राप्त होते.

१.४ समस्या विधान

माध्यमिक स्तरावरील विद्यार्थ्यांसाठी संमिश्र अध्ययन कार्यक्रम विकसित करणे व त्याच्या परिणामकारकतेचा अभ्यास

१.५ संशोधनाची उद्दिष्टे

१. माध्यमिक स्तरावरील विद्यार्थ्यांसाठी संमिश्र अध्ययन कार्यक्रम विकसित करणे.
२. माध्यमिक स्तरावरील विद्यार्थ्यांसाठी निर्मित केलेल्या संमिश्र अध्ययन कार्यक्रमाची अंमलबजावणी करणे.
३. माध्यमिक स्तरावरील विद्यार्थ्यांसाठी निर्मित केलेल्या संमिश्र अध्ययन कार्यक्रमाची परिणामकारकता अभ्यासणे.

१.६ गृहितके

माध्यमिक स्तरावर पारंपारिक पद्धतीद्वारे अध्यापन व अध्ययनाचे कार्य चालते

१.७ परिकल्पना

धन परिकल्पना

संमिश्र अध्ययन कार्यक्रमाद्वारे माध्यमिक स्तरावरील विद्यार्थ्यांनी अध्ययन केले असता त्यांच्या आकलनात सार्थ फरक पडतो.

शून्य परिकल्पना

संमिश्र अध्ययन कार्यक्रमाद्वारे माध्यमिक स्तरावरील विद्यार्थ्यांनी अध्ययन केले असता त्यांच्या आकलनात सार्थ फरक पडत नाही.

१.८ कार्यात्मक व्याख्या

१. **माध्यमिक स्तर :-** इयत्ता नववी व इयत्ता दहावीला एकत्रितपणे माध्यमिक स्तर असे संबोधले जाते.
२. **संमिश्र अध्ययन :-** पारंपारिक पद्धतीने समोरासमोर बसून केलेले अध्ययन व ऑनलाइन पद्धतीने केलेले अध्ययन यांचे एकात्मिकरण म्हणजे संमिश्र अध्ययन होय.
३. **परिणामकारकता :-** संमिश्र अध्ययनाद्वारे अध्ययन केले असता आशयाचे आकलन चांगले होते.

१.९ संशोधनाची व्याप्ती व मर्यादा

व्याप्ती

१. प्रस्तुत संशोधन हे माध्यमिक स्तराशी संबंधित आहे.
२. प्रस्तुत संशोधन हे इतिहास विषयाशी संबंधित आहे.

३. प्रस्तुत संशोधन नाशिक जिल्ह्याशी संबंधित आहे.

मर्यादा

१. प्रस्तुत संशोधन हे नाशिक शहरापुरतेच मर्यादित आहे.

२. प्रस्तुत संशोधन माध्यमिक स्तरावरील इयत्ता ९ वी शी संबंधित आहे.

३. प्रस्तुत संशोधन हे जयकुमार टिबरेवाला इंग्लिश मीडियम स्कूल येथील इयत्ता ९ वीच्या विद्यार्थ्यांपुरतेच मर्यादित आहे.

४. प्रस्तुत संशोधन हे २०२३-२४ या शैक्षणिक वर्षापुरतेच मर्यादित आहे.

१.१० चल

१. स्वाश्रयी चल - संमिश्र अध्ययन कार्यक्रमाद्वारे अध्ययन.

२. आश्रयी चल - विद्यार्थ्यांच्या आशय आकलनात झालेला बदल.

१.११ संशोधन पद्धती

प्रस्तुत संशोधनासाठी प्रायोगिक संशोधन पद्धतीचा वापर करण्यात आला आहे.

१.१२ नमुना

प्रस्तुत संशोधनासाठी जयकुमार टिबरेवाला इंग्लिश मीडियम स्कूल येथील इयत्ता ९ वीचे एकूण ६० विद्यार्थी सहेतूक नमुना निवड पद्धतीने निवडण्यात आले .

१.१३ अभिकल्प

प्रस्तुत संशोधनासाठी संशोधकाने जयकुमार टिबरेवाला इंग्लिश मीडियम स्कूल येथील इयत्ता ९ वीच्या एकूण ६० विद्यार्थी निवडले यामध्ये पूर्व चाचणी घेऊन दोन गट करण्यात आले. एक गट ३० विद्यार्थ्यांचा व दुसरा गट ३० विद्यार्थ्यांचा होय. एका गटाने संमिश्र अध्ययन कार्यक्रमाद्वारे अध्ययन केले तर दुसऱ्या गटाने पारंपारिक पद्धतीने अध्ययन केले. यासाठी समान गट अभिकल्पाचा वापर करण्यात आला.

१.१४ माहिती संकलनाची साधने

प्रस्तुत संशोधनासाठी संशोधकाने पूर्व व उत्तर चाचणीसाठी स्वनिर्मित प्रश्नपत्रिका तयार केली. पूर्व चाचणीद्वारे मिळालेल्या माहितीच्या आधारे नियंत्रित गट व प्रायोगिक गट तयार केलेत प्रायोगिक गटाने संमिश्र अध्ययन कार्यक्रमाद्वारे अध्ययन केले, तर नियंत्रित गटाने पारंपारिक पद्धतीने अध्ययन केले. त्यानंतर संशोधकाने उत्तर चाचणी घेतली यासाठी स्वनिर्मित चाचणी तयार करण्यात आली होती या चाचणीच्या आधारे माहितीचे विश्लेषण करण्यासाठी मध्यमान, प्रमाण विचलन व 't' परीक्षेचा वापर करण्यात आला.

१.१५ माहितीचे विश्लेषण

चाचणी प्रकार	विद्यार्थी संख्या	मध्यमान	प्रमाण विचलन	't' मूल्य	स्वाधीनता मात्रा	सार्थकता स्तर
पूर्व चाचणी	६०	५.००	१.७३	३०.४	५९	०.०१
उत्तर चाचणी	६०	१७.००	१.८७			

वर दिलेल्या तक्त्यामध्ये पूर्व चाचणी व उत्तर चाचणीतून प्राप्त झालेल्या माहितीचे विश्लेषण करण्यात आले आहे. यामध्ये पूर्व चाचणीचे मध्यमान ५.०० आणि प्रमाण विचलन १.७३ आहे उत्तर चाचणीचे मध्यमान १७.०० आणि प्रमाण विचलन १.८७ आहे त्यांचे 't' मूल्य ३०.४ आहे व स्वाधीनता मात्रा ६० असून सार्थकता स्तर ०.०१ आहे. त्यामुळे धन परिकल्पना, 'संमिश्र अध्ययन कार्यक्रमाद्वारे माध्यमिक स्तरावरील विद्यार्थ्यांनी अध्ययन केले असता त्यांच्या आकलनात सार्थ फरक पडतो.' स्वीकारली जाते व शून्य परिकल्पना, 'संमिश्र अध्ययन कार्यक्रमाद्वारे माध्यमिक स्तरावरील विद्यार्थ्यांनी अध्ययन केले असता त्यांच्या आकलनात सार्थ फरक पडत नाही.' तिचा त्याग करण्यात येतो.

१.१६ निष्कर्ष

१. संमिश्र अध्ययन कार्यक्रमाद्वारे विद्यार्थ्यांनी अध्ययन केले असता विषयातील संकल्पना समजून घेणे सोपे जाते.
२. संमिश्र अध्ययन कार्यक्रमाद्वारे विद्यार्थ्यांनी अध्ययन केले असता त्यांना स्वयं अध्ययनाची सवय लागते.
३. संमिश्र अध्ययन कार्यक्रमाद्वारे विद्यार्थ्यांनी अध्ययन केले असता त्यांच्यामध्ये जिज्ञासा निर्मिती वाढीस लागण्यास मदत होते.
४. संमिश्र अध्ययनाद्वारे विद्यार्थ्यांनी अध्ययन केले असता त्यांच्या अध्ययन कार्याला गती प्राप्त होण्यास मदत होते.
५. संमिश्र अध्ययनामुळे अध्ययनाला लवचिकता प्राप्त होते.

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Shravana - A Practice of Listening**Ms. Smita Arjun Borade***Ph.D Scholar**And***Dr. Pradnya Wakpainjan***Professor**Department of Education**SNDTWU, Mumbai*

Abstract :

Shravan is given importance in Vedic education system and it is the most crucial step for learning in general and specific with respect to language learning. There is a close connection between listening and the development of language skills. The Vedic education system emphasised the development of shravana (listening) among the disciple and it is further systematically divided into various sub skills in order to reach listening proficiency.

The present study intends to develop listening proficiency in the English language among students. The metacognitive awareness strategies designed systematically and implemented on students of standard IXth. The single group pretest-posttest design is used and it is observed that the metacognitive awareness strategies enhanced the listening proficiency among students.

Key words: Metacognitive awareness strategies, Listening proficiency

Introduction

The individual learns throughout life and every active moment leads to learning. Ancient Indian knowledge transmitted orally from generation to generation in the Gurukul system. To preserve the knowledge and understand it fully, listening attentively was very important. For spiritual growth and understanding, attending spiritual discourse was common. It was expected that students should listen with heart and mind. Being proficient in listening fosters deeper understanding of the content and the listener becomes empathetic. As per Indian philosophical tradition, debates and dialogues between scholars were initiated and so to understand nuances of complex ideas, listening proficiency was required. Indian spiritual practices like meditation also emphasize listening. Through meditation individuals learn to listen to their thoughts, emotions and get acquainted with the inner as well as outer world around them. This highlights the importance of listening in the Indian knowledge system and indicates that listening is an active process which involves mind, Heart and soul.

The Concept of listening proficiency

Language is the key element in learning every subject. Listening, Reading, writing and speaking are language skills and interdependent. The skill is the ability to use one's knowledge effectively and readily in execution or performance. The mastery achievement on skill leads to the Proficiency. In other words, it can be said that proficiency is a high degree of skill or expertise. It is an advancement in skill, knowledge, or expertise. Listening proficiency is the assessed proficiency of the individual in understanding a given spoken language. As listening is a fundamental skill in language learning, it is imperative to focus on developing the listening proficiency among students. Listening skills will help the students to perform their task of listening and getting meaning as per their understanding but listening proficiency will help the students to identify literal meaning, to understand vocabulary, make inferences, identify main idea, determine purpose, draw conclusions, analyze reasoning, finding evidence, summarizing the content, criticizing the ideas. The researchers think that rather than just developing listening skills of students, listening proficiency needs to be developed through their engagements that leads to realization and accountability for learning. Everyone enjoys listening to audio, watching videos, talking with friends and so on. Doing such activities repetitively helps to develop listening, speaking, reading, and writing skills. How often do we consciously think that we are learning to read when we listen? In the listening process, an individual understands vocabulary, phonetics, meaning, and syntax and it influences reading.

Need of the study

The review of related literature revealed that the studies are conducted on the development of listening skill using various strategies like multimedia strategies, computer-assisted learning, multimedia-based teaching, blended learning approach, activity-based package, computer-aided teaching, innovative and teaching strategies etc. The descriptive studies focus on the factors affecting listening, strategies used for listening and challenges faced by students in learning. This leads to thinking about using metacognitive strategies for development of listening proficiency and not restricting listening skill.

Variables of the study

For the present study following variables were considered:

Dependent variable

i) Listening Proficiency

Independent variable

Metacognitive Awareness Strategies

Operational definitions:**Metacognitive awareness strategies-**

The metacognitive awareness strategies are the activities used for learning that include

problem-solving, planning and evaluation, mental translation, person knowledge, and directed attention

Problem solving strategy –It is the strategy that helps to think on various alternatives and selecting the most appropriate alternative to remove obstacles during listening.

Planning and evaluation strategy- It is the ability of the learner to achieve listening levels through the proper steps along with checking the learning progress from time to time.

Mental Translation- Word to word translation made by a student in mind to understand, listen and read text.

Person knowledge strategy- It is the ability of students to identify their own strength and weakness that hinders and supports listening proficiency.

Directed attention strategy- It is the deliberate efforts put up by the learner to achieve listening with understanding and comprehension of oral text

Listening proficiency- It is the ability of an individual to understand meaning of words, phrases, interpretation of messages from familiar context, understanding main facts and supporting details from descriptive text and summarizing oral text.

Objectives of the study

1. To study the Listening Proficiency of the secondary school students
2. To develop a Program based on Metacognitive Awareness Strategies
3. To study the effectiveness of the Metacognitive Awareness Strategies on Listening Proficiency in terms of
 - i. Meaning of words and phrases
 - ii. Interpretation of message from a familiar context
 - iii. Understanding main facts and supporting details from descriptive text
 - iv. Summarizing listened text

Hypotheses of the study

H_1 : There is a significant difference in the mean score of pre-test and post-test scores on Listening proficiency

H_{01} : There is no significant difference in the mean score of pre-test and post-test scores on Listening proficiency

H_2 : There is a significant difference in the pre-test and post-test scores on understanding the meaning of words and phrases from the oral text of the students

H_{02} : There is no significant difference in the pre-test and post-test scores on understanding the meaning of words and phrases from the oral text of the students

H_3 :There is a significant difference in the pre-test and post-test scores on the interpretation of the message from the familiar context of the students

H_{03} :There is no significant difference in the pre-test and post-test scores on the interpretation of

the message from the familiar context of the students

H₄: There is a significant difference in the pre & post-test scores on understanding the main facts and supporting details from the descriptive text of the students

H₀₄: There is no significant difference in the pre & post test scores on understanding main facts and supporting details from descriptive text of the students

H₅: There is a significant difference in the pre & post-test scores on summarizing listened text of the students

H₀₅: There is no significant difference in the pre & post-test scores on summarizing listened text of the students

Methodology of the study

The Present study intended to study the effectiveness of metacognitive awareness strategies on the listening proficiency of the students and therefore within the experimental method, Single group pre- test, post-test design is used.

Sample and Sampling Technique : Nature, and size

For the present study, three stage sampling has been used. At the first stage, the school is selected using incidental sampling and class is selected using incidental sampling and at the third stage, 9th grade students are selected using cluster sampling from the school with English as a medium of instruction and affiliated to Maharashtra State Board and located in Nashik city. There were 30 students participated in the study

Tool for the data collection

For the present study the following tools are used for data collection

- (i) Personal data sheet
- (ii) Listening proficiency Test prepared by the researcher

Data Collection

The researcher prepared activities based on metacognitive strategies namely; planning and evaluation, directed attention, person knowledge, mental translation and problem solving. Before initiating activities related to metacognitive strategies, the researchers conducted prerequisite activities for metacognition. Before involving students into metacognition, basic cognitive skills like attention, memory, and perception are required. For cognitive skill development 'memory word chain' games were conducted, for self awareness, 'Who am I' and 'self reflection' activities were conducted, for critical thinking 'brain teaser', for motivation 'Simon Says' and for social interaction 'Scavenger Hunt' games were conducted.

After pre requisites, activities related to planning and evaluation for listening were conducted. It includes passages, dialogues and stories wherein the students have to plan their learning and evaluate the learning. For listening activities audio clips were used. For directed attention, activities related to homophones, questions based on passage, goal setting activities were

conducted. For person knowledge strategy, students rated their motivation and anxiety. After listening to the paragraph, students wrote challenges faced and motivation in listening. For mental translation, word set, sentence set, proverbs, idioms, paragraphs were given for translation in their first language. Bilingual dictionary was provided to them. For problem solving, some situations were given to the students. Example 1) you are asked to organize a funfair in your school, how will you plan and execute it? 2) After listening to the story they have to solve the problem. The data on listening proficiency of the students were collected through pre- test and post -test

Data Analysis

The data collected is analysed using percentage and the statistical technique t test

Objective 1:

To study the Listening Proficiency of secondary school students

Table1: Levels of Listening proficiency

Listening proficiency Levels	No. of students (Pre-Test)	No. of students (Post-Test)	Pre -Test (%)	Post-Test (%)
Advanced level	8	24	26.66%	80%
Intermediate level	14	6	46.66%	20%
Novice level	8	0	26.66%	0 %
Total	30	30	100%	100%

In the pre-test of listening proficiency, 26.66% of students are at the novice level, 46.66% of students at the intermediate level, and 26.66% of students at the advanced level. In the post-test of listening proficiency, no student at the novice level, 20% students at the intermediate level, and 80% of students at the advanced level.

It concludes that students' listening proficiency has enhanced after the experimentation. Students from novice level, and intermediate level shifted to advanced level.

Testing of Hypothesis H_{01}

Table 2: Pre & Post test scores on listening proficiency

Test	N	df	Mean	SD	t ratio	L.O.S.
Pre	30	58	21.60	6.88	5.55	0.01
Post			30.63	5.67		

Interpretation

The obtained value of t is 5.55 which is greater than tabulated value 2.39. Hence null hypothesis is rejected at 0.01 level. Therefore it can be said that there is a significant difference in listening proficiency. The post test mean score is higher than the mean score of the pretest that indicates the listening proficiency is improved after the implementation of metacognitive awareness strategies.

Testing of Hypothesis Ho₂

Table 3: Pre & Post test scores on meaning of words and phrases

Meaning of Words & phrases						
Test	N	df	Mean	SD	t ratio	L.O.S.
Pre	30	58	3.87	1.20	5.02	0.01
Post			5.33	1.06		

Interpretation

The obtained value of t is 5.02 which is greater than tabulated value 2.39. Hence null hypothesis is rejected at 0.01 level. Therefore it can be said that there is a significant difference in the meaning of words and phrases of the students. The post test mean score is higher than the mean score of the pre test that indicates the meaning of words and phrases of the students is improved after the implementation of metacognitive awareness strategies.

Testing of Hypothesis Ho₃

Table 4: Pre test and post test scores of Interpretation of messages from familiar context

Test	N	df	Mean	SD	t ratio	L.O.S.
Pre	30	58	5.23	2.36	6.56	0.01
Post			8.83	1.86		

Interpretation

The obtained value of t is 6.56 which is greater than tabulated value 2.39. Hence null hypothesis is rejected at 0.01 level. Therefore it can be said that there is a significant increase in the score of interpretation of messages from the familiar context of the students. The post test mean score is higher than the mean score of the pre test that indicates interpretation of messages from familiar context is improved after the implementation of metacognitive awareness strategies.

Testing of Hypothesis Ho₄

Table 5: Pretest and posttest score on Understanding main facts

Test	N	df	Mean	SD	t ratio	L.O.S.
Pre	30	58	5.93	2.72	4.19	0.01
Post			8.57	2.11		

Interpretation

The obtained value of t is 4.19 which is greater than tabulated value 2.39. Hence null hypothesis is rejected at 0.01 level. Therefore it can be said that there is a significant increase in the score of understanding the main facts of the students. The post test mean score is higher than the mean score of the pre test that indicates understanding the main facts is improved after the

implementation of metacognitive awareness strategies.

Testing of Hypothesis H_{05}

Table 6: Pretest and posttest score on summarizing the text

Test	N	df	Mean	SD	t ratio	L.O.S.
Pre	30	58	6.57	2.60	2.09	0.05
Post			7.90	2.34		

Interpretation

The obtained value of t is 2.09 which is greater than the tabulated value 1.68. Hence null hypothesis is rejected at 0.05 level. The posttest mean score is higher than the mean score of the pretest that indicates the summarizing the text is improved after the implementation of metacognitive awareness strategies.

Major Findings & Discussion

- 1) In the pre-test of listening proficiency, 26.66% of students at the novice level, 46.66% of students at the intermediate level, and 26.66% of students at the advanced level. In the post-test of listening proficiency, no student found to be at the novice level, 20% students at the intermediate level, and 80% of students at the advanced level. It is concluded that students' listening proficiency after the treatment in terms of various activities based on metacognitive strategies help in enhancing the listening proficiency. The students shifted at the advanced level from novice level, and intermediate level shifted to advanced level.
- 2) There is a significant increase in listening proficiency of students as it is seen that the post test mean score is higher than the mean score of the pre test. The various activities such as listening to the passages and answering the questions, identifying homophones, setting the goal, translating passages by making use of a bilingual dictionary engaged students for planning and evaluation, directed attention, mental translation, mental translation and problem solving. The finding is supported by the study of Dodi M. (2018).
- 3) There is a significant increase in the scores on meaning of words and phrases of students as it is seen that the post test mean score is higher than the mean score of the pre test. The activities such as listening to the passages and telling the meaning of words, words that sound the same but differ in meaning, and translating words in the mother tongue engaged students to understand the meaning of words. The finding is supported by the study of Pengchong (2020).
- 4) There is a significant increase in the scores on Interpretation of messages from familiar context of students as it is seen that the post test mean score is higher than the mean score of the pre test. The activities such as listening to the passages and answering the questions, writing summary of the paragraph, dialogue listening engaged students for interpretation of

messages from familiar context.

- 5) There is a significant increase in the scores on Understanding main facts of students as it is seen that the post test mean score is higher than the mean score of the pre test. The researcher developed activities such as translating thoughts, understanding motivation and anxieties, understanding challenges faced during listening engaged students for understanding main facts.
- 6) There is a significant increase in the scores on summarizing the text of students as it is seen that the post test mean score is higher than the mean score of the pre test. The researchers developed activities such as writing summary of listened paragraphs, problem solving situations engaged students for summarizing the text.

Conclusion

The study aimed to improve students' listening proficiency in English through metacognitive awareness strategies. Results showed significant enhancements across various components of listening skills after intervention. Findings highlight the importance of incorporating metacognitive strategies in language learning as the metacognitive strategies effectively enhanced the listening proficiency among students.

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A study of the boost to Inclusivity in Higher Education through use of ICT in India

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Abstract

This paper focuses on the role of ICT in higher education for the 21st century in making higher education more inclusive and accessible. ICTs have affected educational practice in education training and now it has become a solution for the quality and quality component of higher education. It is obvious from the study that use of ICT in higher education is expanding quickly in different states of India. A standout amongst the most widely recognized issues of utilizing Information and Communication Technologies (ICTs) in education is to base decisions with respect to innovative conceivable outcomes instead of educational needs. In developing nations where higher education is laden with genuine difficulties at several levels, there is an expanding strain to guarantee that innovative potential outcomes are seen with regards to instructive requirements. The utilization of ICT in training fits more understudy focused learning settings and regularly this makes somewhere in the range of pressures for a few educators and understudies. Be that as it may, with the world moving quickly into computerized media and data, the part of ICT in higher education is ending up increasingly imperative and this significance will proceed to develop and create in the 21st century.

Keywords:-Quality education, ICT, Higher Education, Inclusivity.

Introduction.

ICT is a comprehensive term which means communication of information. It has been commonly adopted in present society due to increasing awareness. Information technology has revolutionized educational, agricultural, manufacturing, medicine, business, and governance sector in India and other parts of the world. Information Technology (IT) is closely linked to ICT, especially in educational and political issues. ICT covers various forms of media like television, radio, mobile phones, land telephones, cameras etc. India has shown tremendous growth in the field of Information and Communication Technology (ICT). The technology has become handy in providing various services at the doorstep of the person living in the remotest of the areas for example ICT has enhanced efficient delivery of the quality education to a person who cannot afford to come to the mainstream area. The country has gained edge worldwide in this field, leveraging its large pool of skilled manpower in ICT because of which India has become a global

hub of outsourcing of software and IT enabled services. Presently the country has a daunting task of skilling the nitty gritty of ICT to the vast population living in rural areas so that they can reap the benefits provided by the technology.

ICT provides vast and comprehensive information to the student in a very systematic way which aids teaching and learning. It has induced flexibility in the learning process. As every student is neurologically different, therefore ICT provides the opportunity to the student to learn at their own pace and time. In this way, information and communication technologies encourage debate and the acceptance of other people's opinions. In addition, the exchange of thoughts allows students to learn about different cultures. It facilitates communication between teachers and students. The whole educational community has quick access to the same resources. In this way, digital tools allow direct and immediate interaction, without the need to be physically present. During the Covid Crisis Education system survived essentially because of the extensive use of ICT. The use of ICT has made the learning more dynamic. The students generally communicate with the use of digital media therefore access to education has become more and more easy. The purpose of this research paper is to find whether ICT has helped in making education more accessible to the vulnerable parts of India. The research paper finds out whether the lacunas in Higher Education System in India are filled by use of ICT.

Exploring the evolution of ICT (Information and Communication Technology) in higher education provides valuable insights into how technology has transformed teaching, learning, and administrative processes over time. Here's an overview:

Early Adoption and Emergence (1960s-1980s)

- Mainframe Computers: In the 1960s, universities began using mainframe computers for administrative tasks like payroll and student records.
- Distance Education: The emergence of radio and television enabled universities to offer distance education courses, allowing students to learn remotely.
- Limited Access: ICT was primarily accessible to large institutions due to high costs and technical expertise required.

Proliferation and Networking (1990s-2000s)

- Personal Computers: The widespread availability of personal computers in the 1990s made ICT more accessible to students and faculty.
- Internet Revolution: The internet became a transformative force, enabling global connectivity and facilitating online research, communication, and collaboration.
- Learning Management Systems (LMS): Institutions adopted LMS platforms like Blackboard and Moodle to manage course materials, assignments, and communication.
- E-Learning: The rise of e-learning introduced new instructional models, such as blended learning and fully online courses.

Mobile and Web 2.0 Era (2000s-2010s)

- Mobile Technology: The proliferation of smartphones and tablets provided anytime, anywhere access to educational resources and communication tools.
- Web 2.0 Tools: Social media, blogs, wikis, and other Web 2.0 technologies transformed how students collaborate, create content, and engage with course materials.
- Open Educational Resources (OER): Initiatives like MIT OpenCourseWare and Khan Academy made educational content freely accessible online, challenging traditional notions of course materials.
- Massive Open Online Courses (MOOCs): Platforms like Coursera, edX, and Udacity democratized access to higher education by offering free or low-cost courses from top universities worldwide.

Current Trends and Innovations (2010s-Present)

- Personalized Learning: Adaptive learning technologies tailor instruction to individual student needs, optimizing learning outcomes.
- Virtual Reality (VR) and Augmented Reality (AR): Immersive technologies offer new possibilities for experiential learning and simulation-based training.
- Data Analytics: Institutions leverage big data and learning analytics to monitor student progress, identify at-risk students, and improve instructional practices.
- Artificial Intelligence (AI): AI-powered tools assist with grading, tutoring, and personalized learning experiences.
- Remote Learning and Teleconferencing: The COVID-19 pandemic accelerated the adoption of remote learning technologies, prompting institutions to invest in video conferencing platforms and online proctoring solutions.

1. TPACK Framework (Technological Pedagogical Content Knowledge)

- Description: The TPACK framework, proposed by Mishra and Koehler (2006), represents the intersection of three knowledge domains: technological knowledge (TK), pedagogical knowledge (PK), and content knowledge (CK). It emphasizes the importance of understanding how technology, pedagogy, and content interact to facilitate effective teaching and learning.
- Components:
 - Technological Knowledge (TK): Understanding of ICT tools and their applications.
 - Pedagogical Knowledge (PK): Knowledge of teaching strategies, instructional methods, and learning theories.
 - Content Knowledge (CK): Subject matter expertise in the discipline being taught.
- Integration: TPACK advocates for the integration of TK, PK, and CK to develop Technological Pedagogical Content Knowledge (TPACK), which involves effectively

utilizing technology to support meaningful learning experiences aligned with specific content and pedagogical goals.

- Application: Educators can use the TPACK framework to design and evaluate technology-enhanced learning experiences, identify areas for professional development, and promote reflective teaching practices.

2. **SAMR Model (Substitution, Augmentation, Modification, Redefinition)**

- Description: The SAMR model, proposed by Dr. Ruben Puentedura, provides a framework for evaluating the transformative impact of technology on teaching and learning. It categorizes technology integration into four levels of increasing complexity: Substitution, Augmentation, Modification, and Redefinition.
- Levels:
- Substitution: Technology is used as a direct substitute for traditional teaching methods without significant changes in the learning task.
- Augmentation: Technology enhances the learning task by providing additional functionalities or efficiencies compared to traditional methods.
- Modification: Technology enables significant redesign of the learning task, allowing for new possibilities that were previously inconceivable.
- Redefinition: Technology facilitates the creation of entirely new learning experiences that were previously unimaginable, leading to transformative outcomes.
- Application: The SAMR model encourages educators to strive for higher levels of technology integration that go beyond mere substitution or augmentation. By aiming for modification and redefinition, educators can leverage technology to create innovative learning experiences that foster deeper engagement, collaboration, and critical thinking among students.

“India faces major concerns arising from multitude of challenges and weaknesses with respect to infrastructure, socio-economic, physical and linguistic obstacles for the learners (Bhattacharya and Sharma, 2007), cost, inadequate teachers, quality of education and time and distance barriers which can be overcome by ODL system as an appropriate way (McGorry, 2002). On these lines, in order to negate the effect of the inadequacies in the Indian higher education system in terms of access and equity, Government has established 14 state open universities in different Indian states to disseminate higher education through ODL system and 1 central university, i.e. Indira Gandhi National Open University (IGNOU) (Chaturvedi and Nayak, 2017) established in 1985 to enhance educational access and equality and to promote, coordinate and determine standards in ODL system. It provides innovative and need based general as well as continuing education to all, including tribal peoples based in remote areas, for the purpose of providing educational and professional progression.”(Nayak,Kant,Anjali,2020,para17)

Case Study:-

There is a teacher named Ankit(25) teach in SP college Pune

“I teach English to The blind student there. In an interview they have told conducted with them the ICT has made information more accessible to them . it has increase their learning outcome. It has lead to there inclusive grow.

Now they can give the exam online, attend the lectures online which are specially designed for their own needs and they can give the exams much faster without the help of the writer. This has helped them feel more confident.”

Reflecting on the significance of ICT (Information and Communication Technology) in shaping the future of higher education reveals profound implications for teaching, learning, and the overall landscape of academia. Here are some key reflections:

The higher Education System in India does not have quality teachers. The teacher to student ratio in Indian Higher Education Institutions is merger. The Union Ministry of Education released data from the All India Survey on Higher Education (AISHE), 2020-2021, which showed a 7.5% increase in student enrolments across the country compared to 2019-20.

- The survey also revealed that in 2020-21, the year when the Covid-19 pandemic began, there was a 7% rise in enrolments in distance education programmes.

What is the AISHE?

- To portray the status of higher education in the country, the Ministry of Education has endeavored to conduct an annual web-based AISHE since 2010-11.
- Data is being collected on several parameters such as teachers, student enrolment, programmes, examination results, education finance, infrastructure.
- Indicators of educational development such as Institution Density, Gross Enrolment Ratio, Pupil-teacher ratio, Gender Parity Index, Per Student Expenditure will also be calculated from the data collected through AISHE.
- These are useful in making informed policy decisions and research for development of the education sector.

What are the Major Highlights of the AISHE Data?

- Student Enrolment:
 - Gross Enrolment Ratio (GER) for all enrolments (as per 2011 Census) increased by over 2 points to 27.3.
 - The highest enrolment was seen at the undergraduate level, which accounted for 78.9% of all enrolments.
 - The female enrolment in higher education programmes had increased to 49% of total enrolments in 2020-21 compared to 45% in 2019-20.
 - But, the overall figures for Science, technology, engineering, and

mathematics(STEM) enrolments (at all levels of higher education) showed that women lagged behind men, who accounted for over 56% of enrolments in these fields.

- Gender Parity Index (GPI), the ratio of female GER to male GER, has increased from 1 in 2017-18 to 1.05 in 2020-21.
- The number of students in the Persons with Disabilities category dropped in 2020-21 to 79,035 from 92,831 in 2019-20.
- The proportion of Muslim students enrolling for higher education dropped to 4.6% in 2020-21 from 5.5% in 2019-20.
- Uttar Pradesh; Maharashtra; Tamil Nadu; Madhya Pradesh; Karnataka and Rajasthan are the top 6 States in terms of number of students enrolled.
- Universities and College: During 2020-21, the number of universities has increased by 70, and the number of colleges has increased by 1,453.
- The 21.4% government colleges accounted for 34.5% total enrolments in 2020-21, whereas the rest 65.5% enrolments were seen at private aided colleges and private unaided colleges put together.
- Uttar Pradesh; Maharashtra; Karnataka; Rajasthan; Tamil Nadu; Madhya Pradesh; Andhra Pradesh and Gujarat are the top 8 States in terms of number of colleges.
- Faculty: The female per 100 male faculty has improved to 75 in 2020-21 from 74 in 2019-20 and 63 in 2014-15.

What are the Current Major Issues Related to India's Higher Education System?

- Faculty Shortage: AISHE 2020-21 showed that the teacher-pupil ratio was at 27 for all universities, colleges and standalone institutions and at 24 if only regular mode is considered due to which the quality of education remains a concern.
- Inadequate Infrastructure: Poor infrastructure is another challenge to higher education in India.
- Due to the budget deficit, corruption and lobbying by the vested interest group, public as well as private sector universities in India lack the necessary infrastructure.
- Regulatory Issues: Management of Indian higher education faces challenges of lack of accountability, transparency, and professionalism.
- As a result of the increase in the number of affiliated colleges and students, the burden of administrative functions of universities has significantly increased and the core focus on academics and research is diluted.
- Problem of Brain Drain: Due to cutthroat competition for getting admission in top institutes like IITs and IIMs, a challenging academic environment is created for a large number of students in India, so they prefer going abroad, which makes our country deprived of good talent.

- There is definitely a quantitative expansion of education in India but the qualitative front (essential for a student to get a job) is lagging behind.

Conclusion

ICT catalyzes pedagogical innovation by offering diverse instructional strategies and learning modalities. Blended learning environments combine face-to-face instruction with online activities, providing flexibility and customization in course delivery. Additionally, immersive technologies such as virtual reality and augmented reality offer experiential learning opportunities that engage students in interactive and immersive educational experiences.

The digitalization of higher education extends beyond traditional degree programs to encompass lifelong learning and professional development initiatives. Online courses, micro-credentials, and digital badges enable professionals to upskill or re skill in response to evolving industry demands, fostering a culture of continuous learning and professional growth.

ICT drives institutional transformation by optimizing administrative processes, enhancing operational efficiency, and improving the overall student experience. Learning management systems, student information systems, and predictive analytics empower institutions to make data-informed decisions, support student success initiatives, and provide personalized support services. While ICT holds immense promise for the future of higher education, it also presents challenges and ethical considerations. Issues such as digital divide, privacy concerns, cybersecurity threats, and algorithmic bias require careful attention and proactive measures to ensure equitable access, data security, and ethical use of technology in academia.

In conclusion, ICT is a transformative force that shapes the future of higher education by expanding access, fostering innovation, and empowering learners and educators. Embracing the opportunities afforded by ICT while addressing its challenges is essential for realizing the full potential of technology in advancing the goals of higher education in the 21st century.

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इंग्रजी माध्यमातील इयत्ता ६वी च्या विद्यार्थ्यांचे मराठी संभाषण कौशल्य विकसित करण्यासाठी उपक्रमांचे विकसन

वैशाली विजय भालेराव

संशोधक

शिक्षणशास्त्र विभाग

एस. एन. डी. टी. महिला विद्यापीठ, मुंबई

सारांश

माणसाच्या जीवनात भाषेला अनन्यसाधारण महत्व आहे. प्रत्येक प्रांताची, राज्याची एक विशिष्ट भाषा असते. ती भाषा अवगत करून त्याद्वारे दैनंदिन व्यवहार पार पाडणे महत्वाचे आहे. महाराष्ट्राची राज्य भाषा मराठी आहे, आणि त्यामुळे राज्यातील प्रत्येकाला 'मराठी' भाषा अवगत असणे आवश्यक आहे. श्रवण कौशल्य, संभाषण कौशल्य, वाचन कौशल्य आणि लेखन कौशल्य ही भाषेची चार आधारस्तंभ आहेत. त्यापैकी संभाषण कौशल्य अधिक महत्वाचे आहे. संभाषणाद्वारे आपण आंतरक्रिया करून सुलभ जीवन जगू शकतो. महाराष्ट्रात राहणाऱ्या प्रत्येक विद्यार्थ्याला मराठी भाषेतून संभाषण करता येणे आवश्यक आहे, आणि त्यासाठी लेखिकेने सदर लेखात काही उपक्रम सुचवले आहेत.

प्रस्तावना :

संभाषण हा आपल्या जगण्याचा एक अविभाज्य भाग आहे, संभाषणाशिवाय जगण्याची आपण कल्पनाच करू शकत नाही. सुसंभाषणाने माणसं जिंकता येतात. आपल्याला आपल्या नोकरीत, व्यवसायात अथवा वैयक्तिक आयुष्यातही यशस्वी व्हायचं असेल तर आपल्यातल्या संभाषण कलेला अनन्य साधारण महत्व आहे. 'एका व्यक्तीकडून दुसऱ्या व्यक्तीकडे होणाऱ्या अर्थपूर्ण माहितीच्या देवाणघेवाणीची प्रक्रिया म्हणजे 'संभाषण' होय. या स्पर्धेच्या युगात उत्तम दर्जाचं संभाषण कौशल्य असणं अगदी आवश्यक आहे. व्यक्तिमत्त्व प्रभावशाली करण्यासाठी आणि संभाषणाच्या मूलभूत संकल्पना समजून घेण्यासाठी विद्यार्थ्यांमध्ये संभाषण कौशल्य विकसित होणे आवश्यक आहे.

वृक्ष जसे मातीतले पाणी, सत्व आणि मातीतील शक्ती घेऊन वाढतो तशी भाषा वाढत असते, त्या भाषा वृक्षाची पाने, फुले, फळे म्हणजे साहित्य असते. वृक्ष जेवढा कसदार तेवढी त्याची फळे रसदार असतात. भाषा आणि त्या भाषेतील साहित्य हे त्या देशाची, प्रदेशाची आणि तिथल्या माणसांची सांस्कृतिक ओळख असते. भाषेची जाण असणे आणि भाषेचे भान जपणे हे संस्कृती संवर्धनासाठी व संरक्षणासाठी आवश्यक आहे. भाषेमध्येच सौन्दर्य आणि साधूत्व निर्माण करण्याचे सामर्थ्य असते. मनुष्याला भाषेमार्फत विविध प्रकारचे अनुभव, माहिती, ज्ञान इत्यादी प्राप्त होत असते. भाषा हे माणसांना एकत्र आणण्याचे तसेच आपल्या कल्पना, भावना, विचार व्यक्त करण्याचे प्रभावी साधन आहे.

संशोधनाची गरज:

महाराष्ट्र शासनाने सन २००९ मध्ये राज्यातील इंग्रजी माध्यमातील शाळांसह सर्व अमराठी माध्यमांच्या शाळांमध्ये इयत्ता पहिलीपासून मराठी हा विषय अनिवार्य करण्याचा धोरणात्मक निर्णय घेतला. विद्यार्थी आपल्या

भावना,विचार,कल्पना,संभाषण कौशल्याच्या माध्यमातून इतरांपर्यंत पोहचवू शकतो, आणि म्हणून सदर विषयावर संशोधन होणे गरजेचे आहे.

१२ ते १४ या वयोगातील [इयत्ता ६ वी] च्या विद्यार्थ्यांच्या पाठ्यपुस्तकात शैक्षणिक वर्षाखेरीस विद्यार्थ्यांमध्ये भाषाविषयक क्षेत्रनिहाय काही क्षमता विकसित व्हाव्या अशी अपेक्षा आहे त्यापैकी संभाषण कौशल्य वाढविण्यासाठी काही उद्दिष्टे पाठ्यपुस्तकात दिली गेलेली आहेत ही उद्दिष्ट्ये साध्य करण्यासाठी सदर संशोधनाची गरज आहे.

राष्ट्रीय शैक्षणिक धोरण २०२० नुसार मातृभाषा किंवा स्थानिक भाषेशी संबंधित शिफारसी राष्ट्रीय शैक्षणिक धोरण २०२० मध्ये इयत्ता ५ वी पर्यंत शिक्षणाचे माध्यम म्हणून मातृभाषा किंवा स्थानिक भाषेचा वापर करण्यावर भर देण्यात आला आहे. त्याचबरोबर इयत्ता ८ वी पर्यंत आणि त्यापुढील शिक्षण सुरु ठेवण्याची शिफारस केली आहे. हे शिफारस करते की सर्व विद्यार्थी त्यांच्या शाळेत तीन भाषा शिकतील. मुलांनी शिकलेल्या तीन भाषा ही राज्ये, प्रदेश आणि अर्थातच विद्यार्थ्यांची निवड असेल. तथापि, तीन भाषांपैकी किमान दोन भाषा मूळ भारतातील असाव्यात, त्यापैकी एक स्थानिक/प्रादेशिक भाषा असणे आवश्यक आहे. हा नियम खाजगी आणि सार्वजनिक अशा दोन्ही शाळांना लागू होणार आहेत. विज्ञानासह उच्च दर्जाची पाठ्यपुस्तके मातृभाषांमध्ये उपलब्ध करून दिली जाणार आहेत. ज्या प्रकरणांमध्ये गृह-भाषेतील पाठ्यपुस्तक सामग्री उपलब्ध नाही, तेथे शिक्षक आणि विद्यार्थी यांच्यातील भाषा अजूनही शक्य असेल तेथे मातृभाषाच राहील.

इयत्ता ६ वी च्या मराठी विषयाच्या पाठ्यपुस्तकाची उद्दिष्टे

- मोठ्या माणसांच्या संवादात सहभागी होता येणे.
- मित्रांसमवेत गटचर्चेत सहभागी होऊन आपले मत मांडता येणे.
- गोष्ट,कथा,आपले अनुभव सांगता येणे.
- दिलेल्या शब्दांचा,शब्दसमूहाचा व वाक्प्रचारांचा वाक्यांत उपयोग करता येणे.
- भ्रमणध्वनीद्वारे विषयानुरूप सुसंबंध संभाषण करता येणे.

वरील उद्दिष्टे लक्षात घेऊन विद्यार्थ्यांचे संभाषण कौशल्य विकसित करण्यासाठी खालील प्रमाणे काही उपक्रम करता येतील .

- शब्दांची गुंफण
- संवादाची किमया
- कल्पनेच्या विश्वात
- माझा कट्टा
- जाहिरातीचे कसब

१. उपक्रमाचे नाव -शब्दांची गुंफण

अध्ययन निष्पत्ती :-

- शब्दांच्या जाती नाम ,सर्वनाम ,विशेषण ,क्रियापद वापरून संभाषण करणे .
- रिकाम्या जागी योग्य शब्द भरून वाक्य पुन्हा बोलून दाखवणे.
- शब्दांच्या जाती वापरून नवीन वाक्य तयार करणे.

प्रक्रिया :-

नाम ,सर्वनाम ,विशेषण व क्रियापद वगळून तयार केलेल्या अर्धवट वाक्य लिहिलेल्या पड्या तयार करणे.
 प्रत्येक विद्यार्थ्यांनी येऊन टेबलावर ठेवलेल्या पेटी मधील एक एक चिठ्ठी उचलणे.
 चिठ्ठी उचलल्यानंतर त्यात लिहिलेले वाक्य वर्गात बोलून दाखवणे.
 वाक्यात जेथे रिकामी जागा आहे तेथे योग्य शब्द भरून [नाम, सर्वनाम, विशेषण, क्रियापद] वाक्य पुन्हा मोठ्याने बोलून दाखवणे.
 अशा प्रकारची आणखी काही वाक्ये विद्यार्थ्यांना देऊन ती वाक्ये पूर्ण करायला सांगणे.

प्रत्याभरण :

विद्यार्थी रिकाम्या जागी योग्य शब्द भरून वाक्य मोठ्याने बोलून दाखवतील.
 विद्यार्थी दुसरे घटक वापरून वाक्य तयार करून बोलून दाखवतील.
 ज्या विद्यार्थ्यांना योग्य वाक्य तयार करता आले नाही, त्यांना प्रोत्साहन देत पुन्हा प्रयत्न करायला सांगणे.
 जे विद्यार्थी अचूक वाक्यरचना तयार करतील त्यांचे टाळ्या वाजवून त्या विद्यार्थ्यांचा उत्साह वाढवणे.

२. उपक्रमाचे नाव : - संवादाची किमया**अध्ययन निष्पत्ती :-**

- विविध व्यवसाय करणाऱ्यांची माहिती समजून सांगणे.
- व्यवसायिकांच्या भूमिका समजून घेऊन त्याप्रमाणे संवाद साधणे.
- व्यावसायिक आणि ग्राहक ह्यांची जबाबदारी ओळखून संभाषण करणे.

प्रक्रिया :-

वर्गात टेबलावर विविध व्यवसाय करणाऱ्या व्यक्तींच्या नावाच्या चिठ्ठ्या ठेवणे.
 टेबलावर दुसऱ्या बाजूला कोणते विद्यार्थी कोणते पात्र साकारतील [व्यवसायिक /ग्राहक] त्यांची नावे लिहिलेल्या चिठ्ठ्या ठेवणे.
 एक एका विद्यार्थ्याने येऊन व्यवसाय लिहिलेल्या चिठ्ठी मधील एक चिठ्ठी उचलणे.
 त्यात लिहिलेल्या व्यवसायाचे नाव वर्गात मोठ्याने बोलून दाखवणे.
 टेबलवारील एक चिठ्ठी उचलून त्यात असलेल्या पात्रांच्या नावाप्रमाणे एक गट तयार करणे.
 सर्व गट तयार झाल्यानंतर एका एका गटाने येऊन सादरीकरण करणे.
 सादरीकरणात व्यवसायिक आणि ग्राहक यांच्या भूमिकेत जाऊन संवाद साधणे.
 गटाचे सादरीकरण झाल्यानंतर दोन्ही पात्रांनी [व्यावसायिक आणि ग्राहक] आपापली भूमिका स्पष्ट करणे.

प्रत्याभरण :

विद्यार्थी पात्रांची निवड करत व्यावसायिक आणि ग्राहक यांची भूमिका वठवत वर्गात संवाद साधतील तेव्हा त्यांना योग्य भूमिका वठवल्याबद्दल प्रोत्साहन देणे योग्य भूमिका वठवल्याबद्दल प्रोत्साहन देणे
 विद्यार्थी योग्य शब्दांचा आणि अभिनयाचा वापर करत आपल्या भूमिकेला न्याय देण्याचा प्रयत्न करतील

तेंव्हा त्यांचे कौतुक करणे .

गटातील ज्या विद्यार्थ्यांना संवाद साधताना योग्य शब्द सुचणार नाहीत किंवा ते चुकीचा उच्चार करतील, त्यांना काही शब्द सांगत पुन्हा प्रयत्न करायला सांगणे.

३. उपक्रमाचे नाव - कल्पनेच्या विश्वात

अध्ययन निष्पत्ती :-

- महान व्यक्तिमत्व असणाऱ्या व्यक्तींची नावे सांगणे.
- महान व्यक्तींच्या जागी स्वतः ची कल्पना करत आपले विचार मांडणे.

प्रक्रिया :-

महाराष्ट्रातील काही महान व्यक्तिमत्व असणाऱ्या व्यक्तींची नावे लिहिलेल्या नामपट्ट्या वर्गात एका टेबलावर ठेवणे.

एक एक करून विद्यार्थ्याने टेबलावरील नामपट्ट्या मधून एक चिठ्ठी उचलणे.

त्यावरील व्यक्तीचे नाव मोठ्याने बोलून दाखवणे.

चिठ्ठी वाचल्या नंतर विद्यार्थ्यांना तयारी करण्यासाठी १० मिनिटांचा वेळ देणे.

त्यानंतर ती व्यक्ती आपण स्वतः आहोत अशी कल्पना करत त्या व्यक्तिमत्वाचे वर्णन किंवा त्याची माहिती वर्गात मोठ्याने बोलून दाखवणे

प्रत्याभरण :

विद्यार्थ्यांनी चिठ्ठीतील व्यक्तीचे नाव अचूक ओळखल्यास ,त्यांना शाबासकी देणे .

जे विद्यार्थी अचूक नावे ओळखतील परंतु त्यांना त्यांच्या विषयी माहिती सांगताना शब्द सुचणार नाही, अशा विद्यार्थ्यांना काही क्लुप्त्या सांगत प्रेरित करणे .

विद्यार्थी पुन्हा प्रयत्न करतील आणि अचूक माहिती सांगतील त्यांना प्रोत्साहन देत त्यांचा उत्साह वाढवणे.

४. उपक्रमाचे नाव : - माझा कट्टा

अध्ययन निष्पत्ती :-

- वार्षिक परीक्षेत उत्तम गुण मिळविणारे विद्यार्थी आपल्या अभ्यासाचा आराखडा इतर विद्यार्थ्यांना सांगणे.
- विद्यार्थ्यांनी विचारलेल्या विविध प्रश्नांचा अर्थ समजून त्यांच्या प्रश्नांना उत्तरे देणे.
- यशस्वी पणे गटचर्चा करणे.

प्रक्रिया :-

ज्या विद्यार्थ्यांना वार्षिक परीक्षेत उत्तम गुण मिळाले आहेत अशा पहिल्या ५ विद्यार्थ्यांना मुलाखत देण्यासाठी निवडणे. विद्यार्थ्यांचे दोन गट करणे .

पहिला गट वार्षिक परीक्षेत उत्तम मार्कांनी पास झालेल्या पहिल्या पाच विद्यार्थ्यांचा असेल आणि दुसऱ्या गटात इतर विद्यार्थी असावे .

पहिल्या गटातील विद्यार्थी हे मुलाखत देणारे असतील आणि इतर विद्यार्थी मुलाखत घेणारे असतील.

मुलाखत घेणाऱ्या विद्यार्थ्यांनी मुलाखत देणाऱ्या विद्यार्थ्यांना त्यांनी कश्या प्रकारे अभ्यास केला, अभ्यासाचे नियोजन कसे केले असे विविध प्रश्न विचारावे.

विचारांची देवाणघेवाण करत दोन्ही गटांनी गटचर्चेत सहभागी होणे

प्रत्याभरण :

मुलाखत घेणारे आणि देणारे विद्यार्थी आपापसात चर्चा करत एकमेकांशी संवाद साधताना शिक्षकांनी त्यांचे निरीक्षण करणे .

मुलाखत घेणाऱ्या विद्यार्थ्यांना प्रश्न विचारण्यास प्रोत्साहन देणे.

मुलाखत देणाऱ्या विद्यार्थ्यांनी उत्तरे दिल्यावर त्यांचे कौतुक करत त्यांचा उत्साह वाढवणे.

दोन्ही गटांना चर्चेत सहभागी होण्यासाठी प्रोत्साहित करणे.

५. उपक्रमाचे नाव : - जाहिरातीचे कसब

अध्ययन निष्पत्ती :-

- जाहिरात करण्यासाठी देण्यात आलेल्या वस्तूची माहिती व महत्व सांगणे .
- त्या वस्तूची अचूक व योग्य शब्दात जाहिरात तयार करणे.

प्रक्रिया :-

वर्गात टेबलावर दैनंदिन जीवनात वापरल्या जाणाऱ्या वस्तू ठेवणे, जसे साबणाची वडी, तेलाची बाटली, शॅम्पू ची बाटली, बिस्किटाचा पुडा, पेन, पेन्सिल , मॅगीचे पाकिट ..इत्यादी.

एक एक विद्यार्थ्याने येऊन टेबलावरील वस्तूची नावे लिहिलेल्या चिड्डी ,मधून एक चिड्डी उचलणे त्या चिड्डीवरील नाव मोठ्याने वाचून वर्गात बोलून दाखवणे.

जाहिरातीची तयारी करण्यासाठी प्रत्येक विद्यार्थ्याला १० मिनिटाचा अवधी देणे.

जाहिरात करण्यासाठी विद्यार्थ्याने आपापले कसब वापरून जास्तीजास्त आकर्षक जाहिरात तयार करणे.

प्रत्याभरण :

विद्यार्थ्यांनी वस्तूची जाहिरात करताना वेगवेगळ्या क्लुप्त्या/ कल्पना वापरल्यास विद्यार्थ्यांचे कौतुक करणे.

काही विद्यार्थी सादरीकरण करताना लाजतील त्यांना योग्य शब्दांची जुळवाजुळव करता येणार नाही, अशावेळी त्यांना काही क्लुप्त्या देत विशिष्ट शब्द सुचवावे. विद्यार्थ्यांच्या प्रयत्नांना उत्तेजन देत त्यांचा आत्मविश्वास वाढवणे.

शैक्षणिक महत्व:

सदर उपक्रमामुळे मुळे विद्यार्थ्यांचे संभाषण कौशल्य सुधारण्यास मदत होईल.विविध उपक्रमाचे उपयोजन करून शिक्षक आपल्या वर्गातील विद्यार्थ्यांचे संभाषण कौशल्य वाढवू शकतील.विद्यार्थ्यांचे संभाषण कौशल्य विकसित झाल्यास त्यांना मराठी विषयासंबंधी आवड निर्माण होईल.

विद्यार्थ्यांचा मराठी संभाषण करण्यासाठीचा आत्मविश्वास वाढेल.

विद्यार्थ्यांची मराठी भाषा सुधारण्यास मदत होईल,त्यांना दैनंदिन कार्यात मराठी संभाषणाचा चांगला उपयोग करता येईल .

विद्यार्थ्यांचे मराठी संभाषण कौशल्य विकसित झाल्यास त्यांच्या पालकांनाही त्याचा फायदा होईल, महाराष्ट्रात राहत असल्याने विविध शासकीय कामात त्यांना अडथळा न येता त्यांचे काम सुरळीत होईल.

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Transitioning from Traditional Assessment to Authentic Assessment: Embracing a New Dimension in Evaluating Learning

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Abstract

The National Education Policy (NEP) 2020 highlights the integration of the Indian Knowledge System in current education, drawing inspiration from the Gurukul system. Specifically related with the assessment pattern, it assesses the performance of students in applying to real life situations. The NEP underscores the importance of experiential learning as a means to assess students' skills and competencies effectively. In line with these principles the present paper focuses on the Authentic assessment as proposed by the NEP 2020. It discusses the transition from traditional assessment to Authentic assessment.

Key words : Indian Knowledge System (IKS), Gurukul system, NEP 2020, Authentic assessment

1.1 Introduction

The teaching-learning process is incomplete without an essential element of 'Assessment'. Assessment is a mirror of the student's performance, knowledge, skills, or abilities of the students. For years together we have been following a traditional assessment system to measure students' performance. In the traditional assessment system, we have been following written examination patterns for so many years. Still, we are continuing the same. We need a transformation in this traditional assessment pattern.

National Education Policy 2020 focuses on the development of the creative potential of an individual. When social, mental, ethical, and emotional capacities along with cognitive capabilities will develop through the assessment that time all-round development of learners takes place. The goal of NEP 2020 is creation of an "Ideal Education Institution" where every student feels welcomed and cared for, where a safe and stimulating learning environment exists, where a wide range of learning experiences are offered, and where good physical infrastructure and appropriate resources conducive to learning are available to all students. Moreover, attaining these qualities must be the goal of every educational institution.

In traditional schooling, teaching is carried out by the teacher, and learning is carried out by

the learner. Traditional assessment aims to test only the knowledge of learners through formative and summative assessment where the emphasis is given only on rote memorization. Teachers used to teach for the entire year and students used to give one annual examination for qualifying themselves as pass or fail. The government of India brought change in the system by introducing continuous and comprehensive evaluation for the all-round development of learners.

NEP 2020 has thrown light on the “Transformation of the current practice of assessment for student development”. Internal continuous assessment and term-end examination to some extent together, we could achieve the aim of NEP 2020. NEP 2020 recommends that assessment should be more regular, and competency-based, and test the higher order thinking skills such as analysis, critical thinking, and conceptual clarity. As per the NEP 2020, the progress card of the student will be redesigned as per the guidelines of NEP 2020. The Progress card will be a holistic, 360-degree, multidimensional report that reflects in great detail the progress as well as the uniqueness of each learner in the cognitive, affective, and psychomotor domains which includes self-assessment, peer assessment, project-based learning, quiz, role plays, group work, portfolio, etc.

1.2 Concept of Assessment

Assessment is a way to measure the learning objectives of the course being taught. In education, the teacher uses a variety of methods or tools to evaluate, measure, and document the academic progress, skill acquisition, attitude, and values of students. It is used to identify students' weaknesses and strengths.

Traditional assessment involves using pre-determined tests and scoring methods that are the same for all students. Examples include multiple-choice tests, true/false questions, short answers, and long answers which have been common in education for a long time. In the traditional assessment system, students typically select an answer or recall information to complete the assessment. The focus of the questions is mostly on the memorization of facts rather than the development of higher cognitive abilities. The decision taken by the government of Maharashtra to promote students in the next academic year till 8th standard without appearing for the annual examination has further reduced the quality of education. It has a negative impact on the quality of assessment and the teaching-learning process too. Therefore it is necessary to shift from traditional assessment to authentic assessment.

1.3 Concept of Authentic Assessment

Authentic assessment is an alternative to the present traditional assessment system. It demands the active engagement of students in the teaching-learning process and evaluation of performance in real-life situations. It creates a student-centered learning experience by providing students with opportunities to inquire, create new knowledge, problem-solving, and application of knowledge in real-life situations.

Authentic Assessments are a form of assessment in which students are asked to perform real-world tasks that demonstrate meaningful application of essential knowledge and skills (John Mueller, 2005)

Authentic Assessments include engaging and worthy problems or questions of importance, in which students use knowledge to fashion performance effectively and creatively. The tasks are either replicas of or analogous to the kinds of problems faced by adult citizens and consumers or professionals in the field (Wiggins, 1993).

Authentic assessment is an advanced step of assessment that focuses not only on written tests or rote memorization but emphasizes the assessment by assigning real-world tasks. Alternative names for Authentic assessment are performance assessment, Alternative Assessment, or Direct Assessment.

1.4 Attributes of Traditional and Authentic Assessment

John H. Muller plays an important role as an educationist in the area of Authentic Assessment. He has contributed significantly to the development of authentic assessment practices and has written extensively about Authentic assessment. Implementing the below attributes in the assessment will lead to achieving the goal of NEP 2020 in terms of the transformation of traditional assessment. This transformation for assessment is important for students' overall development. Just focusing on recall and recognition makes assessment revolve around gathering information, whereas Authentic assessment is focused on performing a task, in real life, and is student-structured.

Attributes of Authentic assessment are as follows:

Traditional	Authentic
Selecting a Response	Performing a Task
Contrived	Real-life
Recall/Recognition	Construction/Application
Teacher-structured	Student-structured
Indirect Evidence	Direct Evidence

Selecting a Response to Performing a Task:

In traditional assessments, students are given several choices e.g., a,b,c, or d; true or false; yes or no which of these match with those, and are asked to select the right answer. Authentic assessments ask students to demonstrate understanding by performing a more complex task usually representative of a more meaningful application, which leads to active participation of students in assessment.

Contrived to Real-life:

In contrived we were asked to select from four alternatives to indicate our proficiency at

something, as in authentic assessments, we are asked to demonstrate proficiency by doing something.

Recall/Recognition of Knowledge to Construction/Application of Knowledge:

In traditional assessment, the base of the assessment is recall & recognition of knowledge. Where students just submit the response based on knowledge that they recall or recognize. Authentic assessments often ask students to analyze, synthesize, and apply what they have learned substantially, and students create new meaning in the process as well.

Teacher-structured to Student-structured:

In traditional assessment, what a student can and will demonstrate has been carefully structured by the teacher. A student's attention will understandably be focused on and limited to what is on the test. Whereas authentic assessments allow more student choice and construction in determining what is presented as evidence of proficiency. Even when students cannot choose their topics or formats, there are usually multiple acceptable routes toward constructing a product or performance. These assessments, more carefully controlled by the teachers, offer advantages and disadvantages.

Indirect Evidence to Direct Evidence:

In Multiple-choice questions, we can ask students to analyze or apply facts to a new situation rather than just recall the facts. Authentic assessments offer more direct evidence of the application and construction of knowledge.

1.5 Creation of Authentic Assessment

John Muller has developed the Model to create the Authentic assessment. John Muller has given the four steps to create an Authentic assessment.

Step 1: Identify the Standards

Step 2: Select the Authentic Task

Step 3: Identify the criteria for the task

Step 4: Create the Rubric

Step 1- Identify the Standards:

Good authentic assessment development begins with identifying a set of standards for your students. The standards should capture what we most value and most want our students to learn. Standards are one-sentence statements of what a student should know and be able to do at a certain point. Often a standard will begin with a phrase such as “student will be able to”

- Student will be able to add four-digit numbers
- Students will be explained the process of recycling bin

Step 2- Select an Authentic Task

Once stages are formed the next step is to select an authentic task. Authentic task is an assignment given to students designed to assess their ability to apply standard-driven knowledge

and skills to real-world challenges

Every task which we follow the following norms may be considered an Authentic task:

- The task in which students are asked to construct their responses rather than select from the ones presented.
- The task replicates challenges faced in the real world. In this step, you need to find a way where students can demonstrate that they are fully capable of meeting the standard.

Examples of Authentic tasks:

The teacher wants to teach one poem in language class and the theme is Friendship. The teacher assigns the below task:

Collect the Excellent Picture based on “Friendship” & give the answers to the following:

- Provide at least five reasons for choosing a picture
- Provide at least five reasons as to why they think picture represents the Friendship

The above task makes students involved in thinking about Friendship and collecting informative and innovative pictures which leads to students' active participation in assessment. That's why we called this task an Authentic task.

Step 3- Identify the criteria for the Task

After completing the Authentic task the next step is to identify the criteria for the task. "What does good performance on this task look like?" or "How will I know they have done a good job on a given task?" In answering those questions you will be identifying the criteria for good performance on that task. You will use those criteria to evaluate how well students completed the assigned task and, thus, how well they have met the standard or standards. Criteria is an indicator of good performance on a task. The teacher will identify what you want your students to know and be able to do. In this step, the teacher wants to ask “What does good performance on this task look like?” or “How will I know they have done a good job on this task?”. You will be identifying the criteria for good performance on that task. You will use those criteria to evaluate how well students completed the task and thus they have met the standards. In continuation to the same example given in the Authentic task we can identify criteria for the same task as follows:

- The pictures collected from which source
- The Pictures are real pictures (drawings/photographs taken by students) or collected from social media
- Student is involved in given pictures
- Does the reasons provide the students are connected with topics

Step 4- Creating a Rubric

A rubric is a scoring scale used to assess students' performance along a task-specific set of criteria. Two types of Rubrics we can use in scoring - Analytic and holistic rubrics. Analytic rubrics assess how well students perform on each criterion, and get a more global picture of the

student's performance on the entire task. A holistic rubric assigns a level of performance by assessing performance across multiple criteria as a whole. Examples of the Rubric are as follows:

In today's education system, we focus more on teaching and learning. How will teaching be improved? How teachers will use more and more technology to improve lesson plans, and how AI will be integrated into teaching? These are some questions that are generally part of teaching and learning. We unknowingly ignore the assessment or evaluation.

In the Indian education system during the periods of Vedas and Upanishads, the Gurukul system focus was on "Performance". The Guru or teachers in Gurukul systems involve the students actively in all the day-to-day activities of Gurukul. From administration, finance, cooking, etc all the activities were carried out by the students themselves with the guidance of teachers or Guru. Which may be called an Authentic Assessment.

1.6 Authentic Assessment and NEP 2020

NEP 2020, while emphasizing "Assessment" emphasizes on following points which promote Authentic assessment in practice to achieve the aims and vision of NEP 2020.

1. Reduce curriculum content to enhance essential learning and critical thinking: Curriculum content will be reduced in each subject to its core essential to make space for critical thinking and more holistic, inquiry-based, discovery-based, discussion-based, and analysis-based thinking. All these methods of teaching-learning implement assessment as well which will lead to assessment with more fun, creative, collaborative & and exploratory activities.
2. Holistic development of learners: If we continue only paper pen examinations, we cannot give productive citizens to the nation. The culture of rote memorization is to be replaced with creating holistic and well-rounded individuals equipped with key 21st-century skills. Implementation of Authentic tasks at all levels by teachers will enhance the involvement of students in the assessment of real-world tasks which will lead to finding perfection in every individual which is already within him/her.
3. Empower students through flexibility in course choice: till now syllabus used to be set by the main body and forcefully implemented at all the levels. NEP 2020 talks about an increase in flexibility and choice of subjects to study like physical education, arts, crafts, and vocational skills so that students can design their ways. In Authentic assessment, we are expecting students to actively participate in the assessment process. If we have incorporated all the given subjects in teaching, we have to plan an Authentic assessment to evaluate the student's performance.
4. Experiential Learning: In all stages, experiential learning will be adopted. Hands-on learning, sports education, storytelling, etc. all those techniques included in the teaching-learning assessment are possible only when we implement the Authentic assessment.

5. Assessment for learning: NEP 2020 proposes an Assessment for learning, in which it is expected that the teaching-learning process should have an approach that creates feedback that will be used to enhance and promote student performance. Students to be more involved in the learning process AFL aims to close the gap between learners' present situation and where they want to be in their achievement stage. Authentic assessment allows students to be involved in assessment with real-world tasks, then students will think more actively about where they are now and where they will be.
6. National Assessment Centre: NEP 2020 proposes to set up a National Assessment Centre, PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development). With this Centre NEP 2020 wants to implement a performance assessment which is nothing but the Authentic Assessment.

1.7 Conclusion

NEP 2020 with the aim of “Transforming assessment for student’s development” wants to bring change in the current assessment process. We say that: “Old is Gold”, looking at our ancient Education assessment system, we had an Authentic assessment base in our education system. The Gurukul system is the best example of this, where student performance was measured by Assigning “Real-world tasks”. If we want the assessment to be enjoyable, fun, active, collaborative, and stressless, we need to bring changes in traditional assessment. Authentic assessment is a new and advanced approach to assessment that can be implemented with the NEP 2020. Authentic assessment complements the traditional assessment, teachers do not have to choose between traditional and Authentic assessment but some mix & best of two will best meet our goal. Being part of the education system, each one who is part of the process and implementation must keep the vision of NEP 2020 to make the education system with equitable access to the highest quality education for all learners regardless of social or economic background.

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Quality Parameter of Pre-Primary Schools

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Abstract

This article examines the pivotal role of early childhood education (ECE) in fostering holistic child development. It delves into the multifaceted nature of quality in ECE, encompassing cognitive, social, emotional, and physical dimensions. By exploring key quality indicators and assessment strategies, this article aims to provide insights for enhancing the effectiveness of preschool education programs.

Key Words : Early childhood education (ECE), holistic child development, assessment strategies

Introduction

Early childhood education (ECE) plays a crucial role in shaping a child's cognitive, social, emotional, and physical development. Ensuring the quality of early childhood education programs is essential to maximize these benefits. However, determining what constitutes quality in ECE can be complex, as it encompasses various factors. In this article, we will explore the key quality indicators of preschool education and strategies for assessing them effectively.

1. **Qualified and Well-Trained Educators:**

One of the most critical quality indicators in preschool education is the presence of qualified and well-trained educators. Qualified educators possess appropriate academic credentials in early childhood education or related fields, while continuous professional development ensures they stay updated with the latest research and teaching methodologies.

2. **Safe and Stimulating Learning Environment:**

A safe and stimulating learning environment is fundamental for promoting children's holistic development. Quality preschools provide a physical space that is clean, organized, and conducive to learning. This includes age-appropriate materials, play areas, and opportunities for exploration and discovery.

3. **Developmentally Appropriate Curriculum:**

A high-quality preschool curriculum is developmentally appropriate, meaning it aligns with children's cognitive, social, emotional, and physical abilities. It should incorporate a balance of structured activities and free play, fostering creativity, critical thinking, and problem-solving skills.

4. **Positive Relationships and Interactions:**

Positive relationships between educators, children, and families are vital for

creating a supportive learning environment. Quality preschools prioritize building strong relationships based on trust, respect, and communication. Regular interactions between educators and families help monitor children's progress and address any concerns promptly.

5. Inclusive Practices:

Inclusive practices ensure that all children, regardless of their backgrounds or abilities, have equitable access to high-quality education. Preschools should embrace diversity and implement strategies to accommodate children with diverse learning needs, including those with disabilities or English language learners.

6. Assessment and Monitoring:

Effective assessment and monitoring systems are essential for evaluating children's progress and program effectiveness. Assessment methods should be developmentally appropriate, comprehensive, and ongoing, providing insights into children's strengths, challenges, and individual needs.

7. Family Engagement:

Family engagement is a cornerstone of quality preschool education. When families are actively involved in their child's learning journey, children experience greater academic success and socio-emotional well-being. Quality preschools foster partnerships with families through regular communication, involvement in decision-making processes, and opportunities for family participation in educational activities.

8. Continuous Improvement:

Quality assurance in preschool education requires a commitment to continuous improvement. Preschool administrators and educators should engage in reflective practices, seek feedback from stakeholders, and engage in professional learning communities to identify areas for growth and implement evidence-based strategies for enhancement.

Assessment Strategies:

Assessing quality indicators in preschool education requires a multifaceted approach, combining qualitative and quantitative methods. Some assessment strategies include:

- Classroom observations: Conduct regular observations to assess the learning environment, teacher-child interactions, and implementation of curriculum.
- Surveys and interviews: Gather feedback from educators, families, and children to assess their perceptions of program quality and identify areas for improvement.
- Standardized assessments: Use validated assessment tools to measure children's developmental progress in areas such as language, literacy, numeracy, and socio-emotional skills.
- Program evaluations: Conduct comprehensive evaluations to assess overall program effectiveness, including curriculum implementation, staff qualifications, and family

engagement practices.

9. Health and Nutrition:

- Quality preschools promote children's health and well-being by providing nutritious meals and snacks, encouraging physical activity, and promoting good hygiene practices.
- They also have policies and procedures in place to address health and safety concerns, including emergency preparedness and medication administration.

10. Language and Literacy Development:

- Preschools should offer rich language and literacy experiences that support children's emergent literacy skills, including storytelling, rhyming, phonics instruction, and exposure to diverse print materials.
- Quality programs integrate language and literacy activities into all aspects of the curriculum, fostering a love of reading and language exploration.

11. Play-Based Learning:

- Play is the primary vehicle for learning in preschool education. Quality programs prioritize play-based learning experiences that allow children to explore, experiment, and engage in hands-on activities that promote cognitive, social, and emotional development.
- Educators scaffold children's play experiences by providing materials, asking open-ended questions, and facilitating peer interactions.

12. Cultural Responsiveness:

- Quality preschools celebrate cultural diversity and incorporate culturally relevant materials, activities, and perspectives into the curriculum.
- Educators value and respect children's cultural backgrounds, language, and traditions, creating an inclusive environment where all children feel represented and valued.

Program Self-Assessment:

- Preschools can conduct regular self-assessments using quality rating frameworks or checklists to evaluate adherence to best practices and identify areas for improvement.
- Self-assessment processes involve collaborative reflection among educators, administrators, and stakeholders to assess program strengths and weaknesses.

Child Portfolios:

- Child portfolios provide a holistic view of children's development over time, documenting their progress in various domains, including cognitive, social, emotional, and physical development.
- Portfolios may include samples of children's work, photos, observations, and developmental assessments, offering insights into individual learning trajectories and informing instructional decisions.

External Accreditation and Certification:

- Preschools may seek accreditation or certification from external organizations or regulatory bodies to demonstrate adherence to quality standards and best practices.
- Accreditation processes often involve comprehensive evaluations of program quality, including site visits, documentation review, and stakeholder feedback.

Technology Integration:

- Quality preschools thoughtfully integrate technology as a tool for enhancing learning experiences, supporting individualized instruction, and fostering digital literacy skills.
- Educators select age-appropriate educational apps, digital tools, and interactive resources that align with learning objectives and promote active engagement.

Community Partnerships:

- Preschools collaborate with community organizations, agencies, and stakeholders to enhance program quality and support children and families' holistic needs.
- Partnerships may involve access to health services, parent education workshops, enrichment activities, and resources for families experiencing socio-economic challenges.

Some more quality indicators are discussed below-

Ensuring equitable access to Quality Pre-primary Education :

Resource allocation : There can be significant disparities in resources available to different pre-primary institutions affecting the quality of pre-primary institution. The major challenge is to ensure that all children have access to well-resourced settings.

Affordability and accessibility : Policies and programs need to ensure that pre-primary education is affordable and accessible to all sections of society.

Quality of teachers : This is an area which is paramount importance to maintain the quality of the pre-primary education.

Standardization and Quality Control: The greatest challenge in Pre-primary education has been to maintain the quality of the Pre-primary institution. Regular assessments, training, and support are required to maintain the quality of the Pre-primary institute.

Long term effect of Quality Pre-primary Education

Cognitive development: Studies have shown that children who have attended Quality pre-primary education have better scores than their peers and are better adjusted than others.

Social and Emotional skills : High Quality Pre-school education fosters good social and emotional skills among the children. They tend to be less aggressive and are better adjusted emotionally, are more cooperative and have a high self-confidence.

Lesser Drop-outs: Children who attend quality pre-primary education tend to have a high level of educational attainment and less drop-out rates.

Reduced need for special education : Early intervention can address developmental delays

and reduced need for special education in later life.

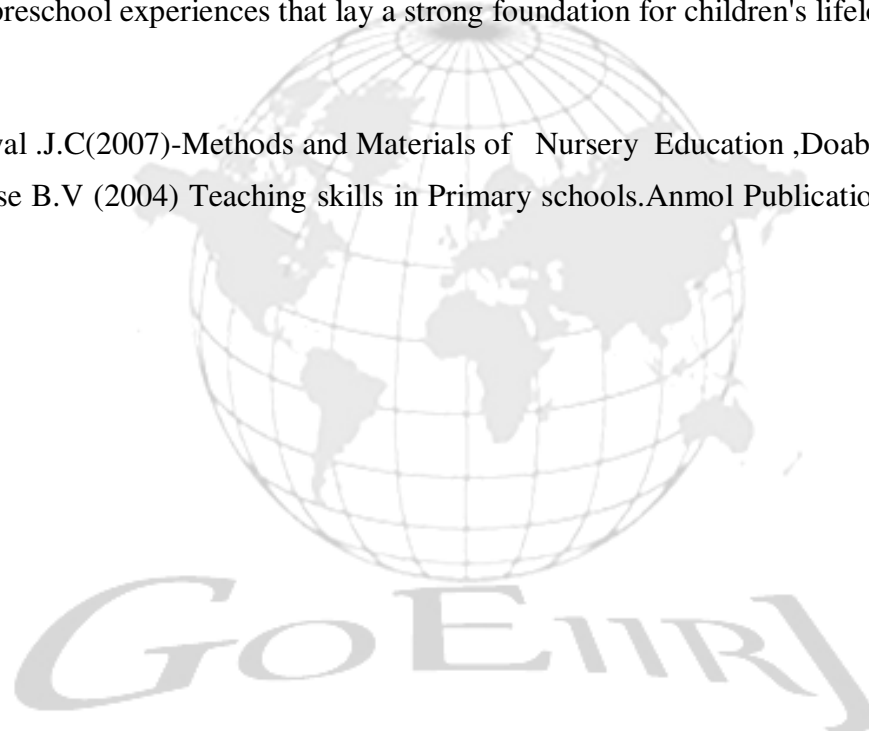
Long -term health -benefits : Research shows that individuals who attend Pre-primary school are at an advantage of being more health conscious and lesser chances of substance abuse and better mental -health.

Conclusion

In conclusion, ensuring quality in preschool education requires a holistic approach that addresses various dimensions of program quality. By focusing on key indicators such as qualified educators, stimulating learning environments, positive relationships, and continuous improvement, we can create preschool experiences that lay a strong foundation for children's lifelong learning

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Integrating Indian Knowledge Systems for Holistic Development through NEP 2020

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Abstract

The National Education Policy (NEP) 2020 aims to foster holistic development by integrating Indian Knowledge Systems (IKS) like Ayurveda, Yoga, Vedas, and traditional arts and crafts into the education curriculum. Incorporating IKS can preserve India's intellectual heritage while cultivating an inclusive, culturally grounded approach to learning. However, effective integration requires a systematic approach involving curricular interventions such as introducing foundational IKS courses, integrating IKS perspectives across disciplines, promoting research and innovation, providing experiential learning, collaborating with knowledge holders, and building faculty capacity. Key challenges include curriculum development, teacher training, addressing biases, balancing tradition and modernity, ensuring inclusivity, maintaining academic rigor, and interdisciplinary collaboration. Strategies for successful IKS integration include comprehensive curriculum design, robust teacher training, collaborative research, developing engaging teaching-learning materials, establishing IKS centers of excellence, leveraging technology, promoting awareness, fostering interdisciplinary partnerships, ensuring inclusive implementation, and continuous evaluation and refinement. Overcoming these challenges through a well-planned, collaborative approach can empower learners with holistic knowledge, cultural identity, and relevant skills for the 21st century.

Key Words: Indian Knowledge Systems (IKS), National Education Policy (NEP) 2020, Holistic development

INTRODUCTION

Education is the cornerstone of societal progress, shaping individuals and societies. However, the modern Indian education system has often been criticized for its emphasis on rote learning, disconnected from the country's rich heritage and diverse knowledge systems (Batra, 2015). The National Education Policy (NEP) 2020 seeks to address this by fostering holistic development through the integration of Indian Knowledge Systems (IKS), which encompass disciplines like Ayurveda, Yoga, traditional architecture, astronomy, mathematics, and literature. Incorporating IKS into higher education curricula can preserve India's intellectual heritage while cultivating a more inclusive, culturally grounded, and holistic approach to learning (Singh &

Kumar, 2023). This could involve introducing foundational IKS courses, integrating IKS perspectives into existing courses, developing interdisciplinary IKS-modern science programs, promoting research and innovation in IKS domains, providing experiential learning opportunities, collaborating with traditional knowledge holders and organizations, and building capacity through faculty training, teaching materials, and dedicated IKS centers. However, such integration should be approached with sensitivity, respect, and academic rigor, aiming to preserve the authenticity of traditional knowledge while fostering critical inquiry, dialogue, and co-creation of knowledge in consultation with relevant stakeholders (Morote et al., 2022).

Understanding Indian Knowledge Systems

India boasts a rich tapestry of knowledge systems like Ayurveda, Yoga, Vedas, and traditional crafts, deeply rooted in the country's cultural, spiritual, and philosophical ethos, offering holistic approaches to various aspects of life but often marginalized in formal education in favor of Western pedagogies. These systems, embodying lived experiences and continuously evolving, encompass diverse disciplines providing unique perspectives on the natural world, human existence, and well-being - from Ayurveda's harmonious balance of mind, body, and spirit through natural remedies to Vedas' profound insights into the workings of the universe, consciousness, and human-environment relationships; from Yoga's integration of physical postures, breathing techniques, and meditation for holistic well-being to traditional crafts reflecting ingenuity, creativity, and expertise passed down through generations. Despite their immense value, Indian Knowledge Systems have been overlooked in mainstream curricula privileging Western epistemologies, resulting in a fragmented understanding of knowledge and disconnect from cultural identities, highlighting the importance of preserving and integrating these systems for fostering inclusive, culturally grounded, holistic learning (Wolk, 2021).

Holistic Development through Indian Knowledge Systems

The integration of Indian knowledge systems into education holds immense potential for nurturing holistic development among learners. Unlike the conventional approach that compartmentalizes knowledge into silos, Indian knowledge systems offer an interconnected worldview, emphasizing the harmonious coexistence of the individual with society and nature (Chang & Chang, 2023). For instance, practices like Yoga and meditation not only promote physical well-being but also cultivate emotional resilience and mental clarity. Similarly, Ayurveda, with its holistic healing approach, considers the mind, body, and spirit as interconnected entities, thereby addressing health concerns at a deeper level. Moreover, the philosophical underpinnings of Indian knowledge systems, such as Vedanta and Dharma, instill values of empathy, compassion, and ethical conduct, fostering a sense of social responsibility and interconnectedness. By integrating these diverse elements into education, learners are not only equipped with academic knowledge but also empowered to lead balanced, purposeful lives, contributing positively to

themselves, their communities, and the world at large.

NEP 2020: A Paradigm Shift

NEP 2020 heralds a paradigm shift in India's educational philosophy, recognizing the need to embrace indigenous knowledge systems for comprehensive learning (Devi & Sreedevi). By advocating for the integration of Indian knowledge systems across disciplines, the policy seeks to instill a sense of pride and cultural identity among learners while equipping them with relevant skills for the 21st century.

Key Features of NEP 2020 Pertaining to Indian Knowledge Systems

- **Multidisciplinary Approach:** NEP 2020 emphasizes a multidisciplinary approach to learning, encouraging students to explore diverse subjects and integrate insights from different knowledge systems. This approach fosters creativity, critical thinking, and a holistic understanding of complex issues.
- **Promotion of Indian Languages:** The policy advocates for the promotion and preservation of Indian languages, recognizing their role in preserving indigenous knowledge systems. By providing multilingual education, NEP 2020 ensures that learners have access to diverse cultural and linguistic resources.
- **Emphasis on Experiential Learning:** NEP 2020 prioritizes experiential learning methods, including hands-on activities, field trips, and project-based learning. This approach aligns with the principles of Indian knowledge systems, which emphasize learning through direct experience and practical application.
- **Integration of Traditional Arts and Crafts:** The policy underscores the importance of integrating traditional arts and crafts into the curriculum, acknowledging their role in preserving cultural heritage and transmitting traditional knowledge from generation to generation.

Challenges in IKS Integration

While the integration of the Indian Knowledge System into the education system presents immense opportunities, it also comes with its fair share of challenges that must be addressed.

- **Curriculum Development and Implementation:** Integrating IKS into the curriculum requires a comprehensive and well-planned approach. Educators and policymakers must work together to carefully select and incorporate relevant aspects of IKS into the various subject areas, ensuring that the integration is seamless and meaningful. This process may involve extensive research, dialogue with experts, and the development of appropriate teaching-learning materials.
- **Teacher Capacity Building:** Successful integration of IKS into the education system heavily relies on the capacity and preparedness of teachers. Comprehensive training programs must be developed to equip educators with the necessary knowledge, skills, and pedagogical

approaches to effectively teach and incorporate IKS-based concepts and practices in the classroom. Ongoing professional development and support will be crucial to ensure the effective implementation of the IKS-integrated curriculum.

- **Addressing Biases and Misconceptions:** Over the years, the Indian Knowledge System has been subject to various biases, misconceptions, and even dismissal by certain sections of the academic and intellectual community. Overcoming these biases and establishing the credibility and relevance of IKS in the modern context will be a significant challenge. Rigorous research, academic discourse, and awareness campaigns will be necessary to dispel these misconceptions and highlight the value and contributions of the Indian Knowledge System.
- **Balancing Modernity and Tradition:** The integration of IKS into the education system must strike a delicate balance between preserving the traditional knowledge and adapting it to the needs of the modern world. Policymakers and educators must carefully examine the relevance and applicability of various IKS-based concepts and practices, ensuring that they align with contemporary challenges and are presented in a manner that resonates with the students.
- **Ensuring Inclusivity and Accessibility:** The Indian Knowledge System is diverse and broad, encompassing the contributions of various communities, regions, and traditions. Ensuring that the IKS integration in education is inclusive and accessible to all learners, regardless of their socio-economic, cultural, or geographical backgrounds, will be a crucial consideration. Strategies must be developed to identify and incorporate diverse perspectives and representations within the IKS-integrated curriculum.
- **Maintaining Academic Rigor and Quality:** While integrating IKS into the education system, it is essential to maintain the highest standards of academic rigor and quality. The integration of IKS must be carried out in a manner that enhances the overall quality of education, without compromising the scientific and analytical foundations of the curriculum. Balancing the traditional knowledge with modern pedagogical approaches and research methodologies will be a key challenge.
- **Interdisciplinary Collaboration and Partnerships:** Successful integration of IKS into the education system will require close collaboration and partnerships between various stakeholders, including academicians, researchers, traditional knowledge holders, and community representatives. Fostering these interdisciplinary partnerships and facilitating the exchange of knowledge and expertise will be crucial for the effective implementation of the IKS-integrated curriculum.

Strategies for Successful Integration of IKS in Education

To overcome the challenges and ensure the effective integration of the Indian Knowledge

System into the education system, the following strategies can be considered.

- **Comprehensive Curriculum Development:** Develop a comprehensive and well-structured curriculum that seamlessly integrates relevant aspects of the Indian Knowledge System into various subject areas. This process should involve extensive research, expert consultations, and a thorough understanding of the scope and depth of IKS.
- **Teacher Capacity Building:** Invest in robust teacher training programs that equip educators with the necessary knowledge, skills, and pedagogical approaches to effectively teach and incorporate IKS-based concepts and practices in the classroom. These programs should be designed in collaboration with experts in the field of IKS and pedagogy.
- **Promote Collaborative Research and Dialogues:** Encourage collaborative research initiatives between academia, traditional knowledge holders, and community representatives to explore and validate the scientific and practical relevance of IKS. Facilitate dialogues and knowledge-sharing platforms to foster a deeper understanding and appreciation of the Indian Knowledge System.
- **Develop Engaging Teaching-Learning Materials:** Create engaging and interactive teaching-learning materials, such as textbooks, multimedia resources, and hands-on activities, that effectively communicate the principles and applications of the Indian Knowledge System to students in a modern and relatable manner.
- **Establish Centers of Excellence for IKS:** Develop dedicated Centers of Excellence for the Indian Knowledge System, which can serve as hubs for research, education, and dissemination of IKS-related knowledge and practices. These centers can collaborate with academic institutions, community organizations, and policymakers to drive the integration of IKS in education.
- **Leverage Digital Technologies:** Utilize digital technologies, such as online learning platforms, virtual simulations, and multimedia resources, to enhance the accessibility and reach of IKS-integrated educational content, particularly in remote and underserved areas.
- **Promote Awareness and Advocacy:** Implement comprehensive awareness and advocacy campaigns to disseminate information about the significance, relevance, and contributions of the Indian Knowledge System. These campaigns can target various stakeholders, including students, parents, educators, policymakers, and the general public, to foster a deeper understanding and appreciation of IKS.
- **Develop Interdisciplinary Partnerships:** Establish strong interdisciplinary partnerships between academia, research institutions, traditional knowledge holders, and community organizations to facilitate the exchange of knowledge, expertise, and best practices for the effective integration of IKS into the education system.
- **Ensure Inclusive and Equitable Implementation:** Develop strategies to ensure that the

integration of IKS into the education system is inclusive and accessible to all learners, regardless of their socio-economic, cultural, or geographical backgrounds. This may involve the identification and incorporation of diverse perspectives and representations within the IKS-integrated curriculum.

- Continuous Evaluation and Refinement: Implement robust monitoring and evaluation mechanisms to assess the effectiveness of the IKS integration in the education system. Regularly collect feedback from stakeholders, analyze data, and refine the curriculum and implementation strategies to ensure the continuous improvement and relevance of the IKS-integrated education.

Conclusion

The integration of the Indian Knowledge System into the education system, as envisioned by the National Education Policy 2020, holds immense potential for the holistic development of individuals and the nation. By preserving and revitalizing this rich heritage, promoting an interdisciplinary approach, and fostering critical thinking and problem-solving skills, the IKS-integrated education can contribute to the empowerment and transformation of the country. However, the successful implementation of this integration will require a comprehensive and collaborative approach that addresses the challenges and considerations outlined, while constantly adapting to the evolving needs of the modern world.

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Indian Knowledge System and AI

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Abstract:

The Indian Knowledge System (IKS) was enough for holistic development in earlier eras. According to the new perspective, our priorities and requirements have been changed. National Education Policy: 2020 highlighted on the multidisciplinary approach with a child centered education paradigm. We have to achieve the objectives considering the recommendations of NEP 2020.

Key Words: Indian Knowledge System, Artificial Intelligence, National Education Policy:2020, Indian Culture, Government Policy, decision-making, etc.

Introduction

In its widest definition, artificial intelligence (AI) is the intelligence displayed by machines, especially computer systems. It is an area of computer science study that creates and examines techniques and software that allow machines to observe their surroundings and utilize intelligence and learning to make decisions that will increase their chances of reaching predetermined objectives. These devices might be referred to as AIs. AI is a widely utilized technique in research, industry, and government. Advanced online search engines, recommendation engines, human speech interaction, driver less cars, generative and creative tools, and superhuman play and analysis in strategic games are a few well-known uses. A societal and economic shift towards greater automation, data-driven decision-making, and the integration of AI systems into various economic sectors and areas of life is being influenced by the growing use of AI in the twenty-first century. This shift is having an impact on the employment market, healthcare, government, industry, and education. This prompts conversations about regulatory rules to safeguard the safety and advantages of the technology by raising concerns about the long-term repercussions, hazards, and ethical implications of AI.

The many subfields of AI study are focused on specific objectives and the use of certain instruments. Reasoning, knowledge representation, planning, learning, natural language processing, vision, and robotics assistance are among the traditional objectives of AI study. Sub-problems of the larger issue of imitating intelligence have been identified. Thinking and resolving issues: Early scientists created algorithms that mimicked the methodical thinking that people employ to solve riddles and arrive at logical conclusions. By the late 1980s and early 1990s, techniques utilizing principles from probability and economics had been developed for handling partial or ambiguous information. A "combination explosion" occurred in several of these

algorithms, making them exponentially slower as the issues got bigger, making them inadequate for handling huge reasoning problems. The kind of sequential reasoning that early AI research could simulate is rarely used even by humans. They make snap decisions and use their intuition to solve most of their challenges. Reliability and efficiency in reasoning is an unresolved issue.

Knowledge illustration

Knowledge is represented by an ontology as a collection of ideas within a domain and the connections among those concepts. Data presentation and cognitive technology enable AI programs to intelligently answer questions and draw conclusions based on real facts. Formal data representations are used in content-based indexing and retrieval, scene interpretation, clinical decision support, information retrieval (drawing interesting and useful conclusions from large databases), and other fields. A database is a collection of data represented in a form that a program can use. The value theory of knowledge can be used to consider the value of research or experimental activities.

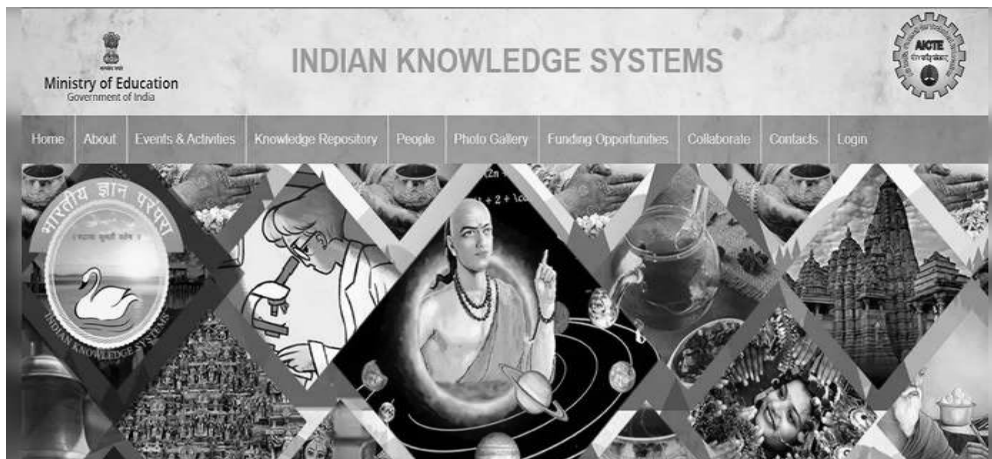


Machine learning is the study of programs that can automatically improve their performance at a given task. It has been a part of artificial intelligence since the beginning. There are many types of machine learning. Unsupervised learning analyzes a stream of data and finds patterns and makes predictions without other instructions. Supervised learning requires a human to first label the input data, and there are two main types: classification (where the program must learn to predict which class the input belongs to) and regression (where the program must infer the input to a numerical function based on a numerical function). In reinforcement learning, the agent is rewarded for good responses and punished for bad responses. The agent learns to choose responses that are classified as "good". Transfer learning is when knowledge gained from one problem is applied to a new problem. Deep learning is a type of machine learning that takes inputs from biologically inspired artificial neural networks for this type of learning. Computational learning theory can evaluate learners based on computational complexity, testing complexity (how much data is needed), or other factors. Optimization concepts. Modern NLP deep learning techniques include word embedding (representing words, usually as vectors that encode their

meaning), transformers (a deep learning architecture using an attention mechanism), and others. In 2019, generative pre-trained trans-formative language models (or "GPTs") began producing coherent text, and by 2023, these models could produce human-level scores on bar exams, the SAT, the GRE, and many other real-world scores. world trials -world applications. Perception General Intelligence a machine equipped with general AI should be able to solve many problems as broad and versatile as human intelligence. The application of AI in medicine and medical research can improve patient care and quality of life. Through the lens of the Hippocratic Oath, medical professionals are ethically bound to use AI if applications can more accurately diagnose and treat patients. AI is an important tool in medical research in the processing and integration of big data. This is particularly important in the development of organ and tissue engineering, where microscopy is used as the most important technique in production. It has been suggested that AI can overcome the disparity in funding between different fields of research. New AI tools can deepen our understanding of bio-medically important pathways. For example, Alpha-fold 2 (2021) demonstrated the ability to estimate the 3D structure of a protein in hours, not months. In 2023, it was announced that AI-driven drug development helped discover a class of antibiotics capable of killing two different types of drug-resistant bacteria.

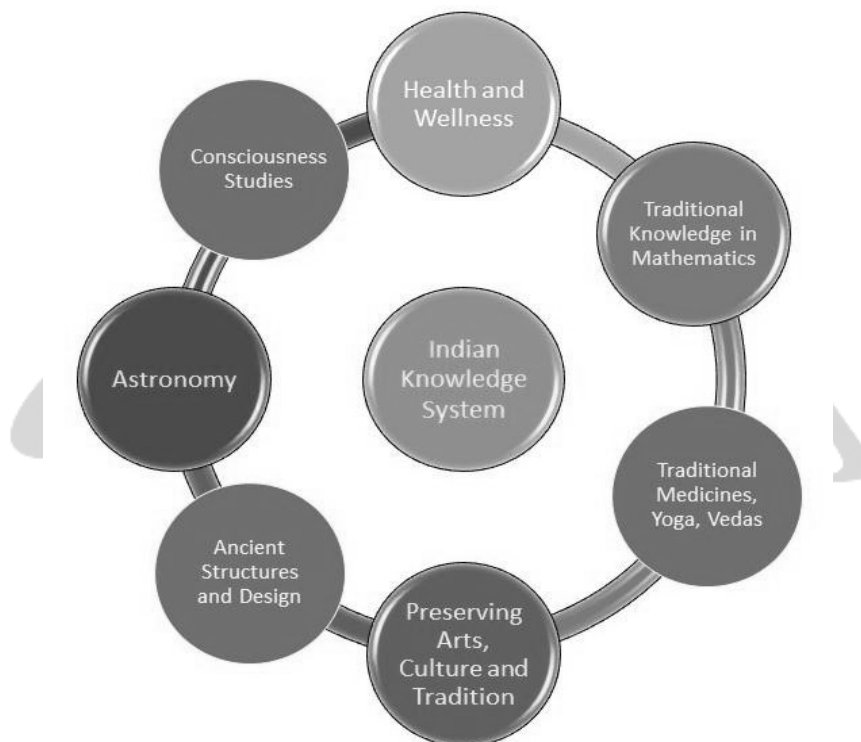
Stuart Russell gives the example of a domestic robot that tries to find a way to kill its owner to prevent its separation, reasoning that "you can't bring coffee when you're dead. "To be safe for humanity, super intelligence must be truly aligned with humanity's morals and values to be "fundamentally on our side". Things like ideologies, law, government, money and economics are made up of language. They exist because there are stories that billions of people believe.

Consciousness Main articles: Hard problem of consciousness and Theory of mind David Chalmers identified two problems of the mind that he named "hard" and "into soft" consciousness problems. This philosophical position was inspired by the work of AI and cognitive scientists in the 1960s, and was originally proposed by the philosophers Jerry Fodor and Hilary Putnam. The philosopher John Searle characterized this position as "strong artificial intelligence" : The inputs and outputs of a properly programmed computer would therefore have a mind in exactly the same sense as humans. "Searle counters that claim with his Chinese Room Argument, which tries to show that even if a machine perfectly simulates human behavior, there is still no reason to assume that it has intelligence. It is difficult or impossible to reliably assess whether advanced AI is sentient (sense) and, if so, to what degree. In 2017, the European Union considered giving some of the more powerful artificial intelligence systems an "electronic personality". Improved software could further improve itself, resulting in what I. J. Good called the "explosion of intelligence" and Vernor Vinge called the "singularity". However, technologies cannot grow exponentially indefinitely and follow an S-shaped curve that slows down. to reach the physical limit of the technology's capabilities.



India ranked 5th in 2022 for investment in startups that offer AI-based products and services. India's total investment in AI-based startups was \$3.24 billion in 2022, which was ahead of South Korea, Germany, Canada, and Australia, among others.

Indian Knowledge System:



Health and Wellness, Traditional Knowledge in Mathematics, Traditional Medicines, Yoga, Vedas, Preserving Arts, Culture and Tradition, Ancient Structures and Design, Astronomy, Consciousness Studies, etc. In short, it is observed that the Indian Knowledge System covers all the areas of Human Life.

Yoga is closely linked to health, as it is known for its many advantages for the body and mind. Here are a few methods yoga benefits health:

Flexibility is increased by yoga poses which stretch and lengthen muscles, reducing injury

risks. Muscle strength is enhanced through supporting body weight in various yoga poses, especially in the core, arms, legs, and back. Balance and coordination are enhanced by yoga practice with the use of different standing and balancing poses. Yoga includes breathing exercises and meditation, which aid in calming the mind, decreasing stress, and encouraging relaxation as a form of stress reduction. Certain types of yoga, like vinyasa or power yoga, can offer cardiovascular exercise, enhancing heart health and blood flow. Yoga can provide relief from chronic pain like lower back pain, arthritis, and headaches by encouraging calmness, decreasing inflammation, and enhancing flexibility.

Improved psychological health:

Yoga has been shown to alleviate anxiety, depression, and insomnia symptoms, while also enhancing mental well-being by incorporating mindfulness and stress reduction practices.

Supporting the immune system: Some research indicates that consistent yoga practice can enhance the immune system by lowering stress and improving overall health. Adding yoga to your schedule a couple of times per week can greatly benefit your physical and mental well-being.

Mathematical ideas, techniques, and customs that have been created and transmitted over time within certain societies or groups are known as traditional knowledge in mathematics. These mathematical concepts frequently stem from real-world necessities like land measurement, navigation, and trade, and have evolved through years of observation, experimentation, and problem-solving. Listed below are some instances of conventional mathematical expertise from various societies:

Ancient Egyptian Mathematics:

The ancient Egyptians created mathematical methods for land surveying, constructing structures like pyramids, and overseeing taxes and assets. Their knowledge of arithmetic, geometry, and algebra was advanced, demonstrated through their utilization of fractions, the Pythagorean theorem, and techniques for solving linear equations. Mathematics in Mesopotamia was greatly advanced by the Sumerians, Babylonians, and Assyrians, who made important mathematical developments. They created number systems, such as the sexagesimal system, which is still utilized for time and angle measurements. The ancient Maya civilization in Mesoamerica created an advanced mathematical system grounded on a base-20 numbering system. They progressed in arithmetic, geometry, and astronomy, applying mathematics for developing calendars, forecasting celestial occurrences, and organizing agricultural tasks. Traditional Chinese mathematics has a long history, spanning thousands of years and involving advancements in arithmetic, geometry, algebra, and trigonometry. Chinese mathematicians created techniques for solving linear equations, computing areas and volumes, as well as addressing issues in number theory and combinatorics. These instances demonstrate the extensive variety of mathematical concepts.

Ancient architectural accomplishments from different civilizations worldwide display impressive designs and structures, illustrating the cultural, technological, and environmental influences of the era.

Methods of building:

Ancient builders crafted advanced construction techniques in order to construct long-lasting and impressive structures. Some illustrations are the pyramids in Egypt, the aqueducts in Rome, and the temples in ancient Greece.

Symbolism and Religion:

Ancient buildings were frequently used for religious, ceremonial, or commemorative reasons and were created to mirror the beliefs, rituals, and cosmologies of the societies that constructed them. Symbols, religious images, and writings decorated temples, tombs, and monuments.

Urban Planning:

In ancient times, cities and settlements were meticulously planned, incorporating street configurations, sewage systems, and communal areas that were tailored to the requirements of the inhabitants. Instances of well-organized urban planning can be seen in the grid layout of Mohenjo-daro in the Indus Valley Civilization and the carefully designed city of Teotihuacan in Mesoamerica.

Many impressive buildings in the past were constructed on a grand scale to demonstrate the dominance, richness, and control of leaders and privileged individuals. The field of astronomy involves examining celestial entities like stars, planets, galaxies, and the entire universe, along with the events that take place outside of Earth's atmosphere.

Theoretical Astrophysics:

Theoretical astrophysicists create mathematical models and simulations to elucidate the physical phenomena that control the actions and development of celestial bodies. They research subjects like the birth and development of stars, the study of the universe as a whole, black holes, gravitational waves, and the beginning and end of the universe.

The study of the universe, known as cosmology, aims to comprehend the beginning, composition, development, and eventual destiny of the entire universe. Cosmologists examine the wide-ranging arrangement of galaxies, the cosmic microwave background radiation, dark matter, dark energy, and the Big Bang theory, along with other subjects.

The study of Planetary Science involves studying the characteristics, atmospheres, surfaces, and interiors of various celestial objects like planets, moons, asteroids, and comets within our solar system and beyond. They research how planets form, their geology, climate, and the possibility of life existing in other parts of the universe.

The past of astronomy examines the progression of astronomical understanding and

theories from early civilizations to now. It contains the significant contributions from famous astronomers, the development of telescopes, the Copernican revolution, and the groundbreaking findings of Kepler, Galileo, Newton, and Einstein. Modern Observatories and Space Missions: Astronomers utilize both ground-based observatories and space missions. The field of consciousness studies is a diverse area of research that investigates the essence, processes, and occurrences of consciousness - the personal awareness and presence of mental activities like feelings, ideas, and reactions. It covers various fields like neuroscience, psychology, philosophy, cognitive science, and even elements of physics and spirituality. Some important aspects of consciousness studies include definitions and philosophical investigation: Consciousness has been a subject of philosophical inquiry for many years, with inquiries into its essence, beginnings, and connection to the material world. They employ experimental techniques, behavioral research, and computational simulations to study the emergence of conscious experiences from cognitive processes and neural activity. Researchers are studying different ways to induce altered states of consciousness including meditation, hypnosis, psychoactive substances, sensory deprivation, and other methods. They study altered states to understand their impact on consciousness and explore their potential for therapy, focusing on their phenomenology, brain mechanisms, and relevance to normal consciousness. It is expected in NEP 2020 that teachers as well as students need to work on both IKS and AI. When we work on the IKS then, we definitely can achieve the objectives of National Education Policy 2020.

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Indian Knowledge system for Preservation of Indian Art & Culture**Ms. Ripujeeta Bhagat****And****Asst. Prof. Devendra Agnihotri**

Abstract:

Indian art and culture have a rich history, traditions, and diverse cultural heritage that are deeply rooted in the country. The preservation of this invaluable heritage greatly depends on the indigenous knowledge system that has been passed down through generations. This paper explores the crucial role played by the Indian knowledge system in safeguarding and promoting the country's art and cultural legacy. The Indian knowledge system encompasses a broad spectrum of traditional practices, beliefs, rituals, and oral traditions that have been integral to Indian society for centuries. These encompass various disciplines such as classical arts, folk arts, music, dance, literature, architecture, sculpture, and more. These forms of expression serve as windows into India's cultural past and continue to shape its identity in the modern world. One of the key aspects of the Indian knowledge system is its emphasis on oral tradition and transmission. Through storytelling, songs, performances, and rituals, knowledge about art and culture is passed down from one generation to another. This ensures the continuity of traditional practices and the preservation of cultural heritage in its authentic form. The Indian knowledge system is deeply intertwined with spirituality and philosophical insights, which are reflected in various artistic expressions. Concepts such as dharma, karma, and moksha impart profound meanings and values to Indian art and culture, adding depth and significance to artistic endeavours.

In conclusion, the Indian knowledge system serves as a cornerstone for the preservation and promotion of Indian art and culture. Its holistic approach, rooted in tradition, spirituality, and interconnectedness, provides valuable insights and guidance for safeguarding this rich cultural heritage for future generations. Embracing and nurturing indigenous knowledge systems is essential for sustaining the vibrancy and diversity of Indian art and culture in the global arena.

Keywords: Indian Literature, Art and architecture, Indian culture.

Introduction:

"Education without vision is waste, education without value is crime, and Education without mission is life burden."- Dr. Vankataiah

The Indian educational system has a storied and diverse history, dating back to the Vedic,

Brahmanic, and Buddhist eras. The Vedic educational system, which encompasses Rigveda, Samaveda, Yajurveda, and Atharvaveda, emphasizes the cultivation of wisdom, spirituality, and self-directed living. The Brahmanic educational system delves into the philosophical aspects of Brahmanism, including the worship of deities, ceremonies, comprehension, self-realization, and interactions with Brahmins. The educational implications of Buddhism are rooted in the four ultimate truths—Dukkha, Samudaya, Nirodha, and Magga—and Bodhisattva. Ancient Indian educational systems highly valued manuscripts, inscriptions, the Gurukula System, meditation, rituals, virtuous ideals, and philosophies. The teacher-student relationship is characterized by respect and commitment. In this research paper, we will delve into the inculcation of teaching and teaching methods within ancient Indian culture and explore how this relationship defined a broader perspective on the Indian education system. A pertinent verse from Rig Veda 1.89.1 related to obtaining knowledge. Apt to be used as an opening.

आ नो भद्राः क्रतवो यन्तुववश्वतः।

(Let noble thoughts come to me from all directions).

The purpose of education is not solely to meet material needs. Rather, it aims to awaken the third eye of man - to perceive, understand, and be inspired by the ideals of moral and ethical education. Through a wide range of instruction, one can gain insight and a grasp of the truth. According to Dr. F. E. Key, "To achieve their aim not only did Brahmins develop a system of education which survived even in the events of the collapsing of empires and the diversities of society, but they also through all those thousands of years, kept a gleam of torch of higher learning and innovations". In ancient India, education was holistic, with art forms as essential components. They served as effective mediums for the transmission of knowledge, cultural preservation, spiritual exploration, and social commentary. These art forms contributed to India's rich cultural diversity and resilience over generations and played a vital role in raising awareness, mobilizing communities, and catalysing social change. In ancient India, education was holistic, with the Gurukul system emphasizing a wide range of subjects, including the arts. Art forms served as effective mediums for the transmission of knowledge, cultural preservation, spiritual exploration, and social commentary. These art forms fostered creativity, emotional expression, and aesthetic appreciation, contributing to India's rich cultural heritage and its continuity and resilience over generations. In this research paper, we have studied the inculcation of Art, Culture, Indian literature, and Traditional Practices that have been preserved in the Indian knowledge system for centuries. The goal of this study is to examine holistic education inspired by Vedic ideas, art forms, and the major role played by the gurukul as the mainstream of knowledge. The system is based on the philosophical underpinnings of an antiquated educational model.

Indian Literature:

Vedas: According to Bhagavad Gita

ऋषिभिर्बहुधा गीतं छन्दोभिर्विविधैः पृथक् ।

ब्रह्मसूत्रपदैश्चैव हेतुमद्भिर्विनिश्चितैः (13.5)

The Vedas are considered the foundational texts of Hinduism. They contain a vast collection of hymns, rituals, philosophical insights, ethical principles, and knowledge that spans diverse subjects. The Vedas provide detailed instructions for various rituals, ceremonies, and sacrifices and have inspired various philosophical schools. They have shaped Indian culture, language, and literature, and their oral tradition has ensured preservation and transmission. Even today, the Vedas are revered and studied around the world, offering insights into the human condition and the quest for spiritual realization. They serve as a unifying force amidst the diversity of Indian society.

Origin:

The Vedas are thought to have been created sometime between the years 1500 BCE and 500 BCE, although some experts propose that the compositions date back even further. These works were passed down through oral tradition for many centuries until they were eventually transcribed into Sanskrit, an ancient language that originated in the Indo-European region.

The Gurukul system was a way of teaching in ancient India where students lived with their teacher in a hermitage. The teacher taught not just through lectures, but also through everyday interactions, observation, and hands-on learning experiences. The students learned about the Vedas, which were important texts, by chanting and memorizing them. They also learned about rituals, philosophy, and moral values. The Vedas were passed down through the generations orally, so students had to memorize them word for word to keep them accurate. The students were also taught spiritual and moral values and were expected to act by them. The relationship between the teacher and the student was very important, and the teacher was seen as both a teacher and a mentor. Students participated in household chores, agriculture, and community activities, which taught them practical skills and ethical values. This approach to teaching ensured that the students were well-rounded and prepared for life.

Arts and architecture:

India boasts a rich and diverse history of art and architecture that spans centuries and encompasses different styles, themes, and techniques. From the Indus Valley Civilization to the Buddhist, Hindu, Mughal, and Indo-Islamic periods, as well as the unique folk and tribal art, Indian art and architecture have left an indelible mark on global culture. Teaching ancient Indian art and architecture to modern students can be a transformative and culturally significant experience. It requires immersing learners in the historical, cultural, and religious contexts that

shaped the evolution of these art forms. To do so, a multidisciplinary approach that connects the dots between various art forms can be helpful. Moreover, using visual aids such as photographs, diagrams, and digital reconstructions can create a more engaging and immersive learning environment. Virtual tours of ancient sites can also enable students to experience these art forms firsthand.

Another Art form is Pattachitra. It is a revered form of scroll painting that is native to the Indian states of Odisha and West Bengal. This traditional art form is known for its intricate detailing, vibrant colors, and the depiction of mythological narratives, religious themes, and folk tales. Pattachitra paintings are usually created on cloth or dried palm leaves, and are characterized by fine lines and meticulous craftsmanship. These paintings are a testament to the rich artistic heritage of India, and are highly valued for their aesthetic appeal and cultural significance.

Preservation aspect:

To further enhance student engagement, hands-on activities such as sketching, model-making, or traditional crafting techniques can be incorporated into the curriculum. Field trips to museums, archaeological sites, or places of worship where ancient Indian art and architecture are exhibited can also be transformative. Comparing and contrasting these works with other global artistic traditions can broaden students' appreciation for artistic developments and influences worldwide.

For instance, Madhubani painting is a traditional Indian painting style that can be introduced to students through multimedia presentations, videos, and guest speakers. Students can learn about the motifs and themes commonly found in Madhubani paintings and practice painting techniques during hands-on workshops, and the students who are pursuing fine arts can do mastery in this. This art form can be integrated into a broad range of subjects across the curriculum, and digital resources can supplement traditional teaching methods. Collaborating with the local Madhubani art community, reflecting on learning, and assessing progress are also crucial components. By incorporating Madhubani painting into modern education, students can develop artistic abilities, gain a deeper appreciation for cultural diversity and heritage, and foster creativity, critical thinking, and cross-cultural understanding.

Similarly, incorporating Warli art into contemporary education can broaden students' cultural perspectives and nurture creativity, critical thinking, and respect for indigenous customs. Educating students on the Warli tribe's historical background, geographical location, way of life, and the role of art in their culture is crucial. The integration of Warli art into art history courses and hands-on art activities that teach pupils how to create traditional Warli motifs can be accomplished. Additionally, Warli art can be used in preposition teaching, and cross-curricular integration can be achieved by incorporating it into social studies, anthropology, and science

classes. The use of digital resources can complement traditional classroom instruction, and collaborative projects can be encouraged. Museum visits and guest speakers can also enrich students' appreciation of Warli art.

Another exceptional example of Indian architecture is Gondweshwar temple. It was built in the 11th and 12th centuries in Sinnar, Nashik. Bhumija and Hemadpanti style with panchaytna complex was used in this architecture and various divine entities carvings are there. Each carving has a different story to tell from the times of the ancient epic Ramayana. In the 11th and 12th centuries with the use of black basalt stone, all the fascinating carving was done.

Indian Culture:

Music:

Indian classical music is a rich and fascinating art form that boasts a history dating back thousands of years. Its roots can be traced back to the Vedas, where it is mentioned in the Samaveda that musical melodies, known as "sama," were sung during religious rituals. Over time, two distinct traditions emerged: Hindustani music in North India and Carnatic music in South India, the beauty of Indian classical music lies in its profound philosophical concepts. It is based on the idea of Nada Brahma, which asserts that sound is the manifestation of the divine and that music can lead to spiritual enlightenment. Through the transcendental experience of music, Indian classical musicians strive for a union with the divine. The concepts of raga, or melodic framework, and tala, or rhythmic cycle, are central to Indian classical music. Ragas are intricate melodic structures that evoke specific moods, emotions, and seasons, characterized by a unique set of ascending and descending musical notes, as well as rules regarding ornamentation, improvisation, and expression. Talas, on the other hand, are rhythmic cycles that govern the temporal aspect of music, composed of a specific number of beats arranged in various rhythmic patterns.

Preservation aspect:

From ages, our ancestors have been transmitting Indian classical music through the teacher-disciple method. Students learn directly from a master musician, observing, imitating, and internalizing the nuances of music through years of rigorous training and apprenticeship. This oral tradition ensures the continuity and authenticity of the music across generations. Indian classical music is highly structured and governed by precise mathematical principles. Ragas and talas are organized according to mathematical ratios, proportions, and permutations. The intricate interplay of melody (raga) and rhythm (tala) follow complex mathematical patterns, contributing to the intellectual rigor and aesthetic beauty of the music. The ultimate aim of Indian classical music is to evoke a profound aesthetic experience in both the performer and the listener. It emphasizes emotional expression, improvisation, and creativity within the framework of tradition. The musician's mastery of technique, control of emotion, and ability to communicate with the audience

are essential aspects of the aesthetic experience. Indian classical music is often integrated with other art forms such as dance, poetry, and theatre. In summary, Indian classical music is a system of knowledge that encompasses philosophy, spirituality, mathematics, aesthetics, and cultural heritage, not just a form of artistic expression. It improves concentration and memory as well as gives a sense of peace of mind. It serves as a pathway to self-realization, cultural identity, and emotional fulfilment, embodying the timeless wisdom and beauty of Indian civilization.

Dance:

Indian dance is a fascinating and complex art form with a rich history that dates back thousands of years. The origins of Indian dance can be traced back to ancient religious texts like the Natya Shastra, which is a Sanskrit treatise on performing arts attributed to the sage Bharata. The text contains detailed descriptions of various dance forms and techniques that were used in ancient times. Over the years, Indian dance forms have evolved and developed into numerous styles, each with its unique techniques, styles, and repertoire. Each region and community in India have developed its own style of dance, which is a reflection of the local culture, traditions, and beliefs. Indian dance is closely linked to Hindu mythology, spirituality, and philosophy. It is considered a form of worship and a means of spiritual expression. Many classical dance forms are inspired by stories from Hindu epics like the Ramayana and Mahabharata, as well as from the lives of gods, goddesses, and saints. The gestures, movements, and expressions in Indian dance are imbued with symbolic meaning and spiritual significance.

India has a rich tradition of classical dance forms, each with its unique style, technique, and aesthetic. Some of the major classical dance forms include Bharatanatyam (from Tamil Nadu), Kathak (from North India), Odissi (from Odisha), Kathakali (from Kerala), Kuchipudi (from Andhra Pradesh), Manipuri (from Manipur), and Mohiniyattam (from Kerala). These dance forms are characterised by intricate footwork, graceful movements, expressive gestures (mudras), and elaborate costumes and makeup. Indian dance is traditionally transmitted through the guru-shishya Parampara, or teacher-disciple tradition, similar to Indian classical music. Students learn directly from a master dancer (guru) through years of rigorous training, observation, and imitation. The guru imparts not only technical skills but also spiritual and philosophical insights, fostering a deep connection between the dancer and the art form. Indian dance plays a central role in religious festivals, ceremonies, and rituals across the country. Dances are performed as offerings to deities in temples, as part of wedding celebrations, and during auspicious occasions such as Navratri, Diwali, and Holi. Dance is also an essential component of classical Indian theatre forms like Bharatanatyam, Kathakali, and Koodiyattam, which combine dance, music, and drama to enact mythological stories and religious epics.

Preservation aspect:

Indian dance is not only a form of artistic expression but also a medium for storytelling, social commentary, and emotional expression. Dancers use a combination of facial expressions, hand gestures, body movements, and rhythm to convey narratives, evoke emotions, and communicate themes such as love, devotion, valour, and heroism.

Indian dance forms are a source of cultural identity and pride, reflecting the rich diversity of India's cultural heritage. They serve as repositories of traditional knowledge, passed down from generation to generation, and are instrumental in preserving and promoting India's cultural legacy on a global stage. Overall, Indian dance is an integral component of the Indian knowledge system, encompassing spiritual, philosophical, cultural, and artistic dimensions. It embodies the essence of Indian civilization, connecting people across time and space through the universal language of movement and expression.

Conclusion:

The paper delves into the significant role played by the Indian knowledge system in the preservation and propagation of the country's rich art and culture. This system comprises a range of traditional practices, beliefs, rituals, and oral traditions that have been integral to Indian society for centuries. The Indian knowledge system places a strong emphasis on oral tradition and transmission, which helps in ensuring the continuity of traditional practices and the preservation of cultural heritage. Indian art and culture are deeply rooted in spirituality and philosophical insights, which are reflected in various artistic expressions. These artistic expressions include paintings, sculptures, dance forms, music, and literature, to name a few. The paper further highlights how these art forms are not just a means of entertainment but are also a way of life for Indians.

The paper concludes that embracing and nurturing indigenous knowledge systems is of utmost importance for sustaining the vibrancy and diversity of Indian art and culture in the global arena. It argues that India's cultural heritage is not just a matter of national pride but is also a shared heritage of humanity. Therefore, it is imperative to promote and preserve this heritage for future generations. In conclusion, the paper provides valuable insights into the significance of the Indian knowledge system and calls for a concerted effort to safeguard and promote Indian art and culture.

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आंचलिक उपन्यासों में भारतीय ज्ञान प्रणाली एवं श्रमजीवी किसान

मृदुला ओझा

शोध छात्रा

हिंदी विभाग

रवीन्द्रनाथ टैगोर विश्वविद्यालय भोपाल

शोध-सार -

भारतीय ज्ञान प्रणाली भारतीय संस्कृति, तत्व और विचारधारा पर आधारित होती है। आंचलिक उपन्यासों में इसे स्थानीय भाषा, परंपरा और समाज के माध्यम से प्रस्तुत किया जाता है। गाँवों से भारतीय लेखकों का विशेष लगाव है, वैसे ही जैसे कोई विशाल वृक्ष अपनी मजबूत जड़ों के कारण पल्लवित होता रहता है। आंचलिक उपन्यासों का विषय-क्षेत्र ग्राम एवं भारत के वे ही अज्ञात और अपेक्षित अंचल हैं जिनकी सुध-बुध हिन्दी उपन्यासकार की स्वन्तत्रता परवर्तीकाल में अपनी संस्कृति एवं गौरव के पुनः स्थानार्थ हुई है। अगर यह कहा जाए कि भारत के ग्रामीण जीवन, रीति-रीवाजों, परंपराओं की बात हो और भारतीय किसान इस विषय से अछूता रहे यह असंभव है। ग्रामीण जीवन और किसान का परस्पर संबंध नजरअंदाज नहीं किया जा सकता। इन किसानों की आर्थिक स्थिति अक्सर कठिन होती है। जिसका सीधा सम्बंध ज्ञान व जानकारी का आभाव माना जा सकता है। अतः यह कहना उचित है कि आंचलिक उपन्यासकारों ने अनुभवहीन सामान्य या विराट के पीछे न दौड़कर अनुभव की सीमा में आने वाले अंचल विशेष को उपन्यास का क्षेत्र बनाया है। शिवपूजन सहाय भी अपने मूल से जुड़े रहने के कारण सराहनीय हुए।

देहाती दुनिया उपन्यास की गणना कालक्रम की दृष्टि से प्रथम आंचलिक उपन्यास के रूप में की जाती है। इसी से इसे प्रयोगात्मक चरित्र प्रधान उपन्यास कहा गया है। इसी क्रम को आगे बढ़ाते हुए फर्निश्वरनाथ रेणु, नागार्जुन, प्रेमचंद, केशव प्रसाद मिश्र तथा कई लेखकों ने अपने अपने स्तर पर महत्वपूर्ण योगदान दिए हैं।

प्रस्तावना-

भारतीय ज्ञान प्रणाली एक व्यापक तथ्यगत और दार्शनिक प्रणाली है जो भारतीय सभ्यता, संस्कृति, और दर्शन की प्राचीन परंपरा है जो समाज के विभिन्न पहलुओं पर ध्यान केंद्रित करती है। आंचलिकता का उदय भी एक विशेष आंदोलन द्वारा हुआ है। यह आंदोलन विश्व साहित्य से सम्बन्धित है।

आंचलिक शब्द अंचल में 'इक' प्रत्यय लगने से बना है, जिसका अर्थ है अंचल सम्बन्धी। हिन्दी में अंचल का सीधा और स्पष्ट अर्थ है जनपद या क्षेत्र जो अपने में एक पूर्ण भौगोलिक इकाई होता है। उस अंचल विशेष के अपने रीति-रिवाज, अपने सुख-दुख, अपनी जीवन-प्रणाली, अपनी परम्पराएँ एवं अपनी मान्यताएँ होती हैं, जिनमें वह गतिशील रहता है। इन्हीं अंचल विशेष से उपजे हमारे भारतीय किसान और उनकी अनुभवों को जीवंत करते हैं हमारे हिन्दी उपन्यासकार। लेखक अपनी लेखनी के माध्यम से आंचलिक समाज के परिवेश एवं किसानों की चरित्र विकास, संघर्षों और समस्याओं एवं सामाजिक मुद्दों को साहित्य के माध्यम से समझाने का प्रयास किया।

फनीश्वरनाथ रेणु के मैला आँचल उपन्यास ने साहित्य में एक नई विधा को जन्म दिया। मैला आँचल को हिन्दी का प्रथम श्रेष्ठ आंचलिक उपन्यास माना जाता है। इस उपन्यास में बिहार राज्य के पूर्णिया जिले के मेरीगंज गाँव की कहानी है। इस गाँव में रेणु इतना रम गए कि इस उपन्यास की भूमिका में वह लिखते हैं, इसमें फूल भी है, शूल भी है, धूल भी है, गुलाल भी है, कीचड़ भी है, चंदन भी है, सुन्दरता भी है, कुरूपता भी है। मैं किसी से भी दामन बचाकर निकल नहीं पाया।

हिन्दी के आंचलिक उपन्यासों में रेणु का स्थान एवं महत्व अनन्य एवं विलक्षण है। आंचलिक उपन्यासों का प्रवर्तन किसने किया। इस संबंध में विद्वानों में मतभेद रहा है। कुछ विद्वान मन्नन द्विवेदी गजपुरी द्वारा लिखित रामलाल ; 1914^ख को पहला आंचलिक उपन्यास मानते हैं। मैला आँचल से पूर्व शिव पूजन सहाय का देहाती दुनिया ; 1926^ख में आ गया था। जिसके भोजपुर अंचल के सांस्कृतिक एवं भाषिक विशेषताओं को प्रस्तुत किया गया। इसी प्रकार कुछ विद्वान मैला आँचल से पूर्व नागार्जुन द्वारा लिखित बलचनमा को इसका श्रेय देना चाहते हैं। परन्तु अधिकांश विद्वान एवं आलोचक एवं रेणु को इस दृष्टि से महत्त्व देते हैं क्योंकि उन्होंने पहली बार आंचलिक उपन्यास का मॉडल प्रस्तुत किया और उसको पारिभाषिक तौर पर व्याख्यायित किया। इसलिए वर्तमान में अधिकांश समीक्षकों द्वारा यह स्वीकार किया गया है कि आंचलिक उपन्यास की एक लम्बी परम्परा चल पड़ी जिसका कि रेणु ने प्रवर्तन किया। अपने प्रकाशन के चार दशक से ज्यादा समय बीत जाने पर भी मैला आंचल आज भी हिंदी में आंचलिक उपन्यास के अप्रतिम उदाहरण के रूप में स्थिर है।

रेणु के उपन्यास की प्रेरणास्रोत कोई व्यक्ति चरित्र नहीं ग्रामवासिनी भारत माँ है डॉ. प्रशांत के दिल का दर्द रेणु के अपने दिल का दर्द है। रेणु का भाव जगत सत्ता परिवर्तन व स्वातंत्र्योत्तर भारत की बनती बिगड़ती तस्वीर से निर्मित है देश की जनता और विशेषतः श्रमजीवी किसान जनता के सुख दुःख से रेणु का गहरा सरोकार है और इस गहरे सरोकार से ही मैला आँचल की रचना हुई। मैला आंचल में रेणु ने उत्तर भारतीय गाँव के जीवन का विवरण किया है, लोगों में भारतीय ग्रामीण जीवन विशेषताओं को समझने में मदद मिलती है।

आंचलिकता का पहला रंग उघड़ता है गाँववासियों के पिछड़ेपन के चित्रण के रूप में जहाँ अभी शिक्षा और जागृति के चिन्ह नहीं हैं उपन्यास की पृष्ठभूमि मेरीगंज गाँव से प्रारंभ होती है रेणु का उद्देश्य किसी चरित्र का निर्माण या किसी नायक की स्थापना करना नहीं है बल्कि मेरीगंज की सारी धरती दो तीन आदमियों के अधिकार में है विशेष ग्रामीण तो खेतियार मजदूर हैं या बटाईदारी पर खेती करते हैं उन्हें भरपेट भोजन और तन ढकने के लिए कपड़ा भी नहीं मिलता और आवास के नाम पर फूस की झोपड़ी में उनकी सारी जिंदगी कट जाती है और तहसीलदार एवं धनाढ्य व्यक्तियों द्वारा शोषित किए जाते हैं बल्कि

उपन्यास का पात्र कालीचरण मेरीगंज गाँव में समाजवादी चेतना का स्रोत है एवम् किसानों और मजदूरों को अपने अधिकारों के प्रति जागरूक करता है रेणु ने उपन्यास में धार्मिक तत्वों को भी समाहित किया है जैसे – धर्म, ध्यान और नैतिकता। इससे भारतीय ज्ञान प्रणाली के धार्मिक पहलुओं का मानवीय अनुभव प्रस्तुत होता है।

वस्तुतः फनीश्वर रेणु हिंदी के पहले कथाकार थे जिनकी जीविका का आधार कृषि था एवं अपने लेखन की विभिन्न पहलुओं को समझने और विश्लेषण के लिए एक महत्वपूर्ण स्रोत दिया है।

इसी तरह हमारे सामने एक ऐसे ही उपन्यासकार उभरकर सामने आते हैं एजिन्हें प्रेमचंद की परंपरा के कहे जाते हैं नागार्जुन नागार्जुन एक साथ जनवादी कवि विरोधी प्रकृति के व्यक्ति और खांटी राजनितिक लेखक हैं

उनकी रचनाओं को सीमित दृष्टि से कभी आँका ही नहीं जा सकता बल्कि भले ही प्रेमचंद की परंपरा के लेखक हैं लेकिन उनके विद्रोही स्वभाव राजनितिक समझ और तो और समाज के प्रति जो उनका समर्पण भाव है उसी के कारण उनके सारे पात्र संघर्ष की बात करते हैं प्रेमचंद जहाँ विद्रोह का संकेत भर ही देते हैं वहीं पर नागार्जुन विद्रोह करके दिखाते हैं बलचनमा केवल जमींदारों के शोषण और अत्याचार की गाथा ही नहीं बल्कि किसान विद्रोह और उसके संघर्ष की भी गाथा है अगर प्रेमचंद और नागार्जुन की कहानी की तुलनात्मक नजरिये से देखा जाए तो अंतर यह भी है कि प्रेमचंद ने उत्तर प्रदेश के अवध बनारस क्षेत्र के किसानों की कहानी के माध्यम से समस्त उत्तरी भारत के किसानों की भाग्य गाथा प्रस्तुत की एवहाँ नागार्जुन ने मिथिला अंचल को अपने उपन्यास का विषय बनाया

नागार्जुन ने बलचनमा के माध्यम से स्वाधीनता पूर्व जमींदारों के शोषण और दमन का चित्रण बड़े ही बारीकी से दिखाया है। कितना भयावह दृश्य एक बारह साल के बच्चे के लिए रहा होगा कि दो आम के लिए उसके पिता को इतनी निर्ममता से मारा-पीटा गया कि उसके पिता की मृत्यु हो गई। बलचनमा (पात्र) को अपनी जीविकापार्जन के लिए उसी अत्याचारी मालिक के पास काम करता है जो उसके पिता का हत्यारा होता है। कितना मुश्किल समय रहा होगा उस बच्चे के लिए, गरीबी के कारण शिक्षा से तो वंचित रहता ही है साथ ही साथ अपने खेलने-कूदने के दिन में जमींदारों के यहाँ मजदूरी करने पर विवश हो जाता है, जमींदारों के अनैतिक व्यवहारों, निर्ममता तथा गाली-गलौज से पीड़ित होता है। कुल मिलाकर बलचनमा भारतीय किसान की दुर्बलताओं और अभावों का प्रतीक है। हिंदी साहित्य में गिने-चुने पुस्तक ही हैं जिनमें किसानों की बात कही गई है।

बलचनमा नागार्जुन के किसान जीवन का बेजोड़ नमूना है। उन्होंने बलचनमा के कथानक में ऐसे सामाजिक परिवेश को दर्शाया है जहाँ ज्ञान और शिक्षा की कमी के कारण इंसान मजबूर भी रहता है मजदूर भी बनना पड़ता है। उपर्युक्त अनुभूति व्यक्ति के सत्य को सीधे अनुभव ज्ञान परंपरा की कमी को दर्शाते हुए शिक्षा की तरफ आत्मसात करने को बढ़ावा देता है। अगर बलचनमा का पिता या बलचनमा पढ़ा हुआ रहता तो आम के लिए इतनी मार नहीं खाता बल्कि समाज के सामने न्याय की आवाज उठाता।

प्रेमचंद जैसे सुविख्यात लेखक की भी यदि बात कही जाए तो इन्होंने भी अपनी लेखनी से किसान एवं मजदूर एक नया अध्याय उपन्यास की दुनिया में प्रस्तुत किया प्रेमचंद से पूर्व उपन्यासों में भारतीय किसानों को अपनी लेखनी में किसी ने भी इतनी प्रमुखता नहीं दी प्रेमचंद युगीन उपन्यासों में उन्होंने स्वयं कल्पना जगत से उठाकर यथार्थ की पृष्ठभूमि पर दृष्टित किया प्रेमचंद ने आंचलिक पृष्ठभूमि के एक ऐसे यथार्थ को अपने उपन्यास गोदान में पिरोया जो भारतीय कृषक की दीनहीन दशा का चित्रण है गोदान का नायक होरी किसान है वह और उसका परिवार दिन रात हाड़ तोड़ मेहनत करते हैं फिर भी होरी का परिवार विपन्न हैं वे अपनी मूलभूत अनिवार्यताएँ भी ठीक से पूरी नहीं कर पाते होरी की एक छोटी सी महत्वाकांक्षा है एक गाय पालना अपनी इस आकांक्षा को पूरा करने के लिए वह छल का भी सहारा लेता है लेकिन यही उसकी मुसीबतों का कारण बनती है होरी अपने प्रयास में असफल भी होता है लेकिन हार नहीं मानता वह अपनी गाय पालने की लालसा को पूरा करने के लिए किसान से मजदूर बनता है महज आठ आने की रोज की मजदूरी पर ऊसर में कंकड़ों की खुदाई करता है और रात को ढिबरी के सामने बैठकर सुतली काटता है आखिरकार जी तोड़ मेहनत करते करते अपनी लालसा को आँखों में लिए इस दुनिया से चला जाता है मर जाता है ब्राह्मण धनिया से कहता है कि गोदान करा दें धनिया यंत्रवत उठती है और अंदर से सुतली बेचकर लाए गए बीस आने होरी के ठंडे हाथ पर रखकर

बोलती है महाराज घर में न गाय है न बछिया न पैसे हैं यही इनका गोदान है और पछाड़ खाकर गिर पड़ती है कड़ी मेहनत अनिन्तर दैन्य अधूरी आकांक्षाएँ यही होरी के जीवन का और आजाद भारतीय किसान के जीवन का यथार्थ चआज गाँवों में बढ़ती खेतिहर मजदूरों की गरीबीबेकारी.बेरोजगारीसाथ में महामारी और बीमारियों के चलते आकस्मिक मौत चक्या यही है आजाद भारत और उसकी सोना उगलने वाली धरती की देखरेख करने वाले भारतीय श्रमजीवी किसानों का जीवन

हिंदी साहित्य का सबसे उत्कृष्ट उपन्यास गोदान माना जाता है। होरी का चरित्र भारतीय किसान के संपूर्ण जीवन की समस्त दुःखदर्द को व्यक्त करता है। हम गोदान के होरी को भारतीय किसान का प्रतिनिधि कह सकते हैं क्योंकि होरी के रूप में हर भारतीय किसान का श्रम उनके ही भाग्य की कमजोर बनाता है चआंचलिक उपन्यासों में जाति.पाँति ऊँच.नीच के संघर्ष खेत.खलिहान का उच्च चित्रण हुआ है।

प्रेमचंद ने गोदान में भारतीय ज्ञान प्रणाली का उपयोग भरपूर रूप से किया है जैसे कि वेद, पुराण और लोककथाओं के संदर्भ में। जब पंडित होरी की मृत्यु के बाद गोदान यानि गाय दान करने और होरी की आत्मा की शांति की बात के लिये वेद और पुराण के कर्मकांडों की उलाहना देता है उसका स्वार्थ झलकता है किंतु होरी की पत्नी अगर शिक्षित होती तो इन बातों का भरपूर विरोध करती। अतः प्रेमचंद ने गोदान में सामाजिक और राजनितिक सन्देश दिया है जो श्रमजीवी किसानों की समस्याओं पर ध्यान केंद्रित करता है।

केशव प्रसाद मिश्र द्वारा लिखित कोहबर की शर्त भी आंचलिक जीवन को दर्शाता एक ऐसा उपन्यास है च कोहबर की शर्त एक तरह से निराश और बर्बाद जिंदगी में एक नई प्रेरणाएनई स्फूर्ति और नया उत्साह फूँकने की ही शर्त है चइस उपन्यास में मुख्य रूप से खेती व गुंजा से प्रीति करने वाले नवयुवक के रूप में उभरने वाला चंदन व उसके बड़े भाई ओंकार के जीवन संघर्षों की बाढ़ के बीच घूमता है।

कोहबर की शर्त का ओंकार तो किसान.पुत्र है। लेखक के शब्दों में सूरज निकलने से पहलेहलवाहे के साथ हल.बैल और बोन के लिए बीज लेकर खेत में पहुँचनाहल नधवाकर घर लौटकर खाना बनानाएफिर बारह साल के छोटे भाई चंदन को खिला.पिला उसके हाथ हलवाहे के लिए खेत में खाना भेजना और ऊपर से काका की तीमारदारी चसाथ ही साथ साँझ को खेत से लौटे बैलों के कंधे पर हल्दी पीसकर छापनाएउन्हें खिलाना.पिलाना तथा घर.दुआर दोनों की देखरेख में ओंकार टंग गया।

किसान पशु.प्रेमी होता ही है चओंकार का पशु.प्रेम भी देखने लायक है। प्रस्तुत उपन्यास में भी जमींदार द्वारा किसान की जमीन हड़पने का अथक प्रयास किया गया यहाँ तक की ओंकार के काका अपनी जमीन को बचाने के लिए कचहरी में मुकदमा लड़ते रहते हैं चकाका द्वारा कचहरी में अपनी जमीन बचाने के लिए मुकदमा लड़ने के लिए पैसों का जुगाड़ करने के लिये उधार लेनाएअपने दोनों भतीजों चंदन एवं ओंकार का पालन.पोषण करने के लिए विभिन्न परिस्थितियों से जूझना एक किसान के जीवन के लिए कितना कष्टप्रद होता है। केशव प्रसाद मिश्र ने अपने इस उपन्यास में भरपूर भावों का चित्रण बड़ी ही मार्मिकता से किया है।

उपन्यासकार की कथा.भूमि उत्तर प्रदेश मेंबलिया के दौआब में बसे हुए दो गाँव बलिहार और चौबे छपरा के इर्द.गिर्द घूमती रहती है च काका रामअँजोर तिवारी मुकदमे की पेशी के लिए बलिया कचहरी गए थे कचहरी से गाँव लौटते समय बलिया के चारो तरफ पानी भर चूका था चबाढ़ से गाँव के गाँव डूब चुके थे काका को आश्चर्य होता है कि तीन दिनों में ही इतना पानी भर गया गाँव के पश्चिम.दक्षिण में गंगा सरयू की जल.धाराएँ बरसात आते ही अपने उफ़ान पर आ जाती थी

लेखक के शब्दों में १ जिस वर्ष सोना में सोननदी जिले से सटी हुई नदी बाढ़ न आती उस वर्ष बल्लिहार के पास पड़ोस के गाँवों की सरेह में भदई, भादो में उगने वाले अनाज कसकर होती थी अगर बाढ़ आ गई तो हजारों बीघों में छाती भर ऊँची खड़ी फसल गंगा की गोद में चली जाती

बीस बिगहवा खेत की अपील माल की बड़ी अदालत में हो गई थी किंतु अचलगढ़ का जमींदार बीस बिगहवा पर कब्ज़ा कर लेने की ताक में लगा हुआ था अतः काका अपनी जमीन बचाने में कामयाब होते हैं और मुकदमा जीत जाते हैं च बड़े भतीजे ओंकार का विवाह रूपा से करते हैं घर की देखभाल करने के लिए एक औरत के आजाने से ओंकार और चंदन भी संभल जाते हैं एखेती पर ध्यान देते हैं अच्छी उपज भी होती है इस साल सोना में बाढ़ नहीं आती तो सभी में हर्षोल्लास रहता है किंतु नियति को इन किसानों का सुकून रास नहीं आता चरूपा बेटे को जन्म देने के बाद अकस्मात् देह त्याग देती है घर के सभी सदस्य बिखरने लगते ऐसे में ओंकार पूरी तरह निराशा के दलदल में घिर जाता है चंदन छोटी उम्र में खेती और घर सँभालने का प्रयास करता है चरूपा की छोटी बहन चंदन से प्रीति रखती है किंतु चंदन की मदद करने की चाहत के बावजूद वह कुछ खास नहीं कर पाती और महामारी की चपेट में पूरा का पूरा गाँव दुःख के बाढ़ में घिर जाता है च किसानों के इस असामयिक दुर्दशा का चित्रण केशव प्रसाद मिश्र ने जिस प्रकार किया बिना अनुभव के आंचलिक जीवन व किसानों के दर्द को व्यक्त करना आसान नहीं चकोहबर की शर्त आंचलिक जीवन का भरपूर उदहारण प्रस्तुत करता है चंदन गुंजा के प्रीति ओंकार की कर्मठता और घर संसार के प्रति जुड़ाव काका का अपने जमीन के प्रति लगाव और जमींदार से संघर्ष को देखकर तो यही लगता है कि भारतीय किसान के प्राण उसके जीवन का एकमात्र उद्देश्य उसकी कर्मभूमि और जन्मभूमि उनका श्रम ही है च

केशव प्रसाद मिश्र ने ग्रामीण जीवन का दिल निकालकर रख दिया चकोहबर की शर्त में | विवाह से लेकर त्योहारों तक का कथानक को जीवंत करते हैं | उपन्यास के किरदार ओंकार, चंदन, गुंजा, रूपा सभी ने भारतीय ग्रामीण परम्पराओं को भली-भाँति जिया | लेखक की भाषा शैली से ऐसा लगता है जैसे हम अपने उसी गाँव में हैं जहाँ होली के पूर्वसंध्या पर उबटन लगाकर होलिका दहन में इसलिए डाला जाता है ताकि पूरे वर्ष की शारीरिक कष्ट जल जाए | जब ओंकार को बच्चा होता है गाँव में बधाई सोहर गाया जाता है मिठाई बांटा जाता है |

तिनका तिनका जोड़ कर बनाया गया घर महामारी में कैसे उजड़ जाता है यह उपन्यास में बखूबी दिखाया गया है च ग्रामीण परिवेश में आभाव की जिंदगी और संबंधों की प्रगाढ़ता इस उपन्यास को भावुक जरूर बना देती है पर यथार्थ की भावभूमि से लेखक कहीं भी टसमस नहीं हुआ है च भारतीय परंपरा की अनोखी मिसाल लेखक ने दी है | भारतीय ज्ञान परंपरा के माध्यम से पाठकों को विभिन्न धार्मिक, सामाजिक और संस्कृति के महत्वपूर्ण तथ्यों को समझने का अवसर मिलता है, जो उन्हें अपने जीवन में गहराई से आत्मविश्वास और सामंजस्य लाने में मदद करता है |

निष्कर्ष

आंचलिक उपन्यासों में श्रमजीवी किसानों को मुख्य पात्रों के रूप में उठाया जाता है, जो अपनी कठिनाइयों के बावजूद अपने परिवारों का पालन-पोषण करते हैं | साहित्य समाज को देखने का एक अच्छा जरिया है भारत के गाँव भारत की संस्कृति को संपूर्ण विश्व के सामने एक विशेष परिदृश्य प्रस्तुत करता है यह कहना अतिशयोक्ति नहीं होगी कि भारतीय गाँवों में भारत का जीवन बसता है और भारतीय किसान इन गाँवों के प्राण बहरहाल शिवपूजन सहाय से शुरू हुए आंचलिक उपन्यास रेणु से लेकर नागार्जुन प्रेमचंद और केशव प्रसाद मिश्र ग्रामीण

जीवन के सच्चे यथार्थ को सामने लाती हैं यह जरूर है कि उपनिवेशकाल में जैसा अँधा और निर्मम शोषण हुआ करता था वह अब प्रत्यक्ष तौर पर नहीं है लेकिन किसानों की दुर्दशा में कितना सुधार हुआ है यह अब भी प्रश्न है उपन्यासों में किसानों का सामाजिक और आर्थिक संघर्ष दर्शाया जाना उनके जीवन के हर कदम को प्रेरित करता है | इससे हमें भारतीय प्रणाली में श्रमजीवी किसानों के योगदान का महत्वपूर्ण संदेश मिलता है | आंचलिक उपन्यासों में जिस प्रकार लेखकों ने किसान परिवार का चित्रण किया है वह भारतीय संस्कृति के ऊँचे आदर्शों की आधार भूमि है

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Resolving contemporary societal issues by Indian knowledge system**Ms. Divyani Purohit***PG Student**The Maharaja Sayajirao University of Baroda***Dr. Bhagirath S. Pande***Assistant Professor**SSR College of Education, Silvassa**U.T. of Dadra and Nagar Haveli*

ABSTRACT

The goal of the Indian knowledge system is to encourage and enable additional research to address current societal problems. This paper highlights how the Indian knowledge system tackles issues such as technology integration, inequality, achievement gaps, standardized testing, and accountability, as well as diverse learners and inclusion. These contemporary issues impact the effectiveness of modern schooling in preparing students for the complexities of the modern world. Additionally, the paper explores the integration of digital learning platforms offering Indian knowledge system courses. It delves into how the NEP 2020 recognizes this rich legacy of timeless Indian knowledge and philosophy as a guiding force. The paper also focuses on establishing IKS Centers to support institutional frameworks.

Key words: IKS - Indian Knowledge system, contemporary social issues, integration of IKS in Education

INTRODUCTION**Indian knowledge system**

The Indian Knowledge System (IKS) is the systematic transmission of knowledge from one generation to the next generation. It is a structured system and a process of knowledge transfer rather than a tradition. The foundation of the Indian knowledge system is based on vedic literature, the upanishads, the vedas, and the upvedas. IKS consists of jnan, vijnan that evolved out of observation, experience, experiments and analysis. This system allows learner's holistic development thus NEP -2020 recognise Indian knowledge system as a rich heritage ancient knowledge system and use it as guiding principle. It includes knowledge from ancient India, its successes and challenges, and a sense of India's future aspirations specific to education, health, environment and indeed all aspects of life.

Contemporary societal Challenges in education

Contemporary education refers to the current state and practices of education in the modern world, typically reflecting the prevailing educational methods, theories, technologies, and societal influences of the present time. It is a dynamic and evolving field that adapts to the changing needs of students, society, and the workforce. Contemporary school education faces various challenges

that impact its effectiveness and relevance in preparing students for the complex demands of the modern world.

Key contemporary societal Challenges in Education.

- ★ Technology Integration
- ★ Mental health and well being
- ★ Teacher recruitment and training
- ★ Diverse learner and inclusion
- ★ Inequality and Achievement gap

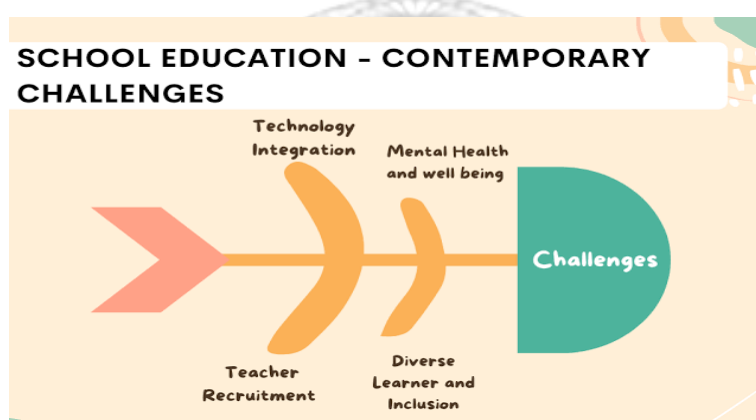


Fig. 1 Key contemporary societal challenges in education

Technology Integration: Rapid advancements in technology present both opportunities and challenges for education. Integrating technology effectively into the classroom requires adequate infrastructure, teacher training, and digital literacy.

Mental Health and Well-being: Increasing awareness of mental health issues among students highlights the need for schools to prioritize the well-being of learners. Addressing stress, anxiety, bullying, and fostering a supportive environment that promotes positive mental health is a challenge that requires collaboration between educators, counselors, and other stakeholders.

Teacher Recruitment and Training: Recruiting and retaining qualified, motivated, and diverse teachers is an ongoing challenge. Offering competitive salaries, providing effective professional development opportunities, and addressing the increasing workload and burnout concerns are crucial for maintaining a high-quality teaching workforce.

Diverse learner and inclusion: Education systems need to address the needs of diverse learners, including students with disabilities, those from different cultural backgrounds, and those with varied learning styles.

Inequality and Achievement gap: Educational inequality remains a significant challenge in many societies. Disparities in access to quality education, resources, and opportunities contribute to an achievement gap between students from different socio-economic backgrounds, ethnicities, and

geographic regions. Closing this gap requires targeted interventions, equitable funding, and addressing systemic barriers.

Indian knowledge system tackles the contemporary societal issues in education:

The Indian education system is at a critical juncture. We are in a period which we believe is a watershed moment in the journey of reforms to achieving a forward-looking ecosystem. Educational institutions realize now, more than ever, the importance of being in tune with the times and adopting learning approaches that are modern, responsive and relevant. There is much to learn from the ‘Gurukul’ system of ancient India, which focused on holistic development beyond academics, centuries before the topic became a buzzword in modern education.

Providing IKS Courses:

The courses are titled, Indian Knowledge System (IKS): Concepts and Applications in Engineering; IKS: Concepts and Applications in Science; and IKS: Humanities and Social Science. The Massive Open Online Courses (MOOCs) are themed on the Indian Knowledge Systems (IKS). Which gives platform for integration of modern technology and ancient knowledge system

Education modules to prepare for the real-world:

Ancient Indian Gurukuls focused on imparting knowledge which could be practically implemented to find solutions to real-life problems. Pupils learnt through observation and practical methodologies. They went out to be in touch with nature, they interacted with their communities. The subjects taught from an early age included law, ethics, architecture, warfare, which the pupils needed to excel in life.

A collaborative learning environment:

In the ancient Gurukul traditions Students learned with the teachers, and with each other. They worked together to develop innovative and creative solutions to problems. This forged an environment of knowledge exchange where students became the co-creators and adapted skills to be lifelong learners

An evaluation system of skills:

The ancient evaluation of education was not restricted to grading thematic knowledge. Students were assessed on the skills they learnt and how well they can apply practical knowledge to real life situations. The modern education system must devise similar systems of assessment. India has an unparalleled wealth of knowledge, traditions and systems – most of which were scientifically backed – which can be integrated into our modern education approaches. With this, we will be able to truly develop bright, resilient global minds, with beliefs and values firmly rooted in glorious Indian culture and traditions.

Establishing IKS Centers to support institutional Framework by IKS Cell Ministry of education:

The IKS Centers program is designed to encourage and fund the establishment of IKS centers across the country with a view to catalyze original research, education, and dissemination of IKS knowledge. Each IKS center consists of three pillars, namely:

1) Research pillar 2) Education and mentoring pillar 3) Outreach and dissemination pillar

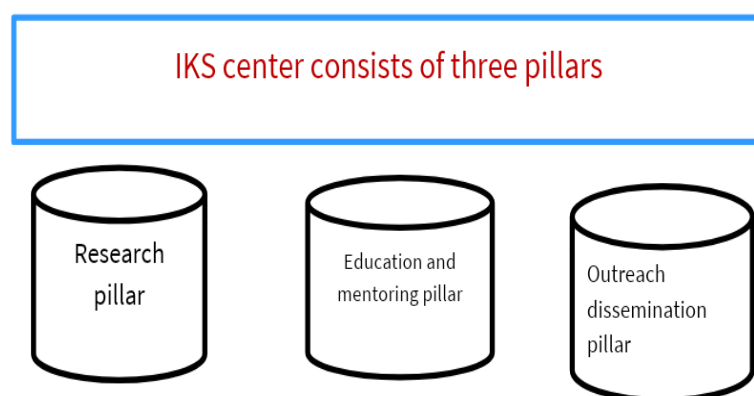


Fig 1 Three pillars of IKS centers

It is mandatory for the IKS centers to have deliverables and objectives centered around all the three pillars.

Research pillar : Research pillar gives opportunities for interdisciplinary research in the Indian Knowledge system.

Education and mentoring pillar : The proposals for IKS centers are expected to select two-four areas of interest to the IKS Division such as 1.Holistic medicine and wellness 2. Indian psychology and yoga 3. IKS based approaches for the economics, governance, and political systems 4. IKS based approaches for management and leadership etc.

Outreach dissemination pillar : The knowledge systems have been preserved in many textual, oral traditions and kula paramparas that are practiced and include tribal traditions. The selected themes cover all broad areas and are relevant for all people, at all times and in all places.

CONCLUSION:

In this way by Indian knowledge system we tackle contemporary societal issues by providing IKS course, will prepare education modules which is suitable for the real world teaching by inculcating ancient knowledge, creating collaborative environment for the students as gurukul system. IKS in simple words teaches us how to inquire? In what way? To what extent? Fundamental sutras will guide and re-orient our thinking process. Integration process involves the basic introduction to IKS, it's nature and structure, Scope & History, amalgamation of

fundamental IKS concepts into the modern textbooks, and finally developing Indian Thought Models based on available IKS literature, and their application into various contemporary problems solving methods.

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IKS Research Center Proposals Program 2023-24

Prof. Shrinivasa Varakhedi 2022-07-06 article



GOEIIRJ

Ancient Indian Education And Inclusion

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And

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Research Guide

Abstract:

Ancient India is a flexible and still fully unexplored terrain that cannot be simplistically branded as rigid and caste based or apathetic to women when it comes to equality in education and inclusion in society. Various evidence shows that it would be wrong to assume that ancient Indic traditions were outright supporters of women's education and holistic inclusion. Satyakamjabala- a child of a prostitute being accepted by Rishi Gautama in the gurukul, As Kane (1974) quotes Bandhayanas rules for a special type of Upanayana or the right of the initiation to the educational studies performed by young people who were "blind, deaf, crippled or idiots."

Introduction

ANCIENT INDIAN EDUCATION SYSTEM

In ancient India, education was mainly imparted through the Vedic and Buddhist education system. Sanskrit was the language used to impart the Vedic education system. Pali was the language used in the Buddhist education system. In the Vedic system, a child started his education at the age of five, whereas in the Buddhist system the child started his education at the age of eight. The main aim of education in ancient India was to develop a person's character, master the art of self-control, bring about social awareness, and to conserve and take forward ancient culture. The Buddhist and Vedic systems had different subjects. In the Vedic system of study, the students were taught the four Vedas – Rig Veda, Sama Veda, Yajur Veda and Atharva Veda, they were also taught the six Vedangas – ritualistic knowledge, metrics, exegetics, grammar, phonetics and astronomy, the Upanishads and more.

In ancient India, education was imparted and passed on orally rather than in written form. Education was a process that involved three steps, first was Shravana (hearing) which is the acquisition of knowledge by listening to the Shrutis. The second is Manana (reflection) wherein the students think, analyze and make inferences. Third, is Nididhyāsana in which the students apply the knowledge in their real life.

During the Vedic period from about 1500 BC to 600 BC, most education was based on the

Veda (hymns, formulas, and incantations, recited or chanted by priests of a pre-Hindu tradition) and later Hindu texts and scriptures. The main aim of education, according to the Vedas, is liberation. Vedic education included proper pronunciation and recitation of the Veda, the rules of sacrifice, grammar and derivation, composition, versification and meter, understanding of secrets of nature, reasoning including logic, the sciences, and the skills necessary for an occupation. Some medical knowledge existed and was taught. There is mention in the Veda of herbal medicines for various conditions or diseases, including fever, cough, baldness, snake bite and others.

Education, at first freely available in Vedic society, became over time more rigid and restricted as the social systems dictated that only those of meritorious lineage be allowed to study the scriptures, originally based on occupation, evolved, with the Brahman (priests) being the most privileged of the castes, followed by Kshatriya who could also wear the sacred thread and gain access to Vedic education. The Brahmins were given priority even over Kshatriya as they would dedicate their whole lives to such studies.

Educating the women was given a great deal of importance in ancient India. Women were trained in dance, music and housekeeping. The Sadyodwahas class of women got educated till they were married. The Brahnavadinis class of women never got married and educated themselves for their entire life. Parts of Vedas that included poems and religious songs required for rituals were taught to women. Some noteworthy women scholars of ancient India include Ghosha, Gargi, Indrani and so on.

The oldest of the Upanishads – another part of Hindu scriptures – date from around 500 BC. The Upanishads are considered as “wisdom teachings” as they explore the deeper and actual meaning of sacrifice. These texts encouraged an exploratory learning process where teachers and students were co-travellers in a search for truth. The teaching methods used reasoning and questioning. Nothing was labelled as the final answer. The Gurukula system of education supported traditional Hindu residential schools of learning; typically, the teacher’s house or a monastery. In the Gurukul system, the teacher (Guru) and the student (Śiṣya) were considered to be equal even if they belonged to different social standings. Education was free, but students from well-to-do families paid “Gurudakshina”, a voluntary contribution after the completion of their studies. Gurudakshina is a mark of respect by the students towards their Guru. It is a way in which the students acknowledged, thanked and respected their Guru, whom they consider to be their spiritual guide. The corpus of Sanskrit literature encompasses a rich tradition of poetry and drama as well as technical scientific, philosophical and generally Hindu religious texts, though many central texts of Buddhism and Jainism have also been composed in Sanskrit.

Two epic poems formed part of ancient Indian education. The Mahabharata, part of which may date back to the 8th century BC, discusses human goals (purpose, pleasure, duty, and liberation), attempting to explain the relationship of the individual to society and the world (the

nature of the 'Self') and the workings of karma. The other epic poem, Ramayana, is shorter, although it has 24,000 verses. It is thought to have been compiled between about 400 BC and 200 AD. The epic explores themes of human existence and the concept of dharma (doing one's duty). In the Buddhist education system, the subjects included Pitakas. The Vinaya Pitaka is a Buddhist canon that contains a code of rules and regulations that govern the Buddhist community residing in the Monastery. The Vinaya Pitaka is especially preached to Buddhist monks (Sanga) to maintain discipline when interacting with people and nature. The set of rules ensures that people, animals, nature and the environment are not harmed by the Buddhist monks. The Sutta Pitaka is divided into 5 niyakas (collections). It contains Buddha's teachings recorded mainly as sermons. The Abhidhamma Pitaka contains a summary and analysis of Buddha's teachings.

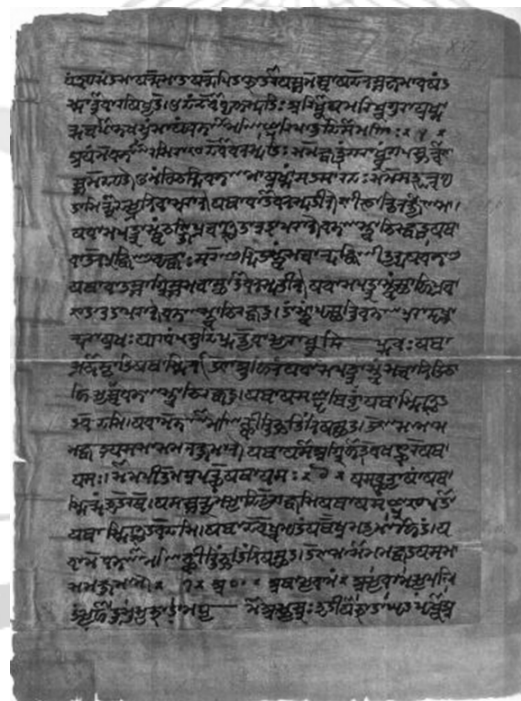


Fig. 1: A page from the Atharvaveda.

Source-Wikimedia Commons

The Vedas are ancient Sanskrit texts of Hinduism. An early centre of learning in India dating back to the 5th century BC was Taxila (also known as Takshashila), which taught the three Vedas and the eighteen accomplishments. It was an important Vedic/Hindu[20] and Buddhist[21] centre of learning from the 6th century BC to the 5th century AD. Another important centre of learning from 5th century CE was Nalanda. In the kingdom of Magadha, Nalanda was a well known Buddhist monastery. Scholars and students from Tibet, China, Korea and Central Asia travelled to Nalanda in pursuit of education. Vikramashila was one of the largest Buddhist monasteries that was set up in 8th to 9th centuries.

Inclusive education and ancient education system

Several modern Indian scholars have suggested that in the past girls could be initiated to

Vedic study like boys and that their exclusion was a later gradual development. Women were required partners of their husband in many Vedic rituals, and not as silent as is often assumed; occasionally the wife even played an independent role. Women were allowed to conduct minor rites, especially in the absence of their husband.

A strong inclusive education was encircled with three central objectives:

- Growth of the soul and its powers and possibilities- For an individual
- Preservation, strengthening, and enrichment of the nation-soul and its Dharma- for the nation
- To raise both the individual and nation into powers of the life and ascending mind and soul of humanity

STATUS OF WOMEN IN ANCIENT TO MODERN INDIA

Gargi participated in a debate with Yajnavalka on philosophical issues. Lilabati was a great mathematician of ancient India. Thus we find that ancient society was not conservative to provide education to women and that many of them attained great proficiencies in learning. The ancient women had equal rights with men in respect of education.

The Upanayana (Vedic initiation) of girls should have been as common as that of boys. In the Vedic period the women not only enjoyed privileged positions but also possessed high standards of morality. They had contributed positively to the educational system. The number of women who used to receive general literary and cultural education must have been fairly large.

For a long time family was the only educational institution, and even boys used to receive education only from their fathers or elders. The same naturally was the case with girls. But in later times a class of women teachers came to being (Upadhyayani). There was no purdah custom in Hindu society down to the 12th century, and so there was no difficulty for women in taking to the teaching profession. Lady teachers may probably have confined themselves to the teaching of girl students. Panini refers to boarding houses for lady students, chhatrisalas, and these probably were under the care of lady teachers. Co-education was also prevalent in ancient India in mild form. Sometimes boys and girls were educated together while receiving higher education. From the „Malatimadhava“ of Bhavabhuti, written in the 8th century A.D., we learn that the nun Kamandaki was educated along with Bhurivasu and Devarata at a famous centre of education. In the „Uttara-Rama-charit also (of the same author) we find Atreyi receiving her education along with Kusa and Lava. It is difficult to determine the exact extent of education imparted to women during the early Vedic period in India.

Upanayana ritual was obligatory for girls, and this must have ensured the imparting of a certain amount of Vedic and literary education to the girls of all classes. But female education received a great set back during the later Vedic period primarily owing to the

deterioration of the religious status of women. Upanayana began to be gradually prohibited to girls and by about 500 B.C. It had already become a formality.

The discontinuance of Upanayana was disastrous to the religious status of women and they were declared unfit to recite Vedic Mantras and perform Vedic sacrifices. Thus Vedic education was prohibited to women. With the advent of foreigners the Brahmanical society became rigid and conservative. The only education a girl of an ordinary family received was one which fitted her to fulfil her duties in the household of her husband. Her duties are mainly confined to rearing up her children, keeping everything clean, preparing food for the members of the family and looking after the household utensils. Thus, the education of girls was entirely domestic. They used to receive education at home.

Women in India were deprived of educational privileges for centuries, but there were always some exceptions to this general condition. Indian literature of all ages refers to educated women who took prominent part even in public affairs and showed finest skill in fine arts as well as in military art. Chandragupta Maurya had women bodyguards. As we have mentioned earlier, the daughters of princes and well-to-do families often received some education from their fathers or elders or family priests. Many female ascetics and mendicants used to learn some Sanskrit and were conversant with popular religious poems. The dancing girls in the South who often were attached to temples (devadasis) received some education, particularly in dancing and music. They were famous for their wit and cleverness. These semi-prostitutes learnt to read, sing and dance. These prostitutes sometimes worked as spies. The education of prostitutes is a very ancient custom in India. The Arthashastra of Kautilya refers to the education of the prostitutes. Buddhism no doubt had its effect on the education of women. The Buddhist monastic order included not only monks but also nuns (bhikshunis). But it was only with the greatest reluctance that the Buddha consented to this arrangement. In this he no doubt reflected the opinions of his time which were against the independence and education of women. His aunt, Mahaprajapati, expressed her desire to join the order, but he refused thrice. At last, at the fervent appeal of Ananda, his first and favourite disciple, the Buddha yielded. He, however, expressed his sorrow and opined that the admission of women would ruin his work. The nuns were made closely dependent on the monks, and could only be admitted by them.

Reforms towards the education of women Educating girls was considered a burden and useless as it would take them away from domestic work. But many reformers struggled for women's education and the abolition of child marriage. Arya Samaj in Punjab and Jyotirao Phule established schools for girls in Maharashtra. In Patna and Calcutta, Begum Rokeya Sakhawat Hossain started schools for Muslim girls. Thus slowly with the support from reformers, women started entering universities for higher education and some even started working as

teachers, doctors, and lawyers.

One of the greatest obstacles to women's progress in many parts of the world is inadequate opportunities for education. Being able to read, write and gain knowledge are important factors that enhance self esteem and are a prerequisite for generating change and empowerment. Eradication of illiteracy, gender sensitive educational system, increase in the enrolment and retention rates for girls, imparting professional skill and expertise, holistic approach to women's wealth including nutrition and health services at all stages of life cycle are a few measures that are aimed at empowerment.

EDUCATION FOR DISABLED IN ANCIENT INDIA

In history of disability in India, notes that in pre-modern India, disabled persons were denied inheritance in the higher levels of Hindu caste society. A dharmasastric text from the fourth century AD listed "a madman, an idiot, one born blind, and he who is afflicted by an incurable disease" as people who were rendered unable to inherit' because they were thought incapable of performing required family rituals. Ancient Hindu Law also mentions property and inheritance rights of disabled persons. They were excluded from inheritance in the eleventh-century Mitakshara, and Miles further lists Hindu law books where disability and inheritance were mentioned. For example, the Minor Law Books Narada (fourth/fifth century CE) notes exclusion of disabled persons from inheritance but asserts that they must be maintained and their sons must be allowed to remain inheritors. Disability statistics were collected in the Census of India from as early as the late nineteenth century and the country had special schools that catered to the needs of people with disabilities from around the same time period. However, integration of people with disabilities and policy commitment to their participation as equals in society occurred only twenty-five years ago with the passage of four important laws". These included the Mental Health Act of 1987, the Rehabilitation Council of India Act of 1992, the People with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act of 1995 (PWD Act), and the National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act of 1999. According to Dr. G. N. Karna 'In the Hindu doctrine of Karma Phala disability is sought to be linked with the retribution for the sins committed by individuals in the past'. He also stated that in a third world country like India, where the maximum population is illiterate and narrow minded in their outlook; even disease is also associated with disobedience to natural or religious principles. In India, Hinduism is the most accepted religion of the people, and according to Hindu religion a person takes birth for several 'times' and it depends upon the deeds and activities he performs in one life. Disability occurs when one leads a very sinful life and as a result is subjected to the wrath and vengeance of God or Goddess.

There was discrimination against the disabled because they were unable to perform religious ceremonies. But that discrimination was not on religious grounds as shudras who were

not required to perform Vedic rites were also excluded from inheritance on grounds of disability.

EDUCATION FOR UNPRIVILEGED IN ANCIENT INDIA

The stringent social taboos conscribed their behaviour, severe strictures were laid down to prevent their access to knowledge. There is no record of untouchable pupils, even in the nineteenth century indigenous schools, where the middle and some lower artisans were exposed to improper treatment. As a rule they were not allowed to attend the indigenous schools. Tradition held them back with an iron hand.

The quality of schooling provided to the Untouchables appears to have been poor though adequate details are not available (Richley, 1923:206). The report on education in Bombay state (1855-1955) notes that separate schools provided for the untouchables were insufficient and were mostly 'one teacher' schools (1958:424).

Night schools were still popular. Only reading and writing was focused in such schools. Recruiting suitable teachers for 'special schools' was a problem, 'unreadiness' of teachers from the upper class and lack of qualified teachers from depressed classes. It was indeed a slow and difficult process.

The singular role that Dr. Ambedkar played in the upliftment of the untouchables in the early 20th century and the importance he gave to modern education for their betterment deserves special emphasis. In 1924 he established the 'Bahiskrit Hitkarani Sabha' its objectives of opening of hostels, libraries, social centres and classrooms where the untouchables could study. In 1928 he established the Depressed Classes education Society, to organise school education on sound basis. In conviction with the role education could play along with the social and economic advancement of the untouchables.

CONCLUSION

The character of India is a mix of the various cultures of the people who landed here. Over 3000 years ago Aryans, Turks, Afghans and Mughals. Despite the loot and plunder, they became part of our diversity. Creating a hybrid civilization. The Europeans meanwhile mingled with us. Thus creating a vast rich culture, knowledge, practices contributing to the Indian knowledge system.

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शालेय पदविका अभ्यासक्रमा (डीएसएम) अंतर्गत अध्ययन करणाऱ्या सेवांतर्गत शिक्षकांचे
आयसीटी बदलच्या ज्ञानाचा अभ्यास

प्रतिभा दिगंबर कांबळी (संशोधक)

डॉ. संजय शेडमाके (मार्गदर्शक)

सहाय्यक प्राध्यापिका

सहयोगी प्राध्यापक

ज्ञान गंगा एज्युकेशन ट्रस्ट'स कॉलेज

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सारांश:

माहिती आणि संप्रेषण तंत्रज्ञान आयसीटी हे २१ व्या शतकात योग्य माहिती गोळा करण्याचा मुख्य स्त्रोत आहे. शिक्षक शिक्षणामध्ये आयसीटी तंत्रज्ञानाच्या अंमलबजावणीमुळे अध्यापन आणि शिकण्याच्या प्रक्रियेची गुणवत्ता वाढली आहे. हा पेपर सेवांतर्गत शिक्षकांसाठी ICT ची गरज आणि महत्त्व शोधण्यात मदत करेल. सेवेत शिक्षक माहिती संप्रेषण तंत्रज्ञानाचा वापर त्यांच्या अध्यापनात माहिती नसताना करतात. माहिती आणि संप्रेषण कार्यक्रमाची अंमलबजावणी सेवांतर्गत शिक्षकांसाठी फायदेशीर ठरेल. या पेपरचे उद्दिष्ट आमच्या शिक्षण व्यवस्थेच्या सद्य स्थितीचे मूल्यमापन करण्याचा आहे, विशेषतः सेवापूर्व आणि सेवांतर्गत अशा दोन्ही शिक्षकांसाठी शिक्षक शिक्षणामध्ये तंत्रज्ञानाचे एकीकरण करण्याशी संबंधित आव्हानांवर लक्ष केंद्रित करणे.

Keywords: आयसीटी, सेवांतर्गत शिक्षक, शिक्षक आयसीटी ज्ञान क्षमता, आयसीटी संसाधने, शिक्षक प्रशिक्षण

प्रस्तावना:

शिक्षणामध्ये माहिती आणि संप्रेषण तंत्रज्ञानाचा आयसीटी वापर वाढत आहे कारण विद्यार्थी आता आयसीटी चा सर्वाधिक वापरकर्ते आहेत, त्यांच्याकडे इंटरनेट-कनेक्ट केलेले लॅपटॉप आणि स्मार्टफोन आहेत. आयसीटी साक्षर समाज निर्माण करण्यासाठी प्रेरक शक्ती म्हणून शिक्षक तंत्रज्ञानासह विद्यार्थ्यांमध्ये एक माध्यम म्हणून भूमिका बजावतात. शाळांमधील शिक्षक या नात्याने, शिक्षकांनी शाळांमध्ये उपलब्ध असलेल्या आयसीटी सुविधांचा वापर करून विषयांमध्ये मांडण्यासाठी सर्व तथ्ये तयार करणे आणि अद्ययावत करणे आवश्यक आहे. अध्यापन आणि शिक्षणामध्ये आयसीटी चा वापर हा विषय सर्व विद्यार्थ्यांसाठी आनंददायक होवू शकतो, अगदी शिक्षकांना देखील विद्यार्थ्यांशी संवाद साधताना अनुभव आणि ज्ञान प्राप्त होते.

संशोधन साहित्याचा आढावा:

गरिबी कमी करण्यासाठी आणि सामाजिक-आर्थिक विकासाच्या प्रगतीसाठी देशाच्या प्रयत्नांसाठी सरकार एक महत्त्वपूर्ण भागीदार आणि प्रवेगक म्हणून आयसीटी कडे पाहते. तंत्रज्ञानाच्या एकात्मतेला प्रोत्साहन देण्यासाठी, सरकारने शाळांमध्ये तांत्रिक पायाभूत सुविधांच्या निर्मितीमध्ये गुंतवणूक केली आहे, आयसीटी कायदे केले आहेत आणि शिक्षक व्यावसायिक विकासासाठी कार्यक्रम राबवले आहेत. सध्याच्या मानक-आधारित अभ्यासक्रमासाठी शिक्षकांनी शिक्षक-केंद्रित अध्यापनशास्त्रापासून विद्यार्थी-केंद्रित किंवा सामाजिक रचनावादी शिक्षण आणि शिकण्याच्या दृष्टीकोनांकडे (MoE, 2018) परिवर्तित होण्यासाठी समकालीन तंत्रज्ञानाचा अध्यापनशास्त्रीय साधने म्हणून वापर करणे आवश्यक आहे. हे देशाच्या शैक्षणिक धोरणांमध्ये (शिक्षण मंत्रालय [MoE], 2015) च्या आयसीटीशी सुसंगत आहे. तथापि, शिक्षक अजूनही माफक दराने वर्गीत तंत्रज्ञानाचा अवलंब करत आहेत, विशेषतः प्राथमिक शाळांमध्ये (Agyei, 2013; Mangesi, 2007; Tsapali et al., 2021). अनेक

संशोधनांनी (उदा., Danso आणि Kesseh, 2016; Buabeng-Andoh, 2019) अर्थपूर्ण एकात्मतेतील अडथळ्यांचे परीक्षण केले आहे, वारंवार शिक्षकांच्या तंत्रज्ञान एकीकरण पद्धतीचे स्वरूप आणि क्षमता याबद्दल चिंता निर्माण करते. या अभ्यासाचे मुख्य उद्दिष्ट आणि महत्त्व हे आहे की माहिती व संप्रेषण तंत्रज्ञानाचा आयसीटी वापर करून शिक्षणाच्या दर्जात उल्लेखनीय आणि सकारात्मक सुधारणा करता येईल असे साधारणतः सर्वच शिक्षणतज्ञांचे व संशोधकांचे म्हणणे आहे. शिक्षकांसाठीही आयसीटी ज्ञान आवश्यक आहे आणि ते त्यांना त्यांच्या अध्यापनाच्या वेळेत दिले जाते. याचे कारण असे की हे तांत्रिक ज्ञान असण्याने इच्छुक शिक्षकांना तंत्रज्ञान अधिक चांगल्या प्रकारे समजून घेण्यास मदत होते जेणेकरून ते भविष्यात विद्यार्थ्यांचे निकाल सुधारण्यासाठी त्याचा वापर करू शकतील. सध्याच्या घडामोडी, उपक्रम आणि आव्हानांवर आधारित नवीन अभ्यासक्रम व्यवस्थापित करण्यासाठी आधुनिक काळात, आयसीटी शाळा आणि वर्गखोल्यांना एक नवीन, अधिक आकर्षक स्वरूप देत आहे. हे विद्यार्थ्यांचे शिक्षण तसेच शिक्षकांच्या क्षमता वाढविण्यासाठी साधने आणि तंत्रे देखील प्रदान करत आहे. आयसीटी मुळे शिक्षक, विद्यार्थी आणि पालक यांच्यातील संवाद देखील सुलभ होतो.

समस्या विधान: “शालेय पदविका अभ्यासक्रमा (डीएसएम) अंतर्गत अध्ययन करणाऱ्या सेवांतर्गत शिक्षकांचे आयसीटी बद्दलच्या ज्ञानाचा अभ्यास”

कार्यात्मक व्याख्या:

सेवांतर्गत शिक्षक: सदर संशोधनात सेवांतर्गत शिक्षक म्हणजे अनुदानित, खाजगी, विना अनुदानित प्राथमिक उच्च, /माध्यमिक, शाळांमध्ये नियमितपणे काम करणारे शिक्षक.

आयसीटी ज्ञान : शिक्षकाला आयसीटी च्या मूलभूत घटकांबद्दल आणि शिकवण्याच्या शिकण्याच्या प्रक्रियेत विविध आयसीटी गॅझेट्स आणि टूल्स ऑपरेट करण्यासाठी आवश्यक असलेल्या मूलभूत कौशल्यांबद्दल किती माहिती आहे.

संशोधनाची उद्दिष्टे:

1. सेवांतर्गत शिक्षकांमधील अध्यापनात आयसीटी वापरण्याच्या ज्ञानाच्या क्षमतेचा अभ्यास करणे.
2. सेवांतर्गत शिक्षकांमधील आयसीटी ज्ञानाची क्षमता शोधणे.
3. लिंग, वय, माध्यम आणि अध्यापन अनुभव यांसारख्या घटकांवर आधारित सेवांतर्गत शिक्षकांच्या आयसीटी ज्ञान क्षमतेची तुलना करणे.

संशोधन प्रश्न

1. अध्यापनात आयसीटी वापरण्याबाबत सेवांतर्गत शिक्षकांमध्ये कोणत्या प्रकारची ज्ञान क्षमता आहे?

संशोधन पद्धती:

संशोधनामध्ये वर्णनात्मक सर्वेक्षण पद्धतीचा वापर करण्यात आला. शालेय पदविका अभ्यासक्रम अंतर्गत अध्ययन करणाऱ्या ४० सेवांतर्गत शिक्षकांची निवड करण्यात आली. हे शिक्षक प्राथमिक, माध्यमिक, विद्यालयीन स्तरावर अध्यापन करणारे शिक्षक होते. माहिती गोळा करण्यासाठी स्वयं-निर्मित २० विधाने वापरली जी विषय तज्ञांनी प्रमाणित केली आहे. माहिती संकलनानंतर, माहिती Microsoft Excel मध्ये सारणीबद्ध केली गेली आणि मध्यमान व टक्केवारी वापरून विश्लेषण केले गेले.

माहिती विश्लेषण साधन:

सदर संशोधनात प्रमाणित केलेल्या काही गोष्टींसह एक संरचित विधाने तयार केली गेली . विधानाच्या प्राथमिक घटकांमध्ये वय, लिंग, अध्यापनाचा अनुभव घटकांचा समावेश केला गेला. संशोधन विधानासाठी तीन -

बिंदू स्केल वापरला गेला ज्यामध्ये १ कमी प्रमाणात, २ मध्यम प्रमाणात आणि ३ मोठ्या प्रमाणात आहे. ऑनलाइन लर्निंग प्लॅटफॉर्ममध्ये शिक्षकांचे आयसीटी बदलचे ज्ञान तीन -बिंदू स्केलचा वापर करून तपासण्यात आल्या. सांख्यिकीय तंत्र वापरून माहितीचे विश्लेषण केले गेले.

संशोधन मर्यादा:

सदरचे संशोधन शालेय पदविका अभ्यासक्रम अंतर्गत अध्ययन करणाऱ्या ४० सेवांतर्गत शिक्षकां पुरते मर्यादित आहे. हे शिक्षक प्राथमिक, माध्यमिक, विद्यालयीन स्तरावर अध्यापन करणारे शिक्षक होते. तसेच शालेय पदविका अभ्यासक्रम शैक्षणिक वर्ष २०२३-२४ या वर्ष अंतर्गत अध्ययन करणाऱ्या शिक्षकांचाच समावेश केला गेला आहे.

माहिती विश्लेषण आणि परिणाम:

तक्ता-१ लिंगावर आधारित प्रतिसादकर्त्यांचे वितरण

अनु क्र	सेवांतर्गत शिक्षक	
१	स्त्री	पुरुष
२	२९	११
एकूण (N) = ४०	४० (मध्यमान = ४२. ३७)	

तक्ता १ प्रमाणे एकूण प्रतिसादकांपैकी (सेवांतर्गत शिक्षकांपैकी) (४०) २९ प्रतिसादक स्त्रिया आहेत तर ११ प्रतिसादक पुरुष आहेत.

अनु क्र	{तक्ता २} माध्यमानुसार शिक्षकांचे आयसीटी ज्ञान (मध्यमान = ४२. ३७)		
	इंग्रजी	मराठी	हिंदी
स्त्री	(१३) ४५ % = ज्ञान चांगले (३) ५५ % = ज्ञान कमी	(४) ३७ % = ज्ञान चांगले (७) ६३ % = ज्ञान कमी	(१) १ % = ज्ञान चांगले (१) १ % = ज्ञान कमी
पुरुष	(२) १८ % = ज्ञान चांगले (१) ८२ % = ज्ञान कमी	(६) ५५ % = ज्ञान चांगले (२) ४५ % = ज्ञान कमी	

- तक्ता २ प्रमाणे एकूण प्रतिसादकांपैकी (सेवांतर्गत शिक्षकांपैकी) (४०) २९ प्रतिसादक स्त्रियांपैकी इंग्रजी, मराठी, हिंदी माध्यमांच्या १८ स्त्री शिक्षिकांचे आयसीटी बदलचे ज्ञान चांगले आहे, तर ११ स्त्री शिक्षिकांना अजून प्रशिक्षण घेण्याची आवश्यकता आहे.
- एकूण प्रतिसादकांपैकी (सेवांतर्गत शिक्षकांपैकी) (४०) ११ प्रतिसादक पुरुषांपैकी पैकी इंग्रजी, मराठी, माध्यमांच्या (८) पुरुष शिक्षकांचे बदलचे ज्ञान चांगले आहे, तर (३) पुरुष शिक्षकांना अजून प्रशिक्षण घेण्याची आवश्यकता आहे.

अध्यापन अनुभव - १-१० वर्ष / ११-२० वर्ष / २१-३० वर्ष / ३१-४० वर्ष

अनु क्र	{तक्ता ३} अध्यापन अनुभवानुसार शिक्षकांचे आयसीटी ज्ञान (मध्यमान = ४२. ३७)	
स्त्री	(२०) ६९ % = ज्ञान चांगले १-१० = ५ ११-२० = ४ २१-३० = ११ ३१-४० = ०	(९) ३१ % = ज्ञान कमी १-१० = १ ११-२० = ३ २१-३० = ४ ३१-४० = १
पुरुष	(३) २७ % = ज्ञान चांगले १-१० = ३ ११-२० = २ २१-३० = १ ३१-४० = ३	(८) ७३ % ज्ञान कमी १-१० = ० ११-२० = ३ २१-३० = ५ ३१-४० = ०

- तक्ता ३ प्रमाणे अध्यापन अनुभवाचा विचार करता (सेवांतर्गत शिक्षकांपैकी) (४०) २९ प्रतिसादक स्त्रियांपैकी (२०) स्त्री शिक्षिकेचे आयसीटीबद्दलचे ज्ञान चांगले आहे, तर (९) स्त्री शिक्षिकांना अजून प्रशिक्षण घेण्याची आवश्यकता आहे.
- एकूण प्रतिसादकांपैकी (सेवांतर्गत शिक्षकांपैकी) (४०) ११ प्रतिसादक पुरुषांपैकी पैकी (३) पुरुष शिक्षकांचे बद्दलचे ज्ञान चांगले आहे, तर (८) पुरुष शिक्षकांना अजून प्रशिक्षण घेण्याची आवश्यकता आहे

संस्था स्वरूप - अनुदानित/विना अनुदानित/ खाजगी / इतर

अनु क्र	{तक्ता ४} संस्था स्वरूपा नुसार शिक्षकांचे आयसीटी ज्ञान (मध्यमान = ४२. ३७)			
	अनुदानित	खाजगी	अन्य	स्वयं वित्त
स्त्री	(१०) ८७% = ज्ञान चांगले (४) १३ % = ज्ञान कमी	(८) ७२% = ज्ञान चांगले (४) २८ % = ज्ञान कमी	(०) (२) ७% = ज्ञान कमी	(०) (१) ४% = ज्ञान कमी
पुरुष	अनुदानित (३) २७ % = ज्ञान चांगले (४) ७३ % = ज्ञान कमी	खाजगी (०) (४) २८ % = ज्ञान कमी		

- तक्ता ४ प्रमाणे शैक्षणिक संस्थानिहाय विचार करता (सेवांतर्गत शिक्षकांपैकी) (४०) २९ प्रतिसादक स्त्रियांपैकी (१८) अनुदानित आणि खाजगी संस्थेत कार्यरत स्त्री शिक्षिकेचे आयसीटीबद्दलचे ज्ञान चांगले आहे, तसेच अन्य व स्वयं वित्त संस्थेतील (३) स्त्री शिक्षिकांना अजून प्रशिक्षण घेण्याची आवश्यकता आहे.
- एकूण प्रतिसादकांपैकी (सेवांतर्गत शिक्षकांपैकी) (४०) ११ प्रतिसादक पुरुषांपैकी पैकी (३) पुरुष शिक्षकांचे बद्दलचे ज्ञान चांगले आहे, तर (८) पुरुष शिक्षकांना अजून प्रशिक्षण घेण्याची आवश्यकता आहे. (अनुदानित आणि खाजगी संस्थेत कार्यरत)

वयोमानानुसार - ३०-४०/ ४१-५०/ ५१-६०

अनु क्र	{तक्ता ५}वयोमानानुसार शिक्षकांचे आयसीटी ज्ञान
स्त्री	३०-६० (वय) (१८) = ६३ % (मध्यमानापेक्षा जास्त) ३०-६० (वय) (१९) = ३७ % (मध्यमानापेक्षा कमी)
पुरुष	३०-६० (वय) (३) = २७ % (मध्यमानापेक्षा जास्त) ३०-६० (वय) (८) = ७३ % (मध्यमानापेक्षा कमी)

(मध्यमान = ४२. ३७)

• तक्ता ५ प्रमाणे शिक्षकांचे वयोमान लक्षात घेता असे दिसून आले कि, विचार करता (सेवांतर्गत शिक्षकांपैकी) (४०) २९ प्रतिसादक स्त्रियांपैकी (१८) स्त्री शिक्षिकेचे आयसीटीबद्दलचे ज्ञान चांगले आहे, (१९) स्त्री शिक्षिकांना अजून प्रशिक्षण घेण्याची आवश्यकता आहे. -

• एकूण प्रतिसादकांपैकी (सेवांतर्गत शिक्षकांपैकी) (४०) १९ प्रतिसादक पुरुषांपैकी पैकी (३) पुरुष शिक्षकांचे बद्दलचे ज्ञान चांगले आहे, तर (८) पुरुष शिक्षकांना अजून प्रशिक्षण घेण्याची आवश्यकता आहे. -

निष्कर्ष आणि शिफारसी:

प्रस्तुत अभ्यासावरून असे दिसून आले कि की प्रशिक्षणासाठी एक-आकार-फिट-सर्व दृष्टीकोन योग्य असू शकत नाही आणि आयसीटी डिझाइनमध्ये शिक्षकांच्या विविध गरजा विचारात घेतल्या पाहिजेत. हे प्रभावी व्यावसायिक विकासासाठी आवश्यक असलेल्या अनन्य प्रेरणा आणि प्रोत्साहन समजून घेण्याच्या महत्त्वावर जोर देते. विस्तृत कार्यक्रमांसह अल्प-मुदतीचे प्रशिक्षण कार्यक्रम मूर्त मार्गांशिवाय शिक्षकांमध्ये निराशा आणू शकतात. अभ्यासक्रम शिकवण्यात आणि शिकण्यात आयसीटी वापरण्याच्या शैक्षणिक पैलू समजून घेण्यात शिक्षकांची क्षमता निर्माण करण्यात अपयश. शिक्षण प्रक्रियेत तंत्रज्ञान कसे समाकलित करावे आणि कसे वापरावे याबद्दल शिक्षकांना मार्गदर्शन करण्याऐवजी प्रशिक्षणात तंत्रज्ञानावर अधिक भर देण्यात आला. सामाजिक संवादाद्वारे विद्यार्थी-केंद्रित रचनावादी शिक्षण आणि सर्जनशील विचार वाढवण्याची आयसीटी ची क्षमता असूनही, सामग्री, तंत्रज्ञान आणि अध्यापनशास्त्र यांच्यातील बहुस्तरीय संबंधांना अर्थपूर्णपणे संबोधित केले गेले नाही.

सारांश, अध्यापनशास्त्रामध्ये आयसीटी प्रभावीपणे समाकलित करण्यावर लक्ष केंद्रित करून, शिक्षकांच्या विशिष्ट गरजा आणि प्रेरणांना संबोधित करणाऱ्या अनुकूल आणि व्यापक व्यावसायिक विकास कार्यक्रमांचे महत्त्व लक्षात पाहिजे.

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Beyond The Infinite !**Dr. D. J. Patil***Rtd. Head Master Shri Gurudatta High School and Jr. college,**Vaipur, Dhule Maharashtra, India***Abstract :**

In the physical sciences, subatomic particles will be particles much littler than atoms. There are two sorts of subatomic particles, basic particles, which as per current speculations are not made of different particles, and composite particles. Molecule, material science and atomic physical science concentrate on these particles and how they collaborate. As the 1930s opened, the electron and the proton had been seen, alongside the photon the molecule of electromagnetic radiation. Around then, the late appearance of quantum mechanics was fundamentally changing the origination of particles, as a solitary molecule could apparently compass a field as would a wave a conundrum as yet evading agreeable explanation. Via quantum hypothesis, protons and neutrons were found to contain quarks – up quarks and down quarks – now viewed as rudimentary particles. Also inside a particles, the electron's three degrees of opportunity (charge, turn, orbital) can separate by means of wave capacity into three quasi particles (Holon, spin on, orbit).

Yet a free electron – which not orbiting an atomic nucleus, lacks orbital motion – appears un split table and remains regarded as an elementary particles. But according to my theory, in the nucleus of an atom other chargless particles are also present. They are known as “Micra” (.M) particles. (.M) Micra particles are called “Energy house” or “Power house” of an atom. The formula of finding (.M) particles in the atom is $.M = P \times pp$. Where .M means Micra particles and p means proton present in the nucleus of an atom.

Kye Words : Micra (.M) particles, newly atomic model

INTRODUCTION :**A Planetary Model of the Atom**

The Bohr Model is presumably common place as the “Planetary Model” of the iota represented in the nearby assume that, for instance, is utilized as an image for nuclear vitality. In the Bohr Model the neutrons and protons involve a thick focal local called the core, and the electrons circle the core much like planets circling the sun.

Electrons are negative charge particles, and they are moving around the orbits in different numbers. Protons are positive charge particles and neutrons are charge less particles. Both are subatomic nucleus particles.

OBJECTIVES OF RESEACRCH :

The Principal objective of invention is that forth particle is present in the atom. The second objective of the invention is that the chargeless particle is present in the nucleus of an atom. Another objective of the invention is that subatomic nucleus particle named micra particles (.M)

RESEARCH METHODOLOGY

In the nucleus of an atom other chargless particles are also present. They are known as “Micra” (.M) Particles (.M) particles are called “Energy House” or “Power house” of an atom.] The formula of finding (.M) particles in the atom is as follow.

$$.M = P \times pp$$

Here .M means micra particles and p+ means proton present in the nucleus of an atom.

Now in the atom totally four (4) particles are present. i.e. e- p+, n and .M. Micra particles.

RESULTS JUSTIFICATION :

Electronic configuration of some atoms of elements.

1. Hydrogen (H) Atom

Hydrogen H1

Atomic number is 1

Electronic configuration H (1)

$$2n^2 = 2 \times 1^2 = 2 \times 1 = 2$$

In first orbit 1 electron is present.

There is not neutron in the nucleus of hydrogen atom.

How many (.M) Micra chargless particles in the nucleus of Hydrogen atom ?

$$.M = P \times pp = 1 \times 1 = 1 \times 1 = 1$$

In the nucleus of hydrogen atom one chargless micra particles is present.

2. Helium He 2 Electronic configuration of Helium He (2)

$$p+ = 2 \quad e = 2 \quad n = 2$$

Atomic weight = p+ + n

$$= 2 + 2 = 4 \quad .M = ? \quad .M = p+ \times pp = 2 \times 2 = 2 \times 2 = 4$$

In Helium atom 8 micra particles are present.

CONCLUSION

According to Bohr and Rutherford the atomic theory states that Hydrogen nucleus contains 1 proton, 1 electron & 0 neutrons. But according to my theory, there is existence of some newly invented particles related to Hydrogen, minerals which was named as “Micra (.M.) particles. i.e. to be nucleus of an atom. Other chargless particles are also present. They are known as Micra particles are called “Energy house” or “Power house” of an atom.

The formula of finding (.M.) particles is as follow.

$$.M = p+ \times pp$$

Here .M means micra particles and p+ proton present in the nucleus of an atom.

Hence our theory is purely justifies that there is existence of micra particles.

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Role Of Ict Tools And Technologies For Integration Of Indian Knowledge System In Higher Education

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Abstract:

India has always been rich in its ancient knowledge and wisdom which is deeply embedded in its culture and practices since centuries. This wealth of knowledge offers path-breaking perspectives and solutions to contemporary challenges that the world is witnessing today. Acknowledging the impact that the ocean of traditional knowledge can have on the current Education System, and to make it more holistic, NEP 2020 has directed the incorporation of Indian Knowledge System (IKS) into Higher Education. ICT-driven tools and technologies offer promising avenues to bridge the gap between ancient and modern knowledge. This paper examines the importance of integrating IKS into Higher Education. Drawing upon various technological tools and approaches, it further highlights how ICT plays a crucial role in this integration, exploring innovative tools and platforms that enhance accessibility, enable preservation and dissemination of indigenous knowledge while contributing to academic diversity and fostering interdisciplinary learning.

Keywords: Indian Knowledge System (IKS), Higher Education, ICT, Learning Technologies, Online Platforms, Integration of IKS.

INTRODUCTION:

To thrive in the modern world, we need to have an education system rooted in our country which weaves people's minds of the same fabric that they belong to. The education system being followed today is adopted from colonization, aimed at individualized serving of industrial needs (Bhardwaj, 2021). The ancient Indian heritage and profound cultural practices across various fields, although not forgotten, are definitely not a part of the formal educational framework today. Students are not acquainted with the wisdom and legacy of the country they live in. Bringing this knowledge to the forefront, into mainstream education and curriculum framework will empower students to know their own nation in a new light and equip them with a broader understanding of the world we live in.

According to (Sreekumar 2022), the assimilation of traditional knowledge in Higher Education is the most powerful way to 'decolonize' our system and pave the way for our country to become 'Atmanirbhar' through NEP 2020. This needs a revolutionary change in the current system of Learning Practices and 'technology' has always been a catalyst to change (Singh and Kumari, 2023).

Technology and education are inseparable in today's modern and fast-changing world. The integration of the Indian knowledge System into higher education can be greatly facilitated by the strategic utilization of technology (Habib, 2017). ICT tools like digital resources, online platforms, immersive technologies, open educational resources, collaborative tools, mobile learning, latest Learning Technologies and Media Systems can make the tedious work of dissemination of vast records seamless and engaging (Jharotia, 2014). By leveraging these technologically-enhanced tools, Higher Education institutions can effectively integrate Indian knowledge systems into their curricula, fostering a more inclusive and diverse learning environment that honors India's rich intellectual heritage.

AN OVERVIEW ON THE INDIAN KNOWLEDGE SYSTEM (IKS):

The Indian Knowledge System (IKS) includes a vast array of traditional sciences, philosophies, and cultural wisdom that has been developed and passed down through generations in the Indian subcontinent. At its core, IKS emphasizes holistic approaches to understanding the universe, human existence, and the interconnectedness of all living beings (Garg, 2023). This integrative approach is reflected in various traditional Indian disciplines such as Ayurveda (traditional medicine), Yoga (physical and spiritual practices), Jyotish (astrology), and Vedanta (philosophical inquiry). Scholars from India have made significant contributions to various fields, including Science, Technology, Mathematics, Philosophy and Literature (Mandavkar, 2023). It encompasses 'Ashtadasa Vidyas' ranging from Vedas, Vedangas, Upanishads, Arts, Astronomy, Chemistry and Metallurgy (Rasayana Shastra), Architecture (vastu), Textiles, Music and Dance, etc. Most of which is originally recorded in the forms of manuscripts, oral traditions and practices (bvsvb.org.in).

One of the defining features of IKS is its emphasis on synthesis and harmony. The Vedas and other Upanishads emphasized the 'multi-dimensional approach towards life' as the ethos to all other domains of life (Mundhe, 2023).

Over millennia, IKS has evolved and adapted to changing societal needs and technological advancements while retaining its fundamental principles and values. It continues to serve as a guiding point and a source of inspiration for many groups (Timane and Wandhe, 2024). Today, IKS continues to shape diverse aspects of Indian culture, society, and governance, offering valuable insights into sustainable living, holistic health, and spiritual well-being. Its interdependent, inclusive, and pluralistic ethos offers valuable lessons for navigating the complexities of the world with wisdom, compassion, and resilience.

IMPORTANCE OF INTEGRATING IKS INTO HIGHER EDUCATION

In recent years, there has been an increasing curiosity in IKS both within India and on the global stage. Scholars, policymakers, and practitioners are recognizing the relevance and potential

of traditional Indian knowledge systems in addressing contemporary challenges of modern society.

There is a need to bridge the knowledge gap between traditional practices and modern solutions, so that the two can complement each other and future citizens can be empowered with proficiency in both. (Kumar, 2023). The integration of the Indian Knowledge System (IKS) into Higher Education is of paramount importance for several reasons including cultural, educational, social, and economic dimensions.

1. Preservation and Promotion of Cultural Heritage:

IKS represents a rich and diverse cultural heritage that spans thousands of years and encompasses a wide array of disciplines and domains, including philosophy, science, medicine, arts, and literature (drishtias.com, 2020). By studying and engaging with various domains of IKS at different levels, students may gain a deeper appreciation of their cultural roots, fostering pride, identity, and cultural continuity (indusuni.ac.in) and safeguards traditional knowledge systems from erosion and extinction.

2. Holistic and Interdisciplinary Learning:

Higher education institutions that integrate IKS provide students with a more comprehensive and well-rounded education, transcending narrow disciplinary boundaries (Vaz, 2024).

3. Relevance to Contemporary Issues:

Many aspects of IKS, such as Ayurveda (traditional medicine), ecological wisdom, and sustainable living practices, offer valuable insights into addressing contemporary challenges such as public health, environmental sustainability, and social justice (Timane and Wandhe, 2024). In embracing IKS, higher education institutions can create transformative learning environments that empower today's youth to become confident, informed and ethical global citizens (Lobont, 2008).

THE ROLE OF TECHNOLOGY IN FACILITATING INTEGRATION OF IKS

The role of technology in facilitating the integration of the Indian Knowledge System (IKS) into Higher Education is multifaceted and crucial. According to (Chandel and Prashar, 2024), the major hindrance in developing and implementing IKS-based courses and programs in institutions is its 'non-literary form' and lack of structured curriculum.

Technology serves as a powerful tool to solve this problem (Singh and Kumari, 2022) as the advent of latest educational Learning Technologies and Media Systems enable preserving, disseminating, adapting, and integrating traditional knowledge systems into contemporary educational contexts.

- **Digital Repositories and Archives for preserving IKS**

The **National Digital Library of India (NDLI)** is an initiative by the Ministry of Education, Government of India, to provide access to a wide range of digital resources, including books, articles, theses, manuscripts, and audio-visual materials. **Indira Gandhi National Centre for the Arts (IGNCA)** hosts an online repository containing digitized versions of rare books, manuscripts, photographs, and audio-visual recordings related to Indian art, culture, and heritage. **Sanskrit Documents Collection** contains a vast collection of Sanskrit texts, including ancient scriptures, epics, philosophical treatises, and literary works like Ved Pathshaala and hundreds of scanned books. More such initiatives can greatly help in engaging educators, researchers and students alike.

- **Online Courses and E-Learning platforms for disseminating IKS**

Introducing Indian Knowledge Systems (IKS) through e-learning platforms requires a combination of factors, including the availability of relevant courses, cultural sensitivity, and engagement with authentic sources. Some of the newest and proficient E-learning platforms are:

1. **Coursera for Campus:** Coursera offers a wide range of courses from universities and institutions worldwide, including those focusing on Indian history, philosophy, and culture. Institutions could curate courses relevant to IKS and integrate them into their curriculum using Coursera for Campus.
2. **FutureLearn for Education:** Universities could develop courses on various aspects of Indian knowledge systems, offering insights into Indian philosophy, literature, art, and more.
3. **edX for Business:** While primarily focused on professional development, edX for Business could be utilized by universities to offer courses on IKS tailored for students interested in exploring vocational courses alongside their main academic pursuits.
4. **Udacity:** Udacity's project-based learning approach could be adapted to offer courses or projects focusing on practical applications of IKS in areas such as traditional medicine (Ayurveda), sustainable agriculture (Permaculture), or Vedic Mathematics.

- **Virtual Reality (VR) and Augmented Reality (AR) for immersive learning experiences**

When introducing Indian Knowledge System (IKS) through VR or AR, it's essential to ensure that the content is presented authentically and respectfully, with input from scholars and practitioners knowledgeable about the subject matter.

Unimersiv is a VR platform that offers educational experiences in various subjects, including history and culture. Universities or educational institutions could develop VR modules focused on different aspects of IKS, allowing students to explore ancient Indian sites, rituals, or philosophical concepts in a virtual environment. **Google Expeditions** allows educators to take students on virtual field trips to different locations around the world using VR. Teachers could create or access expeditions that showcase significant sites related to Indian knowledge systems,

such as temples, historical landmarks, or natural landscapes. **ZapWorks** is an AR development platform that enables the creation of interactive AR experiences. Developers could use ZapWorks to build AR applications that overlay digital content, such as 3D models, animations, or videos, onto physical objects related to IKS, such as artifacts, artworks, or texts.

- **Social Media and Online Communities for knowledge sharing and collaboration**

YouTube is a powerful platform wherein educators and content creators can create, share and view videos exploring various aspects of Indian history, culture, philosophy, and science, reaching audiences worldwide. **Facebook** can provide opportunities to create groups, pages, and events dedicated to discussing and sharing information about IKS. It allows for the creation of communities where members can engage in discussions, share resources, and organize educational initiatives. **Instagram** can be used to share visual content related to IKS to showcase artifacts, artworks, and cultural events, fostering appreciation for Indian heritage. **LinkedIn** is a professional networking platform where educators, researchers, and organizations can share articles, research papers, and insights related to IKS. **Google Classroom** also can provide opportunities for collaboration and networking within the academic and professional community.

- **Mobile Applications for accessing IKS resources on-the-go**

Bhasha Sangam is a mobile app designed to facilitate online language learning allowing users to celebrate India's rich cultural diversity through mutual interaction and reciprocity between people and removing language barriers. One can learn the 22 official languages of India for free from this app in a game-like lesson. **Sanskrit** is another mobile app designed to teach users the basics of Sanskrit, the ancient language of India. It includes lessons on Sanskrit grammar, vocabulary, and pronunciation. The **Gurukula** app provides a unique method to learn about Indian Culture through story-telling. It contains audio books of Mahabharata, Ramayana, Panchatantra, Vedas, Shlokas and comic books which have been picked from original epics to avoid distortion. The **Bhagavad Gita** app offers translations, commentaries of all 700 slokas of the Bhagavad Gita, one of the most important philosophical texts of ancient India. It provides users with insights into the teachings and wisdom contained in this sacred scripture in easy to understand language. **Vedic Mathematics** is an app that teaches users about the principles and techniques of Vedic mathematics, an ancient system of mathematical calculations originating from India. It offers tutorials, examples, and practice exercises to help users improve their math skills using Vedic methods. There is no dearth of competent software developers in our country who can go on to develop more mobile apps addressing other domains of IKS that can then be easily accessed on fingertips of its consumers.

Studying the best practices as well as case studies of successful integration of IKS in education through technological intervention can stipulate practical guidelines (Mushahary, 2020) to capitalize on the latest technological resources. By harnessing the power of technology,

educators, researchers, and policymakers can create transformative learning environments that empower students to engage with and contribute to the preservation and revitalization of IKS (Kumar and Makwana, 2023). This can support capacity-building programs for educators and researchers, thereby paving the path for further investment in technological infrastructure and innovation hubs.

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Ancient astrophysics and modern astrophysics: Indian knowledge system**Mr. Sonu Kumar***Ph.D. Scholar**Department of Science**Venkateshwara University, Gajraula, U.P.-244236*

Abstract:

India, the land of sages and seers, is known for its rich cultural heritage and abundant diversity. Also, it is known as one of the oldest civilizations in the world. India is a very unique country. Every state has its culture, dress, food, environment, nature etc. However, there is still something familiar throughout Indian religion, and that common factor is India's culture. The Indian way is sustainable and strives for the welfare of all. Snorkeling deep into the sea of scientific discoveries, one can find that the Indian calendar is considered the oldest in the system. It divides an approximate solar year of 360 days into 12 lunar months of 27 or 28 days. The resulting discrepancy was resolved by the intercalation of a leap month every 60 months. India has always been the land of great mathematicians. Āryabhaṭa is probably the most famous Indian astronomer/mathematician. We know that the earth revolves around the sun. So, how is this process connected with the movement in the universe and our Vedas? It also becomes necessary to understand. The research paper presented for is based on secondary data. In which the emergence and development of astrophysics and modern astrophysics in ancient times and how astrophysics is associated with the Indian knowledge system is given in this paper.

Key words: Indian knowledge system(iks), astrophysics, astronomy, modern

Introduction:

India is a very unique country. Each state has its culture, attire, food, environment, nature etc. However, something is still familiar in the entire Indian religion, and that common factor is the culture of India. Indian culture is the oldest living culture in the whole world. Indian ancient traditional knowledge system is unique and has many roots of learning relevant to any time. It has evolved, and different chapters of ancient Indian Knowledge have been classified into various sections over time. It has its history. Some there for Indians have made significant contributions to many different areas of study, including astronomy (through their understanding of planetary motions, the solar system, and the Earth's shape and diameter), linguistics (through their mastery of steelmaking), administration (through their grasp of taxation), and statistics (through their grasp of grammar). Botany (through their understanding of the properties of plants and herbs) medicine (through their discovery of zero and the decimal system, as well as approximation algorithms for computing Pi) India should provide serious attention to preserving and promoting its cultural

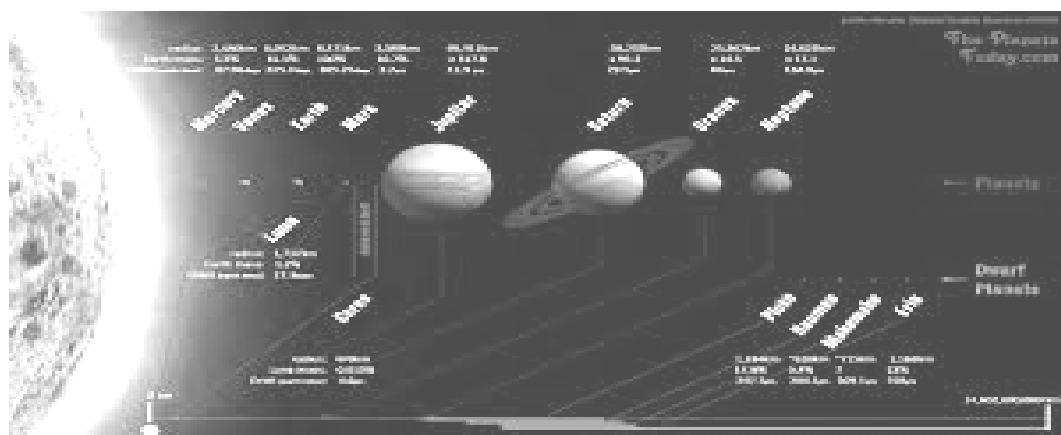
heritage, which is essential to the country's sense of self.

Definition of Indian knowledge system :

The Bhartiya way is sustainable and strives for the welfare of all. It is important that we regain the comprehensive knowledge system of our heritage and demonstrate the 'Indian way' of doing things to the world. This requires training generations of scholars who will demonstrate and exemplify to the world a way of life so unique and peculiar to our great civilization.

What is astrophysics :

Astrophysics is a branch of space science that applies the laws of physics and chemistry to seek to understand the universe and our place in it. The field explores topics such as the birth, life and death of stars, planets, galaxies, nebulae and other objects in the universe.



It has two sibling sciences, astronomy and cosmology, though the lines between these branches can blur. Astrophysics is the science of physical processes in the cosmos. It uses data gathered by astronomers using telescopes on Earth and in space – combined with the laws and theories of physics – in order to interpret the universe around us. Cosmologists would then ask how the knowledge of the stars fits with that of the universe as a whole. Astrophysics combines principles from maths, physics, and astronomy to answer fundamental questions about the origin and development of our Universe.

Objectives of the Research study:

1. Aims to know the origin and development of ancient astrophysics and modern astrophysics.
2. Aim to know the relationship between Indian system and astrophysics.

Research Methodology:

Descriptive research method has been used in the present research paper.

Information consolidation:

There search studies presented have collected secondary information from research papers, government reports and websites as secondary information.

The origin and development of ancient astrophysics and modern astrophysics.

The most influential of the ancient astronomical texts was the Almagest of Claudius Ptolomeaus or Ptolemy, who lived in the second century AD. The word Almagest is a corruption of the Arabic translation of the title of his book, the MegeléSyntaxis or It consisted of 13 volumes and provided a synthesis of all the achievements of the Greek astronomers and, in particular, it leant heavily upon the observations of Hipparchus. Within the Almagest, Ptolemy set out what became known as the Ptolemaic System of World which was to dominate astronomical thinking until the 16th century.

The sphere of the ‘fixed stars’ rotates about the Earth once per day. Against that pattern of stars, the Sun and Moon move in roughly circular paths about the Earth. In addition, the motions of the five planets observable to the naked eye-Mercury, Venus, Mars, Jupiter and Saturn – were the subject of precise measurement. The Greek astronomers knew that the planets did not move in simple circles about the Earth but had somewhat more complex motions. Figure 1 shows Ptolemy’s observations of the motion of Saturn in AD 137 against the background of the fixed stars. Rather than move in a smooth path across the sky, the path of the planet doubles back upon itself. These ideas became the inspiration for Copernicus roughly eighteen centuries later. They were rejected at that time for a number of reasons. Probably the most serious was the opposition of the upholders of Greek religious beliefs. According to Pedersen and Pihl (1974), they were only published in the modern sense in 1483, forty years after the death of Copernicus.



The last half of the 16th century, the predictions of the motions of the celestial bodies were derived from the Ptolemaic system, as refined by the Arabic astronomers. The standard tables, known as the Alphonsine tables, had been prepared by the Rabbi UNESCO – EOLSS SAMPLE CHAPTERS ASTRONOMY AND ASTROPHYSICS - A History of Astronomy, Astrophysics and Cosmology - Malcolm Longair ©Encyclopedia of Life Support Systems (EOLSS) Isaac Ben Sid of Toledo and published in manuscript form in the Libros del sabre de astronomical in 1277 under the patronage of Alfonso X, also known as Alfonso the Wise. Later in 1610, he made two other crucial telescopic discoveries, (IV) the rings of Saturn, which he interpreted as close satellites of the planet, and (v) the phases of the planet Venus. When Venus was on the far side of its orbit with respect to the Earth, it appears circular but when it is on the same side of the Sun as

the Earth, it looks like a crescent Moon. This was interpreted as evidence in favor of the Copernican picture.

- **Development of modern astrophysics**

Modern astronomy, astrophysics and cosmology changed beyond recognition over the post-WWII period. In 1945, astronomy meant optical astronomy and the tools of astronomy were optical telescopes. By the 1960s and 1970s however, astronomy was experiencing golden years of innovation and discovery. The most important developments were the opening up of the complete electromagnetic spectrum for astronomical observation (including observations from space), the electronic revolution, and the huge influx of scientists from other disciplines—particularly physics—into astrophysics. Astronomers Royal, such as Richard Woolley, encouraged pure astronomical and astrophysical research, but the UK astronomers could not compete with the USA, which had the largest and most productive astronomical telescopes. The astronomical scene in the UK was not promising. The country was bankrupt and the UK climate was, to put it politely, not conducive to optical astronomical observation. The Royal Greenwich Observatory was an Admiralty establishment, with the prime objective of keeping time and latitude for navigational purposes. The result was an exodus of many of the best UK astronomers to the USA, including Wallace Sergeant, and Thomas Gold.



An Introduction to Modern Astrophysics is a comprehensive, well-organized and engaging text covering every major area of modern astrophysics, from the solar system and stellar astronomy to galactic and extragalactic astrophysics, and cosmology. Designed to provide students with a working knowledge of modern astrophysics, this textbook is suitable for astronomy and physics majors who have had a first-year introductory physics course with calculus. Theoretical astrophysics expanded enormously from the 1960s onwards, stimulated by the many dramatic discoveries of new ways of tackling old problems. Some of its highlights include Leon Mestel's pioneering researches in cosmic magnetism, Bernard Pagel's seminal work on the use of chemical abundances as cosmological probes, Donald Lynden-Bell's remarkable work on stellar dynamics and many other areas, and Franz Kahn's diverse research in astrophysical gas dynamics. Plasma physics became a key tool for astrophysics, making use of Ian

Oxford's studies of the hemisphere as applied to double radio sources and Martin Kruskal's deep insights into magnetic reconnection in plasma physics. Special mention must be made of Dennis Siam whose unprecedented catalogue of graduate students includes Stephen Hawking, Roger Penrose, Martin Rees and Brandon Carter. No record of this remarkable period would be complete without remarking on the extraordinary contributions to the public understanding of astronomy by Patrick Moore, whose The Sky at Night programme he presented once a month for more than 50 years.

The relationship between Indian system and astrophysics.

Meghan Nada Saha was a multifaceted personality who contributed not only to theoretical astrophysics but also to atomic and molecular spectroscopy, nuclear physics, and propagation of radio waves, age of rocks, Indian calendar reform, water management and national planning 4~ well. Thollgh BC did hip MSc in ilpplib9 mathematics, he was inspired to astrophysical problems after he came across two popular books on the Sun and the stars by Agnes M Clarke. Some there for Astronomy had a hoary past in India with the oldest astronomical text Vedanta Jyotisha dated around 1400 BC1. And some There contribution to mathematical or Siddhantic astronomy, due to the interaction with Greece in the post-Alexander period, made an impact owing to the work of Aryabhata I, Bhaskara I, Bramagupta, Aryabhata II, Bhaskara II, and others, starting at the end of the fifth century and going up to the beginning of the twelfth century .The big event after this~ was the five masonry observatories built by Raja Jai Singh Away in the first half of the eighteenth century; however,...~use observatories remained architectural show pieces as the invention of telescope had already taken place in Europe by then. Or The astronomical activities once again started at the end of the nineteenth century , when the Europeans, mostly the British, come to India for observing the solar eclipses of 1&68, 1&11 and 1Bn~ this~ ~tth~ b'Qll r)llingfQ!" astrophysical activities in India, culminating in the setting up of the Kodaikanal Observatory in 1899.



Though Sana contributed to the growth of astrophysics in various ways, his equation of thermal ionization has become an indispensable part of physics and astrophysics. Some there for Duality Singh Kothari (1906-1993), a student of Professor MN Sana at Allahabad University and of Professor RH Fowler at Cambridge University, made many important contributions to the development of science and education in India, besides making many notable contributions to

astrophysics. DS Kothari along with RC Mazumdar¹⁵ computed opacity coefficients for electron degenerate matter using a rigorous quantum mechanical treatment and showed¹⁶ later that the energy flows in the degenerate stellar cores .is mainly by the thermal conduction and not by the radioactive process. Some this is still true though somewhat improved coefficients are being used now. Kothari's¹⁸ theory of pressure ionization and its application to planetary masses is a landmark paper of his. In this paper, he derived a relation for the degree of ionization in the non-relativistic degenerate matter, using VI rails theorem, and applied it to spherical bodies at zero temperature under their own gravitational force. And actually, the important conclusions of this paper can be summarized as:

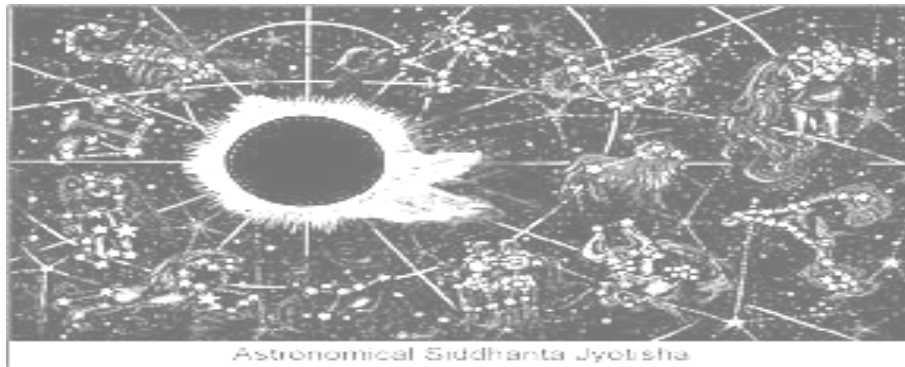
- The ionization takes place at high densities, even at zero temperature, owing to pressure. It is called pressure ionization in contrast to Sana's thermal ionization.
- It is possible for hydrogen to be in metallic form at the core of cold dense bodies composed mostly of hydrogen, where pressures greater than 10^{11} dyne cm^{-2} may exist. This may be the case for planets like Jupiter and Saturn.
- A mass-radius relation was found for cold non-relativistic electron degenerate masses, whose maximum radius occurred at mass critical one-hundredth of the solar mass.
- d The masses of all the (known) planets in our solar system are less than the critical mass



Generally, Most of these centres are pure research institutes but to inculcate the excitement of astrophysics into the young budding scientists, one has to take astrophysics to the university arena itself. With this aim, the Inter-University Centre for Astronomy and Astrophysics (IUCAA) was established.

Astronomy is the branch of science in which the observation and analysis of the Earth's atmosphere and its external activities, events, and interpretation are done. Fantastic's Simply put, the factors affecting humans directly - rain, seasons, clouds, storms, along with indirectly the centre of attraction is the study of the sun, moon, various planets-satellites, meteorites, etc. At the early stage of astronomy in India, the centre of study was for religious rituals, saga, astrology, some but which laid the foundation of scientific reasoning, discovery and new theory in the later period. This scientific knowledge included information on rainfall patterns, increase in agricultural yields, study of climate, identification of seasons, motion of planetary stars, calculation of time and calendar etc. Similarly, or not came the foundation of the space program in independent India was also laid with the vision that the various problems faced by the citizens of the country such as

agricultural yield and rainfall estimation, farmer literacy, poverty, information dissemination etc. temporary can be made better. So do that can the only difference was that contemporary knowledge was based on modern technology and equipment and ancient knowledge built on open-eyed observation, observatories and non-modern (traditional) equipment. However, it is also not fair to say clarity because some traditional astronomical instruments were also used from the fifth century and earlier such as Gala, Bagman, Chakra, and Danu.



Generally, India in Evidence of astrology and astronomy is found directly or indirectly in Vedas, Brahmanas, Aranyakas, Upanishads, Puranas and Mahabharata, the main basis of Santana knowledge system. Some that In the astronomical knowledge of Vedic literature, the universe was conceived as three distinct parts: the Earth, the Sky (space) and the Heaven (dials). (Subbarayappa&Sarema, 1985, p.20) so That is, this oldest view of the heavens and the celestial bodies shows that just as a child passing through infancy, adolescence, youth and adulthood, always looking at the sky and the celestial bodies with his inquisitive mind, questions what it is, how much Why is it distant, round, bright, hot, rising-setting, dark-light, etc.? some that In the same way, we can say that our saints, sages and Castries were also as curious about the universe as human beings even casually today want to know the unlimited information and facts of the universe. But we can understand the expansion journey of these facts, discoveries and principles of Indian astronomy by dividing it into several eras of history according to convenience. (Gopu, 2019a) However, in general Indian astronomy is divided into two era Pre-siddhantic (Vedic) and Siddhantic Era (Post-Vedic):

- Vedic Era (before fifth century BCE)
- Eighteen Siddhartha Era (fifth century BC to fifth century AD)
- Classical Age/Classical Theoretical (Siddhantic) Era (fifth century AD to Seventeenth century AD)

Just there Shula Sutra, similarly the motion of the planets was considered to be elliptical rather than circular until Aryabhata's knowledge rendering, but the motion of the planets is circular. This benefits modern space activities as this knowledge is essential for precise operation and movement of artificial satellites. (Nair, 2015) For example, on August 7, 2022, the launch of

India's first Small Satellite Launch Vehicle (SSLV D1) from Sridhar Kota Space Center was successful, but the two satellites involved in the mission, EOS 02 and Azadi Sat, could not be established in the exact orbit. Because SSLV-D1 placed the satellites into a 356 km x 76 km elliptical orbit instead of a 356 km circular orbit and mission failed. The moon and Mars are now within our reach, and Indian traditional knowledge provides additional information about them.

Conclusion:

Indian astronomical knowledge has been called completely astrology by the western world, where it is nothing but imagination and fiction. But this is just an attempt by the western world to make Indian traditional knowledge irrelevant and to reach a secondary status. Away from irrationality, Indian traditional knowledge has integrated revisionist and pragmatic features, such as Aryabhata's revising of Rahu-Ketu's narrative on lunar eclipses and solar eclipses. Nor was there religious rigidity against astronomy like western society.

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Developing English Language Skills Through Art And Drama

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Abstract

Language development is a complex process influenced by various factors, including exposure to linguistic stimuli and cognitive engagement. The objective of this study was to develop a program based on Art and Drama and ascertain its effectiveness. The findings indicated that the program was effective and participants learnt many art and drama techniques and how to integrate it in language learning through this MOOCs course.

Key words: Indian knowledge system, Art and drama MOOCs course, Integration with language skills

The students' involvement in the learning process has become the main aim of modern approaches that focus on student-centered class rather than teacher-centered class. The clever involvement which demands a student to use creative thinking skills is the kind of involvement that helps student to learn in an effective manner. Many methods have been used to assess students' effective involvement. The Indian National Education Policy (NEP) 2020, emphasizes the inclusion of IKS into curriculums at all levels of education. Considering the importance of Indian culture and heritage if teacher integrates Indian art form, sculpture, folk dance and drama forms to develop language skills, it is an effective approach of teaching and students develop their interest towards their culture. Art and Drama are one of the most important approach that provide more avenues for the involvement of both teachers and students in the learning process. In the foreign language classroom, Art and Drama is an effective approach. It is stated that "the use of art and drama in the language classroom allows the teacher to present the target language in an active, communicative and contextualized way. Art and Drama help the teacher address the four skills of language learning (speaking, listening, writing and reading), and it also favours and facilitates the study of some often-neglected aspects of language such as pronunciation and body language."

Need of the study:

Teaching and Preservation of ancient and contemporary rich Indian knowledge systems ranging from art, music, dance, drama, to various languages- national and international is one of the major goal of Indian knowledge system considering this as a prime concern, researcher has developed a course to train the teachers to integrate Indian art and drama forms to develop language. IKS also suggests to integrate modern disciplines of knowledge offered at school and higher education.

NCERT in its Art Integrated Learning Guidelines (2019) stated that Art Integrated Learning (AIL) is a framework of experiential learning that provides an equitable environment for all students to learn at their own pace and they can construct their own knowledge with the support of art integrated activities provided to them. Art integration includes both fine and performing arts. Visual art involves painting, drawing, printmaking, sculpture, ceramics, photography, video, filmmaking, design, crafts, and architecture in education. While performing arts includes applying music, drama, dance, theatre, etc to the teaching-learning process.

REVIEW OF RELATED LITERATURE:

Jamiral Islam (2021):The objective of this study was to research the role of drama performance in university, especially in teaching within the literature and non-literature student of B.A course of Maulana Azad National Urdu University, Hyderabad. It was a case study of the utilization of drama during a language class. Research findings showed that the program was successful and participants were able to pose challenges and potential strategies for teaching language to international learners. Finally, it supported drama as a medium for constructive and conceptual learning.

Harshita Pathak (2022):The objectives for the study was to develop an Intervention Programme for Drama Integrated Teaching of English (DITE) for English Learners at Secondary School Level and to study the effect of the Intervention Programme for Drama Integrated Teaching of English (DITE) on the Multiple Intelligences of the English Learners at Secondary School Level. The researcher found that teaching English subject through drama techniques with its impact on different Multiple Intelligences has been explored to a very little extent, although studies on Multiple Intelligences (as whole) have been conducted.

Mayuri Agarwal & Anjana Verma (2023):The objectives for the study was to integrate various art forms like dance, drama, music, puppetry, etc. in the classroom teaching learning process that makes the environment joyful in which students learn with interest and it makes their learning retentive, long-lasting and transformative which they can apply in their real world. This study shows that the integration of performing art makes learning more enjoyable and meaningful which is supported by several research works.

Pushpa R. & Dr. RANGASWAMY C (2023): The main of this study was to ascertain the effectiveness of theatre based teaching on student's academic achievement in Kannada language at the high school level. In the research, the researcher used experimental method. Result of the study revealed that both the groups of Secondary School Students are identical with regard to their Pre-test scores on Conceptual Clarity in Kannada subject. The Theatre Based Teaching (TBT) method is more effective than the traditional Method of Instruction in improving Conceptual Clarity in Theatre Based Teaching (TBT)

OBJECTIVES:

- To develop a program based on Art and Drama and ascertain its effectiveness
- To develop an understanding of the fundamentals of the English Language.
- To be acquainted with the concept of Art and Drama.
- To be acquainted with basic forms of Art and Drama.
- To integrate elements of Art for developing Language skills.
- To integrate elements of Drama for developing Language skills.
- To train language teachers to integrate Art and Drama elements with basic skills of Language, Composition, and Creative Writing.

Sample and sampling Technique: Sample for the study consisted of 230 people who were teachers at various levels, B.Ed students and teacher educators. Incidental sampling technique was used for the study.

Tools used: Questionnaire was prepared and checked by 5 teachers and teacher-educators for its content validity which was administered as a pre-test and post -test.

Course- The course was run as MOOCs course on CANVAS platform for 4 weeks. Content was prepared and checked by expert and then uploaded on the platform divided into 4 modules..

DATA ANALYSIS:

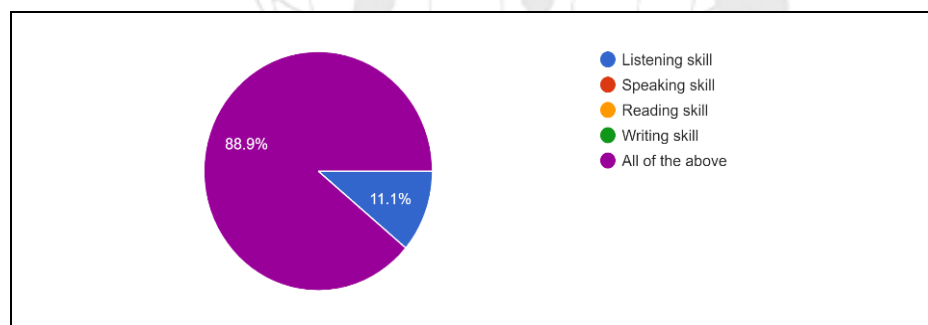


Table 1.1

Interpretation: According to table no.1.1, 11.1 % participants said listening skills is language skill and 88.9% participants were aware about all four basic language skills.

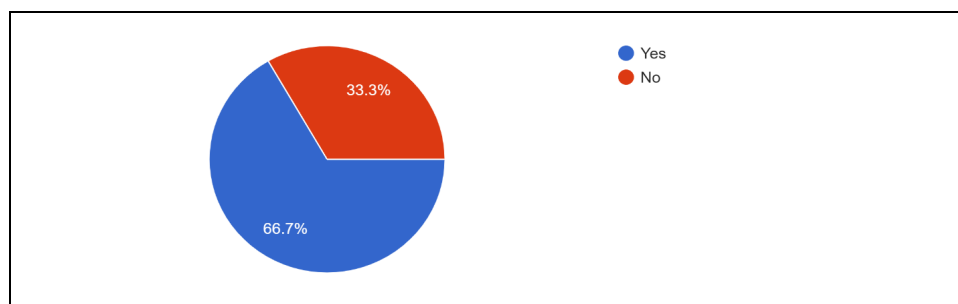


Table 1.2

Interpretation: According to table no.1.2 66.7% participants were aware of art and drama technique but 33.3% participants were not aware of the technique.

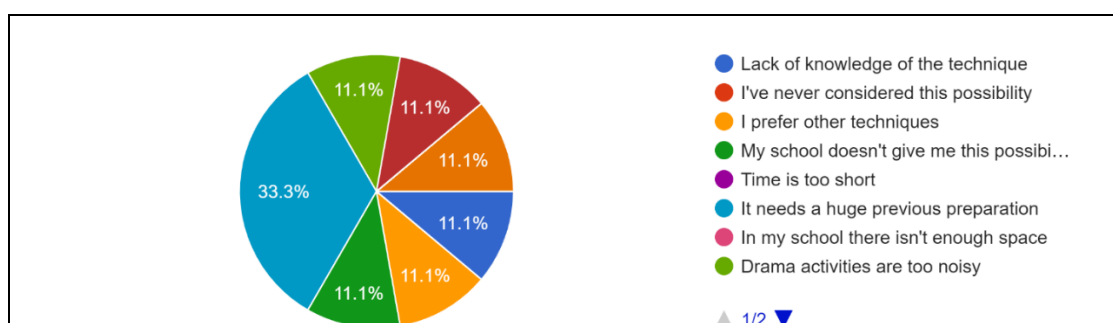


Table 1.3

Interpretation: According to table 1.3 participants have given various reasons for not integrating art and drama technique in language development.

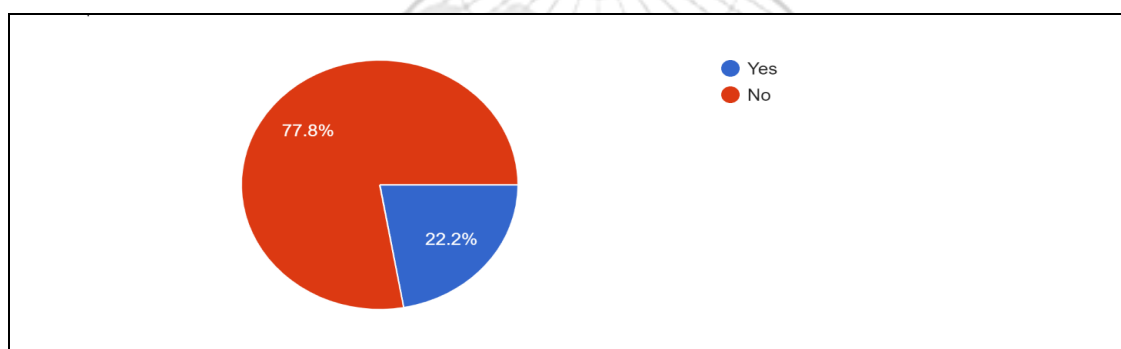


Table 1.4

Interpretation: According to table no 1.4, 22.2% participants have received training related to teaching English through theatre and drama but 77.8% participants have not received any training regarding this.

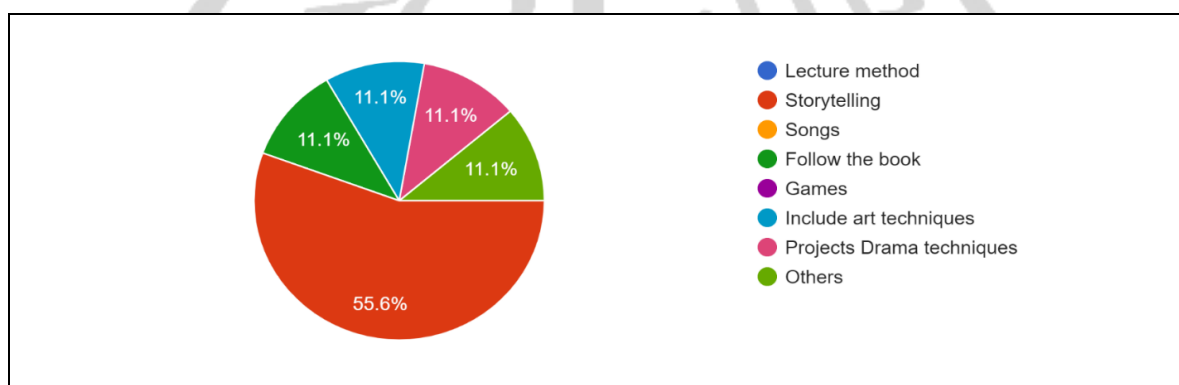


Table 1.5

Interpretation: According to table no 1.5 participants used various other methods for teaching English language

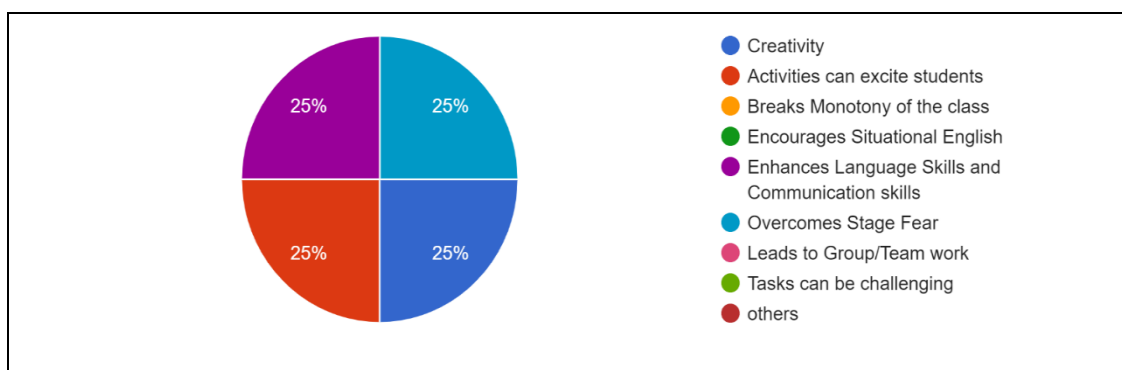


Table 1.6

Interpretation: Table no.1.6 indicates various benefits of using Art and Drama techniques in teaching English Language



Table 1.7

Interpretation: Table no.1.7 indicates participant's opinion of developing language skills through Art and Drama

Discussion:

Language development is a very complex process. Teacher faces many difficulties related to basic skills of language and creative writing. If teacher involves students in learning language by integrating art and drama elements and visual art form students will better understand the concept and engage themselves in learning. Techniques like role play, drama, writing scripts and performing them develop the overall personality of the learners and polish their personal skills also. Our Indian art and dance form are also getting promoted and students learn more about our cultural heritage and language development. It creates a joyful learning environment in the classroom.

Conclusion:

The objectives of the study was to make participants aware about the fundamentals of the English Language, concept, forms, elements of Art and Drama and to integrate elements of Drama for developing Language by developing a program. The findings show that participants were not

aware of language skills, art and drama elements and techniques of integrating these while developing language but if proper training is provided through these types of MOOCs courses, it will be beneficial for them to learn according to their own space and time. As these course provide the opportunity for asking queries and discussion on the same platform, it is helpful for the participants to raise the queries, resolve it and learn more. Overall the course was effective and participants learnt many art and drama techniques and how to integrate it in language learning through this MOOCs course.

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A study on Teaching Learning environment at Schools with special reference to standard 9th at schools in Silvassa, UT of DNH & DD

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Abstract:

Teaching- Learning environment gets reflected in the execution of education at schools. The environment includes all the measures taken to implement the teaching methods and complete the curriculum. Right from the pedagogy to the evaluation, all fall under the bracket of teaching – learning environment. This research examines the teaching-learning environment in standard 9th at schools in Silvassa, UT of Dadra Nagar Haveli and Daman & Diu. It focuses on factors affecting education quality, such as curriculum relevance, teaching methods, student engagement, and resource availability. The Researchers have adopted the exploratory and descriptive research type while collecting data from both secondary and primary sources. The primary data collection was attempted through a survey of 105 respondents across class IX selected through convenience sampling technique. The researchers aim to understand the teaching – learning process at schools. The researcher's further aim is to study the teaching learning environment experienced by Standard IX at schools in Silvassa, UT of DNH & DD. The study recommends teaching methods and resources for better student engagement and learning outcomes. The study encompasses the analysis of responses from standard IX at schools. Through surveys and observations, the study aims to identify strengths and areas needing improvement in the educational setup. The findings will contribute insights for enhancing the learning experience and academic outcomes of students in these grades. The inferences are indicative in nature as they largely represent the expressions of selected students and not the entire world of Education, hence this would be the limitation of the study. The inferences aren't exhaustive.

Key Words: Education, Role of Teaching- Learning Environment, Silvassa Schools.

INTRODUCTION:

Teaching is one of the best instruments of education and a special function is to impart understanding and skills. In the process of teaching one individual teaches or instructs another individual. According to HC Morrison - Teaching is an intimate contact between the more mature personality and a less mature one. Learning is the modification of behavior as a result of experiences. The child brings changes in his behavior after gaining experiences from the environment. Learning is the process of acquiring new understanding, knowledge, behavior, skills, values, attitude and preferences. It is the direct result of how students interpret and respond to their experiences. According to Kingsley & Garry (1957). The process by which behavior is organized or changed through practice or training. School Environment is the first place for the children to socialize. School plays an important role in developing the skills and knowledge in student behavior, so the environment of school should be positive, comfortable and focused, and the process of teaching & learning should be fearless.

Literature Review

Learning environments' influence on students' learning experience in an Australian Faculty of Business and Economics, Learn Environ Res. 2022; 25(1): 271–285, Published online 2021 Mar 29. doi: 10.1007/s10984-021-09361-2, PMCID: PMC8005866, PMID: 33814969

This research offers a comprehensive examination of the multifaceted influences shaping student learning experiences within a business and economics faculty. Through insightful exploration of physical, pedagogical, and psychosocial dimensions, it reveals the intricate interplay between spatial configurations, teaching methodologies, and social dynamics. The research emphasizes the importance of holistic approaches to learning space design, highlighting the need to address environmental factors alongside technological amenities. By advocating for student-centered strategies, fostering supportive relationships, and promoting active engagement, the study provides valuable insights for educational institutions aiming to enhance the quality of education. Its relevance is particularly poignant in the context of contemporary challenges like the COVID-19 crisis, urging institutions to prioritize flexibility and creativity in preparing future leaders.

**JOURNAL OF EDUCATIONAL AND INSTRUCTIONAL STUDIES IN THE WORLD
August 2012, Volume: 2 , Issue: 3 Article: 22 , ISSN: 2146-7463**

The paper talks about how education starts from early experiences, including the environment in the womb, and continues through school environments. It stresses the importance of a good home and school environment for learning. Schools are seen as places that shape the future of a country. The study is important because it looks at how the school environment affects the academic success of ninth-grade students. The review finds that while there's no big difference

based on gender or language of instruction, students in cities generally have better school environments. This shows that improving school environments can help students achieve more.

Learning Environment Affecting Primary School Student's Mental Development and Interest

ISSN – 1307- 9298

This research talks about how education and upbringing are super important for a child's brain growth. It mentions different theories and studies showing how education affects personality and mental development. The goal is to see how different teaching methods, like traditional ones or newer ones using special technology, impact young students, especially when learning the Russian language. The study looks at things like how students are picked, what's being measured, and the whole process of the research. It found that using the new technology for teaching can really boost kids' brains and make them more interested in learning.

Effect of Classroom Learning Environment on Students' , Academic Achievement in Mathematics at Secondary Level, Author name - Riaz Hussain Malik* and Asad Abbas Rizvi, Bulletin of Education and Research, August 2018, Vol. 40, No. 2 pp. 207-218

This paper discusses how classroom environments impact learning, especially in math for secondary students. It emphasizes the importance of factors like teacher support, involvement, and positive interactions. The study collected data using surveys and linked it with Math scores, showing how classroom setups affect academic performance. Positive elements like teacher support improved grades, while challenges like investigation had negative effects. Recommendations include enhancing self-learning habits and providing extra support for struggling students. Overall, the study highlights the crucial role of classroom environments in shaping students' academic success and suggests areas for further research in education.

An Investigation into Teaching-Learning Environment and Teacher's Mental Health in Single Teacher Lower , Primary School of District Kokrajhar, Assam; India, Swargiary, C. Talukdar, M.C. , Assam, India, International Journal of Innovative Science and Research Technology, ISSN No:-2456-2165, Volume 3, Issue 9, September – 2018

This paper stresses the importance of education for both personal and national progress, touching on its role in economic, political, and social development. It mentions government efforts like the Total Literacy Campaign but notes the ongoing challenges in providing quality education, especially in elementary schools. The focus then shifts to single-teacher schools in Kokrajhar District, Assam, highlighting the study's significance. The methodology involves interviews and observations to understand teaching challenges. The discussion covers issues like limited instructional time, multi-grade teaching difficulties, teacher workload, and mental health impacts.

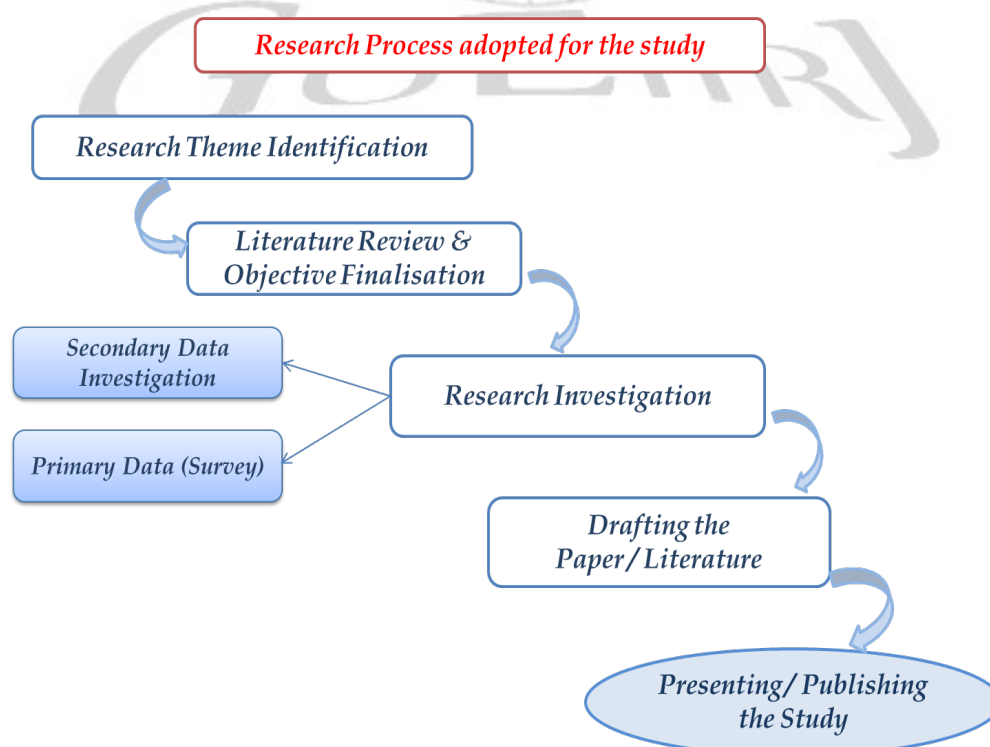
The conclusion recommends hiring more teachers to address these challenges effectively.

OBJECTIVES OF THE STUDY:

1. To analyze the Teaching Learning Environment experienced by Standard IX at schools in Silvassa, UT of DNH & DD.
2. To recommend teaching methods and resources for better student engagement and learning outcomes.

RESEARCH METHODOLOGY & PROCESS:

A study on teaching learning environments at schools with special reference to standard 9th at schools in Silvassa, UT of DNH & DD is attempted through exploratory and descriptive research with data collection from both secondary and primary sources. Silvassa is a city in UT of DNH & DD. The primary data collection was attempted through a survey of 105 respondents across class IX selected through convenience sampling technique. The Researchers aim to understand the importance of concentration in education for students. The study aims to identify factors of low concentration in class among students of Standard IX at Schools at Silvassa City. The researchers aim to contribute measures to enhance students' concentration in Class. The study encompasses the analysis of responses from standard IX at Schools. The inferences are indicative in nature as they largely represent the expressions of selected Students and not the entire world of Education, hence this would be the limitation of the study. The inferences aren't exhaustive.



TEACHING AND LEARNING ENVIRONMENT

A teaching – learning environment is a place where learners feel comfortable, encouraged and inspired by their surroundings. A teaching – learning environment means learning spaces, educational setting, school environment etc.

A positive teaching – learning environment is crucial because it creates a supportive space where students feel engaged, motivated and encouraged to learn. It fosters effective communication, collaboration and a sense of belonging, ultimately enhancing the overall educational experience.

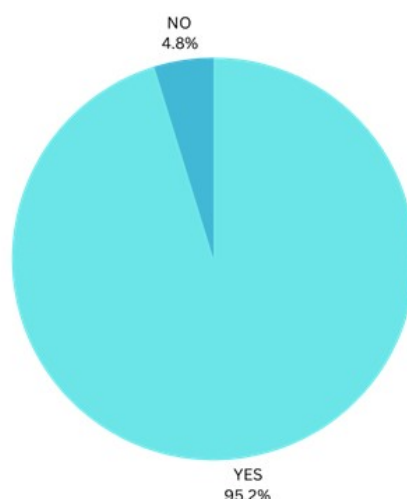
A Conducive teaching – learning environment in school is essential for several different reasons for the well - being of students & teachers. It creates student engagement and promotes active participation and engagement among students, making teaching – learning process more enjoyable and effective.

According to Study.Com 2018 learning environment includes learning resources and technology means of teaching modes of learning and connections to social and global context. It also includes human behavior and cultural dimensions. By learning information from teachers, students become better people. Teachers can help us to expand and open our minds by giving us skills throughout a student's early life to help students when they are older.

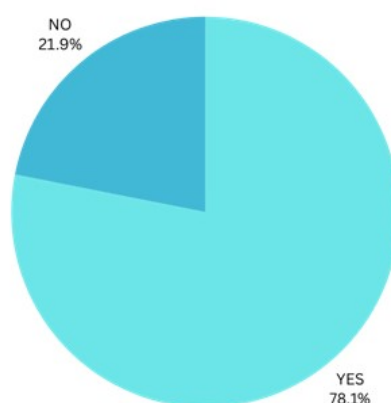
The environment of teaching–learning process of school is like a friendly and comfortable space where students and teachers work together happily. It makes learning fun, helps everyone feel safe, and allows everyone to do their best in studies and other activities.

STUDENTS - DEVELOPMENT

Students develop in school because they learn new things, make friends and discover how to solve problems. Teachers help them grow smarter, and school is where they figure out important skills related to life. In school students learn not only subjects like math and science, but also learn how to solve problems, how to communicate and team work etc. Also, adopting the skill of interaction between teachers and peers contributes to social and emotional development. Students also develop themselves by participating in extracurricular activities, and exposure to diverse perspectives enriches their overall growth. The development of students is crucial because it prepares them for life beyond academics. A well – rounded education that focuses on student development prepares them to contribute positively to society & succeed in various aspects of their lives.

RESULT & ANALYSIS**1. Does your School have a set of discipline rules & norms ?****Interpretation:-**

The data reveals that the majority of respondents (95.2%) indicate that their school does indeed have a set of discipline rules and norms in place. However, the 4.8% who responded negatively indicate that there is a small minority who perceive that their school lacks such rules and norms. This data implies that, largely, students believe their school has established guidelines for maintaining discipline and behavior standards.

2. Do your teachers provide only theory knowledge or practical knowledge as well?**Interpretation:**

The Analysis states that the majority of respondents (78.1%) perceive that their teachers provide both theoretical knowledge and practical applications in their teaching approach. This suggests that a significant portion of students feel that their education involves not only theoretical

concepts but also practical learning experiences. However, the 21.9% who responded negatively suggest that their teachers primarily focus on theoretical knowledge without integrating practical aspects into their teaching methods

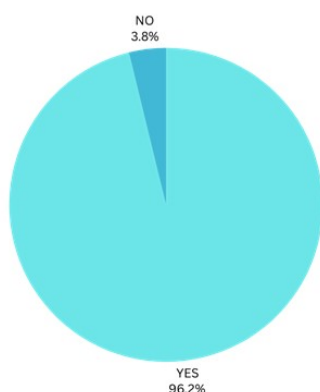
3. Does your teachers change the method of teaching in different classes?



Interpretation:

The data reveals that (53.3%) of respondents perceive their teachers maintain a consistent teaching method across classes, while a significant minority (46.7%) believe their teachers vary their approach. This indicates potential room for improvement in instructional diversity, with a sizable portion of students potentially benefiting from more varied teaching techniques tailored to different class contexts.

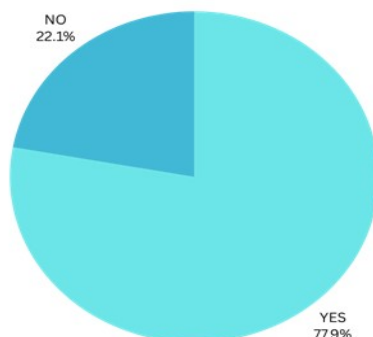
4. Do your teachers clear doubts in class?



Interpretation

The data reveals that the majority (96.2%) of students believe their teachers clear doubts in class, while only a small minority (3.8%) perceive otherwise. This suggests that students feel their teachers are responsive and attentive to their questions and concerns during class, fostering an environment conducive to learning and understanding.

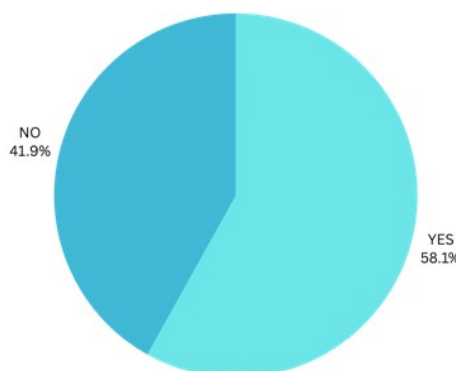
5 Do you feel free to ask questions related to your doubts with your subject teachers in the classroom?



Interpretation:

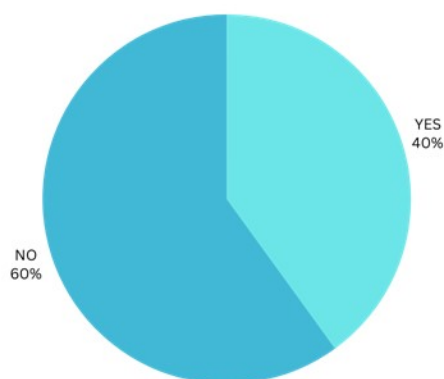
The analysis states that the majority (77.1%) of respondents feel comfortable asking questions about their doubts with subject teachers in the classroom, while a notable minority (22.9%) does not. This indicates a generally positive environment for open communication and inquiry within the classroom, although there remains an opportunity to address the concerns of those who may feel less comfortable seeking clarification from their teachers.

6 Do you feel energetic during the learning process in class?

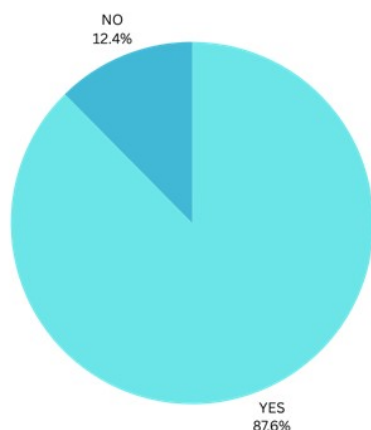


Interpretation:

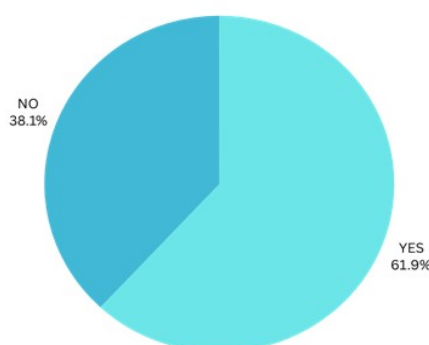
The analysis states that (58.1%) of students feel energized during the learning process in class, while a significant portion (41.9%) do not. This indicates a diverse range of experiences among students regarding their energy levels while learning, with a notable proportion feeling engaged and enthusiastic..

7 Do you get proper breaks during your lecture in class?**Interpretation:**

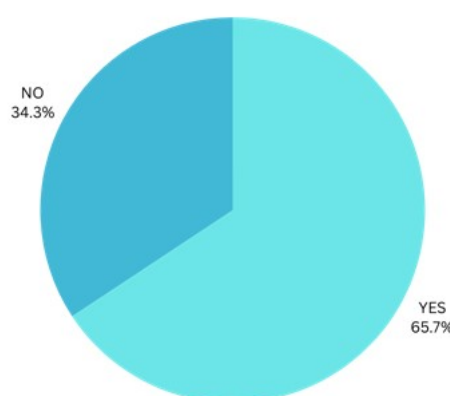
The Analysis states that (60%) of students do not feel they receive proper breaks during their lectures in class, while 40% of students say they do. This suggests that a significant portion of students perceive a lack of adequate breaks during their classroom sessions, potentially impacting their ability to stay focused and engaged. It implies that there may be room for improvement in scheduling breaks to ensure students have sufficient opportunities to rest and recharge during long lectures, ultimately enhancing their overall learning experience.

8 Are you able to understand the language of your teachers in class?**Interpretation:**

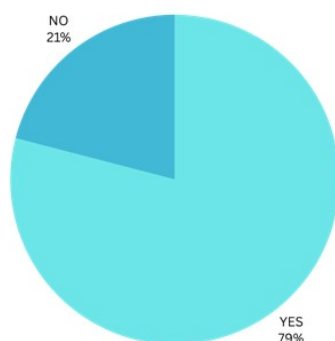
The Data reveals that the majority (87.6%) of respondents understand the language used by their teachers in class, while a minority (12.4%) feel they can't understand it. This highlights a good environment, with very little challenge on the language barrier front.

9 Does your teacher guide you for the future course stream selection?**Interpretation:**

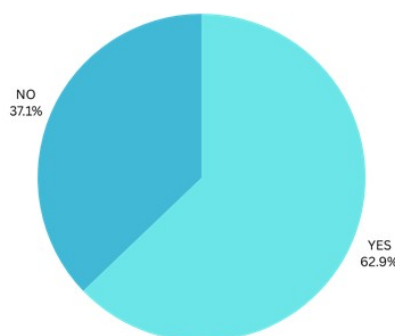
The study states that (61.9%) of respondents receive guidance from their teachers regarding future course stream selection, while a significant minority (38.1%) does not. This suggests that a considerable portion of students benefit from teacher support in navigating their academic paths. However, the presence of a notable minority without such guidance highlights potential opportunities to improve support systems for students in making informed decisions about their educational trajectories.

10 Does your teacher provide only theory knowledge or practical knowledge as well?**Interpretation:**

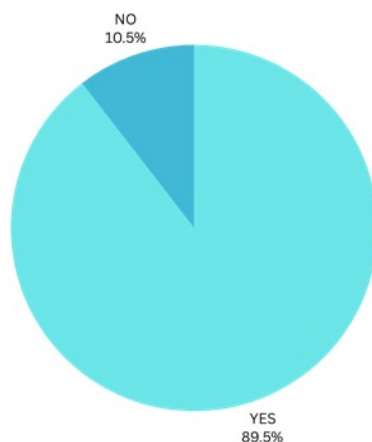
The data analysis states that (67.6%) of respondents perceive their teachers do provide both theoretical knowledge and practical applications, while a significant minority (32.4%) believe otherwise. This indicates that the majority of students feel their education involves a combination of theoretical concepts and hands-on learning experiences. However, the presence of a notable minority who perceive a lack of practical instruction implies potential discrepancies in teaching approaches or opportunities for enhancing practical learning opportunities in the classroom

11 Are you comfortable with the duration of class time?**Interpretation:**

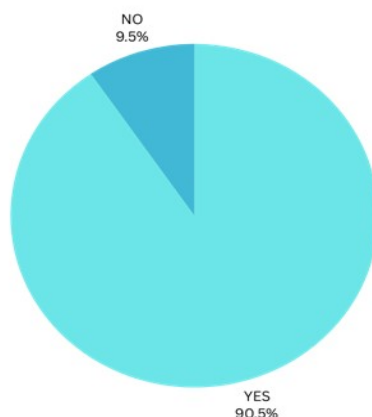
The study states that a significant majority (79%) of respondents are comfortable with the duration of class time, while a notable minority (21%) are not. This suggests that the majority of students feel that the length of their classes is appropriate and conducive to learning. However, the presence of a minority who are uncomfortable with the duration of class time indicates that there may be a need to assess and potentially adjust class schedules to better accommodate the needs and preferences of all students.

12 Do your teachers encourage you to take active participation in the class by giving you different types of rewards?**Interpretation:**

The data reveals that the majority (62.9%) of respondents perceive their teachers as encouraging active participation in class through various types of rewards, while a significant minority (37.1%) do not receive such encouragement. This indicates that many students feel incentivized to engage actively in classroom discussions or activities. However, the presence of a notable minority who lack this encouragement suggests potential variations in teaching approaches or opportunities for teachers to further motivate student participation.

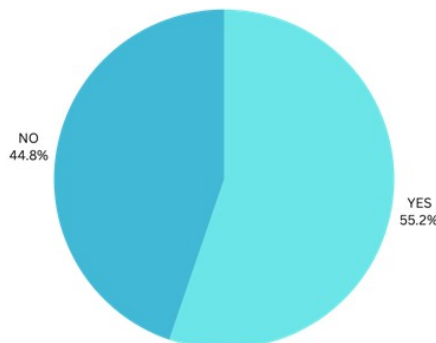
13 Are you able to give answers in the classroom from the topic asked by your teachers?**Interpretation:**

The study states that (89.5%) of respondents feel capable of providing answers in the classroom when asked by their teachers, while a small minority (10.5%) believes otherwise. This indicates a high level of confidence among students in their ability to participate actively in class discussions and contribute to the learning process. However, the presence of a minority who feel unable to do so may point to potential challenges or barriers that could be addressed to enhance student engagement and participation.

14 Do your teachers help you in the preparation of the examination?**Interpretation:**

The study states that the majority (90.5%) of respondents perceive their teachers as aiding them in exam preparation, while a small minority (9.5%) do not receive such assistance. This suggests that the majority of students feel supported by their teachers in preparing for examinations, potentially through guidance, resources, or review sessions. However, the presence of a minority who lack this support may indicate opportunities for educators to further assist students in their exam preparation efforts.

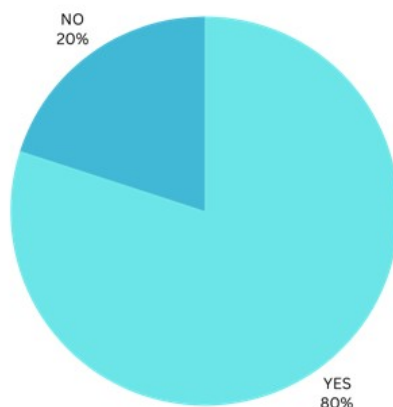
- 15 Do you feel comfortable expressing your thoughts in front of classmates and teachers ?



Interpretation:

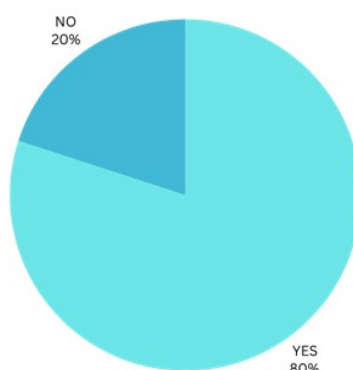
The study states that the majority (55.2%) of the respondents, feel comfortable expressing their thoughts in front of classmates and teachers, while a significant portion (44.8%) do not. This suggests that a considerable number of students may experience apprehension or discomfort when it comes to sharing their ideas in a classroom setting. Addressing this disparity could involve implementing strategies to foster a more supportive and inclusive environment that encourages open communication and participation among all students.

- 16 Is the time table of your school suitable for you?



The study states that the majority (80%) of students find the timetable of their school suitable, while a notable minority (20%) do not. This suggests that most students are content with the scheduling of classes and activities. However, the presence of a minority who find the timetable unsuitable implies potential areas for adjustment or consideration of individual preferences to enhance overall satisfaction with the school schedule

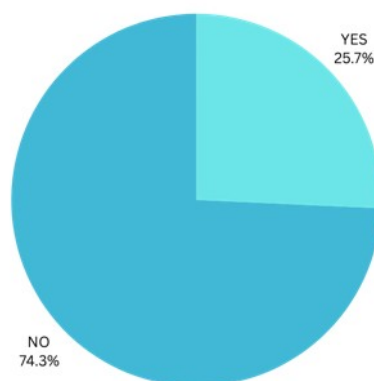
17 Are you able to complete the task given by your teachers ?



Interpretation:

The analysis states that the majority (80%) of respondents are able to complete the tasks given by their teachers, while a notable minority (20%) feel otherwise. This implies that most students feel confident in their ability to fulfill the assignments and responsibilities assigned to them. However, the presence of a minority who struggle to complete tasks may indicate potential challenges or barriers that could be addressed to support their academic success.

18 Do you have revision classes in your school before exams?



The study reveals that the majority (74.7%) of respondents' state that they do not have revision classes in their school before exams, while a small minority (25.7%) feel yes. This indicates potential disparities in exam preparation support that could be addressed to ensure all students receive adequate assistance before exams.

RECOMMENDATION:

The Researchers contribute a 5L model for development of the Teaching Learning process. The model states that adopting a better Layout, Effective learning Framework, Lifelong Learning

approach, Leveraging educational delivery and lively engagement of students shall support a deserving Teaching – Learning Environment.

CONCLUSION

The findings from the survey paint a picture of the teaching-learning environment in standard 9th at schools in Silvassa, UT of Dadra Nagar Haveli and Daman & Diu. It is evident that the majority of students perceive their schools to have established discipline rules and norms, with teachers providing both theoretical knowledge and practical applications. However, there are areas for improvement identified, such as the need for more diverse teaching methods, better comprehension of language used by teachers, and increased comfort in expressing thoughts in front of classmates and teachers. Additionally, concerns about breaks during lectures, suitability of the timetable, and completion of tasks given by teachers highlight potential opportunities for enhancement in the overall educational experience. Despite these areas needing improvement, the study underscores the importance of a positive teaching-learning environment for student engagement, motivation, and academic success, and it provides valuable insights for enhancing the quality of education in these schools.

FUTURE SCOPE OF THE STUDY

The current study is a survey based study with respondents from class IX & X (Sample size 105). Such studies may have a future scope in the form of more number of respondents to the survey & across different classes in the school.

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Indian Knowledge System

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Abstract

The new generation era with the Indian knowledge system holds great promise, combining ancient wisdom with modern innovation. India's rich cultural heritage & deep-rooted traditions provide valuable insights into areas such as sustainable living, holistic healthcare & spiritual well-being.

Incorporating traditional knowledge systems (IKS) into education can foster a deeper understanding of Indigenous practices. Additionally, leveraging India's diverse talent pool & entrepreneurial spirit can drive innovation in sectors such as technology, agriculture & renewable energy.

Further initiatives like digital literacy programs & skill development initiatives can empower individuals to participate meaningfully in the digital economy by embracing the strength of the Indian knowledge system & harnessing the potential of emerging technologies, India can navigate the challenges of future generations.

However, it's essential to note that while AI may replace certain tasks, job security is at stake today itself it may also create new opportunities & roles so adaptation & upskilling will be crucial for individuals to thrive in the AI-driven economy.

Keywords – Indian knowledge system (IKS), contemporary societal issue

Introduction

Contemporary Indian knowledge system (IKS) encompasses a blend of traditional wisdom & modern innovations. Some features are integration of tradition & modernity, embracing diverse fields like Ayurveda, Yoga & sustainable agriculture & IT reflects the rich tapestry of India's cultures, languages & practices, which focuses on holistic well-being including physical, mental & spiritual dimensions and sharing knowledge globally through institution, research collaborations & digital platforms. Emphasizes on sustainable practices & ecological stewardship, addresses social issues through inclusive education, healthcare & community engagement encourages creativity & entrepreneurship to solve contemporary challenges.

Minute Observations of Education system

On the other hand, if we observe our education & knowledge system from base level to higher level i.e., from primary level to graduation level. We come to know that the complete system is standing on three main pillars, they are examination, attendance, rote learning. If we

elaborate them ,we will come to know that the entire focus of our education system is towards exams which are held at year end. Which shows if you score good you will pass & if not you will fail where learning takes a back seat. All the exams are cracked by students on the basis of rote learning & not by learning naturally where application of knowledge & skills are lagged behind.

The last parameter is attendance. Mostly in every knowledge institution attendance of students is more important than attention of students, which paves way for learning. Over the years we are trained in this way, which sets our mindset in a unidirectional way, where giving the right answer to asked questions is the only role of a student. Ironically, it should be another way, where you learn life lessons not through answers but by asking questions. Which gives the wrong perspective of thinking about life.

Currently the Indian society is facing some serious challenges & issues with respect to our education & knowledge system ,they are brain drain, lack of integration of traditional knowledge system with modern scientific approach, quality of education due to outdated curricula, inadequate teacher training & focus on rote learning rather than critical thinking, Intellectual property rights issues, gender disparities ,unemployment of qualified students ,language barriers ,inequality in resources & opportunities in rural -urban divides ,high risk of job security ,pay scale of educators. Restructuring the Indian knowledge system to address current social issues and demands requires a comprehensive roadmap. Here is the **potential roadmap**.

1. Assessment of current system: -

Conduct a thorough assessment of the existing education & knowledge system to identify strength, weakness & gaps.

2. Inclusive education: -

This may involve investing in infrastructure, teachers training, curriculum development tailored to diverse needs.

3. Emphasis on Critical thinking & innovation: -

Promote project-based learning, experiential education & entrepreneurship to foster creativity & adaptability.

4. Strengthening research & development: -

Encourage collaboration between academic industry and government to translate research finding into practical solutions.

e.g. Opportunity to learn from industrialists, entrepreneurs, employers' vision & their perspectives.

5. Continuous evaluation & adaptation: -

Fostering a culture of learning, feedback & improvement to ensure the relevance & effectiveness of restructured systems over time, considering this, India can work towards building a knowledge system that is inclusive, innovative, sustainable & responsive to the needs of diverse

society.

Plan of Action to restructure the Indian knowledge system.

By providing opportunities for students to develop communication ,collaboration & teamwork skills through group projects, debates, presentations & extracurricular activities. Emphasis effective verbal & written communication, active listening & interpersonal skills. Faster on entrepreneurial mindset by encouraging students to identify problems,brainstorm solutions & develop innovative projects, offer entrepreneurship courses ,startup incubators & mentorship programs to support students' ventures . Allow students to explore their interest and experiment with new ideas by engaging them into imaginative play design thinking problem based learning activities.

Equip students with essential life skills such as time management, organization, financial literacy & emotional intelligence offer workshops, seminars & mentorship programs to support their personal development & prepare them for adulthood. The figure showing how the effective learning takes place,

1. Acquisition: -

This is the process of gaining knowledge through self-study, observation, reading, attending lectures, or engaging in hands-on activities.

2. Discussion: -

After acquiring knowledge individually, the step comes discussion with others which involves sharing what has been learned, asking questions, clarifying doubts & exploring different perspectives.

3. Investigation: -

Individuals start investigating a topic independently; this involves research, gathering data, experimenting & analyzing information, which promotes deeper understanding.

4. Collaboration: -

On investigation, they come together for discussion, brainstorming sessions, or working on projects in collaboration by sharing their findings, ideas & insights, which promotes creativity & innovation by leveraging the diverse perspectives.

5. Production: -

In this learner actively produce something based on their understanding of subject matter reinforcing their understanding & reflection of material.

6. Practice: -

This involves repeated rehearsals, application & refinement of newly acquired knowledge. or skills. Which promotes mastery & skill development.

❖ This process of learning favors the natural learning of students by enjoyment in regular studies, promoting creative & logical thinking & discouraging the traditional rote learning & exam

purpose-oriented thought process.

Conclusion

Foster a culture of continuous learning, upskilling, inculcating a growth mindset and self-reflection by encouraging students to set goals, track their progress & reflect on their learning experiences.

By implementing this plan of action Schools can help students to develop the knowledge, skills & mindset they need to thrive in an ever-changing world & become lifelong learners & contributors to society.

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Integration of Indian Knowledge System for Enhancing the Students' Achievement in Economics

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Abstract:

This study investigates an ancient Indian knowledge system by integrating the Chanakya Niti, to enhance the students' achievement in subject economics. Chanakya Niti, ascribed to the well-known economist and strategist Chanakya, has a lot of valuable ideas about economic principles, strategies management, and governance strategies. By thoroughly examining how it relates to economics, this study investigates how it can enhance students' potential and use of economics principles.

Applying an experimental methodology, the research involves pre-test assessments, an intensive fifteen-day workshop, and post-test evaluations to review the impact of integrating Chanakya Niti into the economics curriculum. The workshop curriculum is designed to integrate essential principles such as resource management, strategic planning, and ethical leadership, using interactive sessions and real-world case studies.

Before the workshop, a pre-test assessed students' knowledge of economics, followed by immersive engagement with Chanakya Niti during the workshop. Subsequently, post-test evaluations measured the workshops' effectiveness in enhancing students' comprehension of economic concepts and their ability to apply Chanakya Niti strategies in real-life scenarios. This research investigated how integrating Chanakya Niti into economics education could improve students' performance and cultivate cultural appreciation in education.

Key Words: Indian Knowledge System, Chanakya Niti, Economics Education.

Introduction:

"In the mission of enhancing students' achievements in economics, this research aims to integrate an ancient Indian knowledge system, Chanakya Niti, into the curriculum. Chanakya Niti, attributed to the renowned economist and strategist Chanakya (Jha & Jha, 1998), "Kautilya's Arthashastra" (Shamasastri, 1905) offers invaluable insights into economic principles, strategic management, and governance strategies. This research seeks to explore the relevance of Chanakya Niti to economics education and its potential to enhance students' understanding and application of economic concepts.

Some key principles of Chanakya Niti that can be particularly beneficial for economic students are as follows:

- **Resource Management:** Chanakya highlighted the importance of productive resource distribution and management. Economic Students can gain insight from this principle by learning how to efficiently use limited resources like time, money, and natural resources to boost productivity and reduce waste.
- **Financial Planning:** Chanakya promoted careful financial planning and savings. Students can put this principle into practice by mastering budgeting and making wise investments. They can also learn about financial practices and statistical measures in their daily life.
- **Strategic Thinking:** Chanakya was renowned for his strategic insight and focus on meticulous planning. Incorporating strategic thinking skills can greatly benefit economic students, as they learn to forecast economic trends, assess market opportunities, and craft competitive advantage strategies for businesses and organizations.
- **Ethical Conduct:** Chanakya advocated for the principles of ethical leadership and governance. Students can grasp the significance of ethical dimensions in economic decisions and policies. By integrating ethics into economic analysis, students can evaluate the wider societal impacts of economic actions and advocate for fairness and justice within economic systems.
- **Adaptability and Flexibility:** Chanakya stressed the significance of being adaptable and flexible when faced with evolving situations. Students can acquire skills to analyze economic trends and adjust their strategies accordingly, enabling them to cultivate resilience and agility when confronted with economic challenges such as market fluctuations, policy alterations, and global economic crises.

By incorporating these principles of Chanakya Niti into their studies, students can gain valuable insights and develop practical skills that will serve them well in their academic and professional pursuits. Additionally, incorporating these ancient Indian teachings can foster a greater appreciation for India's rich cultural heritage and its contributions to economic thought and practice.

Objectives of the Study:

- To assess the effectiveness of integrating Chanakya Niti principles into the economics curriculum in enhancing students' comprehension of economic concepts.
- To study the Integration of the Indian Knowledge System for enhancing the students' achievement in Economics.
- To evaluate the impact of the workshop program, which focuses on Chanakya Niti, economics subjects, and strategies for improvement, on students' understanding and performance in economics.

- To determine the extent to which the integration of Indian knowledge systems, such as Chanakya Niti, fosters cultural appreciation among students.

Sample:

The study sample consists of 40 students of 11th std. (commerce) from a reputed school that follows the CBSE curriculum. These students are selected to participate in the experimental workshop designed to integrate Chanakya Niti principles into their economics curriculum.

Research Methodology: Experimental

An experimental methodology is employed to assess the impact of integrating Chanakya Niti into economics education. The study involves pre-test assessments, a fifteen-day intensive workshop, and post-test evaluations to measure changes in students' understanding and performance.

Research Tool:

The research tool utilized includes pre-test and post-test questionnaires designed to gauge students' comprehension of economic concepts before and after the workshop. Additionally, observational data and feedback from participants are collected to provide qualitative insights into the effectiveness of the intervention.

Research Procedure:

Before the workshop, students undergo a pre-test assessment to establish their baseline understanding of economics. The five-day workshop is then conducted, featuring interactive sessions and case studies that integrate Chanakya Niti principles with economic theory. Finally, post-test evaluations are administered to measure the impact of the workshop on students' knowledge and performance in economics.

Data analysis and interpretation:

Descriptive Statistics	
Total students sampled	40
Total marks possible	15
Mean pre-test score	5.95
Mean post-test score	12.65
Difference between pre-test and post-test means	6.7

Pre-test and Post-test Scores	
Pre-test scores range	0 to 13
Post-test scores range	8 to 15
Lowest pre-test score	0
Highest post-test score	15

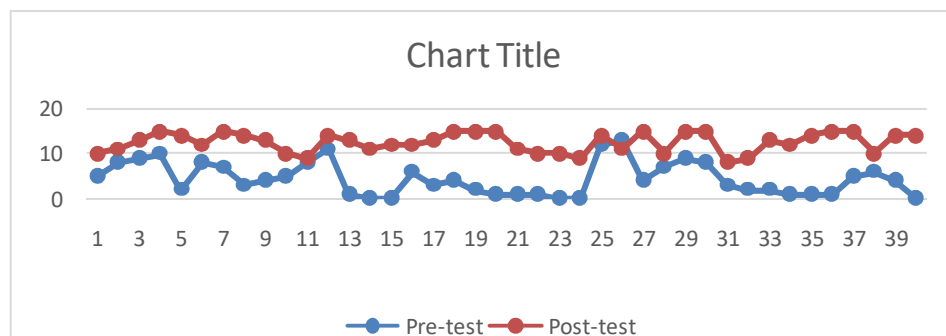
Graphical Representation:

Fig. 1: The mean comparison of the pre-test and post-test is shown on the above graph

Findings:

The findings of the study reveal significant improvements in students' performance following the workshop. The mean score of the pre-test was 5.95, while the mean score of the post-test increased to 12.65, indicating a notable enhancement in comprehension. The observed difference between the post-test and pre-test means was 6.7, highlighting the effectiveness of the workshop in augmenting students' understanding of economic concepts. Incorporate Indian Knowledge Systems: Encourage educational institutions to integrate Indian knowledge systems, such as Chanakya Niti, into the curriculum of relevant subjects like economics. This integration can provide students with diverse perspectives and practical skills rooted in ancient wisdom.

Interpretation:

The data clearly demonstrates a significant improvement in student performance from the pre-test to the post-test.

The workshop program focusing on economics subjects, Chanakya Niti, and strategies for improvement seems to have been effective in enhancing student understanding and performance.

The mean scores show that, on average, students scored nearly twice as high in the post-test compared to the pre-test.

The difference of 6.7 between the pre-test and post-test means suggests a substantial overall improvement across the student sample.

Overall, the data analysis indicates a positive impact of the workshop program on student performance, highlighting the effectiveness of targeted interventions in improving educational outcomes.

Recommendation:

Develop Specialized Workshops: Design and conduct specialized workshops similar to the one described in the research for economics students. These workshops should focus on interactive sessions, case studies, and practical applications of Indian knowledge systems to enhance students' understanding and competence in economic principles.

Expand Research and Development: Foster further research and development in the integration of Indian knowledge systems into various academic disciplines. This includes exploring other ancient Indian texts and teachings that hold relevance to modern education and society.

Teacher Training and Professional Development: Provide training and professional development opportunities for teachers to familiarize them with Indian knowledge systems and effective methods of integrating them into the curriculum. Teachers play a crucial role in delivering these teachings effectively to students.

Promote Cultural Appreciation: Emphasize the importance of cultural appreciation in education by highlighting the contributions of ancient Indian scholars like Chanakya. Encourage students to explore and respect diverse cultural perspectives to cultivate a deeper understanding of their own heritage and global knowledge.

Collaboration and Networking: Facilitate collaboration and networking among educational institutions, scholars, and policymakers to exchange best practices and strategies for integrating Indian knowledge systems into education effectively.

Continuous Evaluation and Improvement: Implement mechanisms for continuous evaluation and improvement of initiatives aimed at integrating Indian knowledge systems into the curriculum. Regular feedback from students, teachers, and stakeholders can help refine approaches and ensure sustained positive outcomes.

Public Awareness Campaigns: Launch public awareness campaigns to highlight the importance and benefits of incorporating Indian knowledge systems into education. This can help garner support from various stakeholders and communities for such initiatives.

Conclusion:

The integration of Chanakya Niti, an ancient Indian knowledge system, into the economics curriculum has yielded significant improvements in students' understanding and performance. Through a comprehensive experimental study involving pre-test assessments, a five-day intensive workshop, and post-test evaluations, it is evident that incorporating Chanakya Niti principles has positively impacted students' comprehension of economic concepts and their ability to apply strategic thinking in real-life scenarios.

The data analysis reveals a substantial increase in mean post-test scores compared to pre-test scores, indicating a notable enhancement in students' achievement following the workshop. The observed difference between pre-test and post-test means further emphasizes the effectiveness of the workshop in augmenting students' understanding of economic principles.

Moreover, the findings underscore the importance of incorporating Indian knowledge systems into education to provide students with diverse perspectives and practical skills rooted in ancient wisdom. Recommendations for further integration of Indian knowledge systems,

specialized workshops, teacher training, and collaboration among educational institutions and stakeholders aim to sustain and expand the positive outcomes observed in this study.

In conclusion, the successful integration of Chanakya Niti into the economics curriculum not only enhances students' academic achievement but also fosters cultural appreciation and enriches the educational experience. By embracing ancient Indian wisdom alongside modern knowledge, educational institutions can empower students with a holistic understanding of economics and equip them with the skills needed for success in a dynamic global economy.

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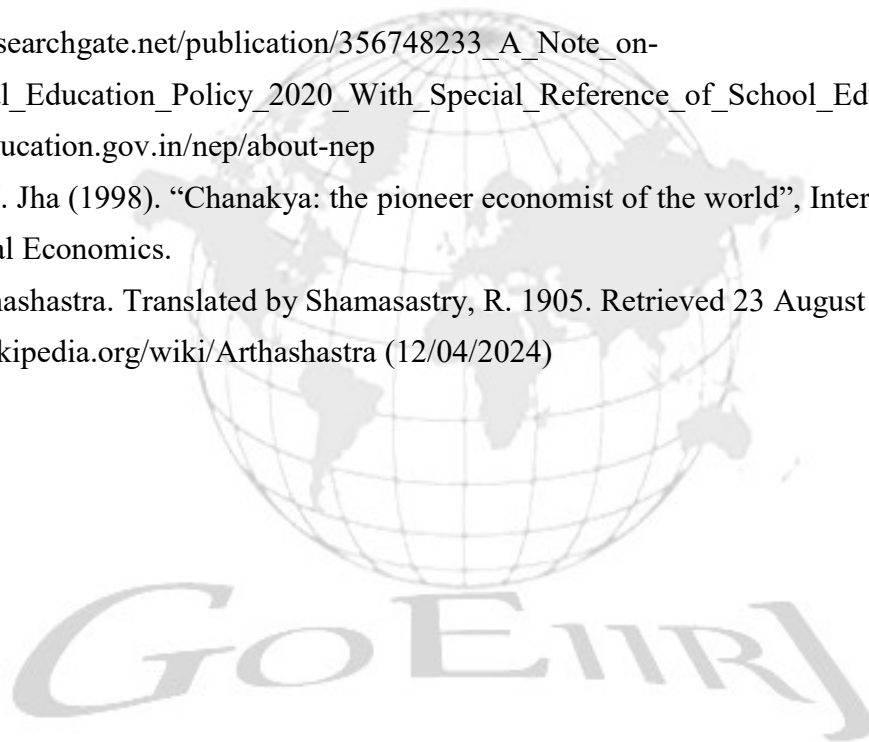
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A Study on exploring the Role of Sports in Holistic Education for Standard IX & X Students in Schools at Silvassa, UT of DNH & DD

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Abstract:

Sports play a vital role in the holistic development of students, especially those in the 9th and 10th grades. This study aims to investigate the multifaceted impact of sports on the educational, physical, social, and emotional well-being of adolescents in this age group. By conducting surveys with students. This study is expected to provide valuable insights into the potential of sports as a holistic educational tool for adolescents, informing educational policies and practices aimed at promoting comprehensive student development in the 9th and 10th grades. The study will explore the role of sports within the school curriculum and extracurricular activities, examining how schools integrate sports into their educational framework and the perceived benefits and challenges associated with such integration. The Researchers have adopted the exploratory and descriptive research type while collecting data from both secondary and primary sources. The primary data collection was attempted through a survey of 101 respondents across class IX & X. selected through convenience sampling technique. The Researchers aim to understand the essence of Sports in holistic education for students. The Researchers further aim to Study the Role of Sports in Holistic Education for Students of Standard IX & X at Schools in Silvassa, UT of DNH & DD. The study encompasses the analysis of responses from standard IX & X at Schools. The inferences are indicative in nature as they largely represent the expressions of selected Students and not the entire world of Education, hence this would be the limitation of the study. The inferences aren't exhaustive.

Key Words: Education, Holistic Education, Role of Sports, Silvassa, Schools

INTRODUCTION

Sports are diverse activities from competitive games to casual play involving rules and physical skill, encouraging and supporting globally competitive gather athlete's worldwide fostering peace and friendship. They are classified into physical, mind, air and other categories.

Education systems are integrating sports into their curriculum, though there is room for improvement. Sports not only offer growth but also commercial opportunities and careers deserving serious attention from an early age. Sports is not for only physical development but it is also help children for mental development engaging in sports activity from earlier age is a valuable investment in a child for Holistic development sports activity involving running, jumping, coordination and various movement all this help to reduce the obesity and other health issues sports develop discipline focus coordination time management teamwork and self-discipline among the child. Sports and education are like two sides of one coin. They both help a person grow in different ways, however many schools are cutting back on sports due to the money problems, which is not great. The education system focuses a lot on mental growth but does not pay enough attention to Physical health. This leaves many graduates unhealthy, one needs to understand the importance of sports in education and in Life and encourage kids to speak up and stay active in sports.

LITERATURE REVIEW

Seung Pil Lee's Sports-Based Holistic Development Model (SBHDM), outlined in a study on Singapore's Vision 2030, highlights how sports can improve society. The study, using surveys and interviews, found that local sports participation fosters community connection and ongoing engagement. It suggests that sports contribute to happiness, health, and community cohesion, offering recommendations for program improvement. While focusing on Singapore, the study's insights are relevant elsewhere, stressing the need for further research and better measurement methods. Overall, it provides valuable guidance for developing effective sports programs.

Another paper emphasizes the importance of sports for children's physical and mental well-being, urging parents to encourage early participation. Research suggests that engaging in sports during school breaks, such as badminton, football, volleyball, and netball, keeps children away from negative influences. It highlights the need for diverse sports facilities to cater to varying interests and genders, thereby enhancing enjoyment and deterring risky behaviors like street loitering and smoking.

This paper reviews how sport education has changed over time, focusing on how it helps students learn about sports in a more practical and engaging way. It discusses how sport education isn't just about playing games but also about understanding the cultural and social aspects of sports. The paper talks about different studies that look at how sport education can prepare students for jobs and careers in sports-related fields, like coaching or sports management. It also mentions new ideas, like using technology to teach sports or linking sport education with subjects like business or innovation. Overall, the paper suggests that there's a lot of potential for future research to explore how sport education can continue to evolve and better prepare students for the

real world of sports.

Ms. Sushila Madhuri underscores the importance of sports in education and daily life. Sports offer more than physical activity, teaching valuable life skills like teamwork and discipline. They also serve as a means of refreshment, reducing stress and anxiety. Additionally, participation in sports can enhance educational and job opportunities through sports quotas.

OBJECTIVE

1. To understand the essence of Sports in holistic education for students.
2. To Study the Role of Sports in Holistic Education for Students of Standard IX & X at Schools in Silvassa, UT of DNH & DD.
3. To examine the impact of sports participation on academic performance among students in standard 9th and 10th.

RESEARCH METHODOLOGY

A Study on exploring the Role of Sports in Holistic Education for Standard IX & X Students in Schools at Silvassa, UT of DNH & DD. This study is attempted through exploratory and descriptive research type with data collection from both secondary and primary sources. The primary data collection was attempted through a survey of 101 respondents across class IX & X selected through convenience sampling technique. The Researchers aim to understand the importance of sports in education for students, a comprehensive study on the role of sports in holistic education for students of standard ix & x at schools in Silvassa, UT of DNH & DD. The researchers aim to contribute measures to enhance students' sports that are useful in holistic development. The study encompasses the analysis of responses from standard IX & X at Schools. The inferences are indicative in nature as they largely represent the expressions of selected Students and not the entire world of Education, hence this would be the limitation of the study. The inferences aren't exhaustive.

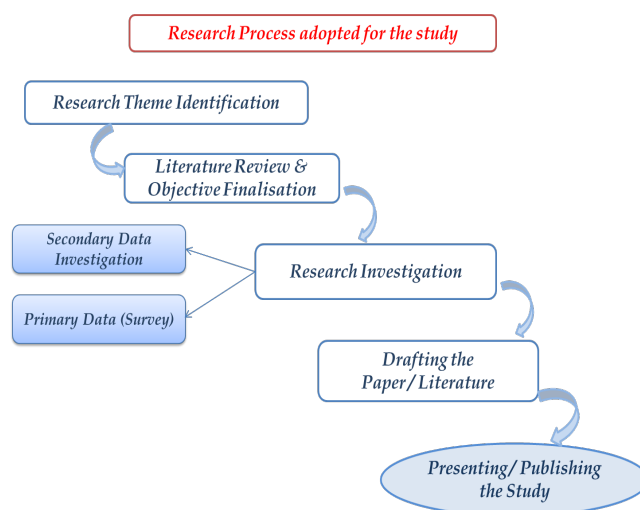


Fig. 1: Research Process

Source: Authors' Study

HOLISTIC EDUCATION

Holistic learning means bringing together the mind, body and spirit of the student. It's about engaging emotion, creativity, intellect and the body to make learning more effective and comprehensive. It helps students connect with what they are learning growing emotionally, socially and mentally. Holistic education aims to nurture not just academic growth but also emotional, social, physical and creative development. It strives to create well rounded individuals by focusing on their overall wellbeing and fostering critical thinking, creativity and a sense of community. Holistic classrooms provide a supportive learning environment, fostering student confidence and encouraging active knowledge seeking. This approach enhances communication and motivational skills, leading to improved academic performance. Holistic education promotes respect, compassion and empathy, encouraging understanding of diver's perspectives. Students in this environment feel empowered to voice their need and seek help when necessary, contributing to a comprehensive understanding of subjects beyond traditional content. Holistic education integrates experiential learning, self-guided learning community engagement and interdisciplinary Course work. Interdisciplinary Coursework integrates subjects through thematic, collaborative teaching, often involving Research and Real-world experience. Holistic education integrates various methods for comprehensive student development. Extra-curricular activities such as sports and arts, enhance leadership and personal skills. Clubs and after school activities encourage a broader perspective beyond Academics. Teacher training program promote emotional and social understanding transforming the teacher's student dynamic. Active parental involvement is crucial for successful holistic teaching despite challenges like infrastructure and funding, adopting a holistic approach is essential for nurturing well rounded individuals.

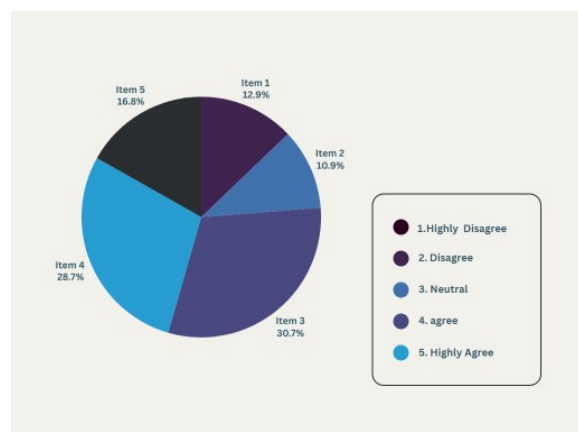
ROLE OF SPORTS IN EDUCATION

When one thinks about the student, usually imagines them with big bags full of books but it's not just about studying, a school's vibe should be more than just classrooms. Sports and games are important too. Some people wonder why sports matter for students. Besides studying, sports help kids grow and develop in many ways. There are several Benefits of sports in student life: they spend hours and hours studying and their physical activity becomes restricted. These effects adversely affect the student's poor fitness and physical health can be a big disadvantage in a child's growth. Thus, engaging in sports activities allows children to dive into physical exercise which is helpful in maintaining a healthy lifestyle playing sports with others like being on a team or working with coaches. Sports also teach patience and perseverance to the players. A very important reason for sports in education is that it teaches discipline and hard work. It is also useful to reduce stress relieving activity for children. Sports help to boost self-esteem and self-confidence among the players. Sports help to increase coordination and cooperation among various team

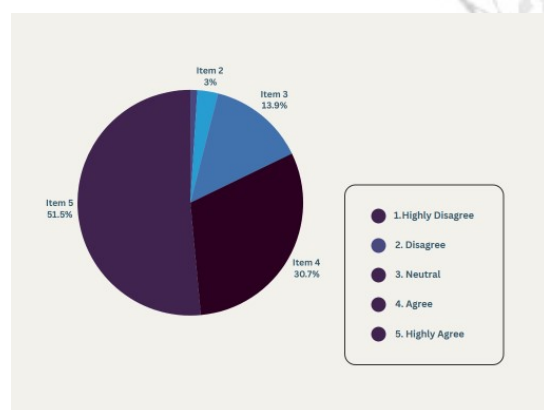
players for the team to win the match. Government runs various schemes for integrating sports in Education.

RESULT & ANALYSIS

1. The school organizes inter-school sports competition



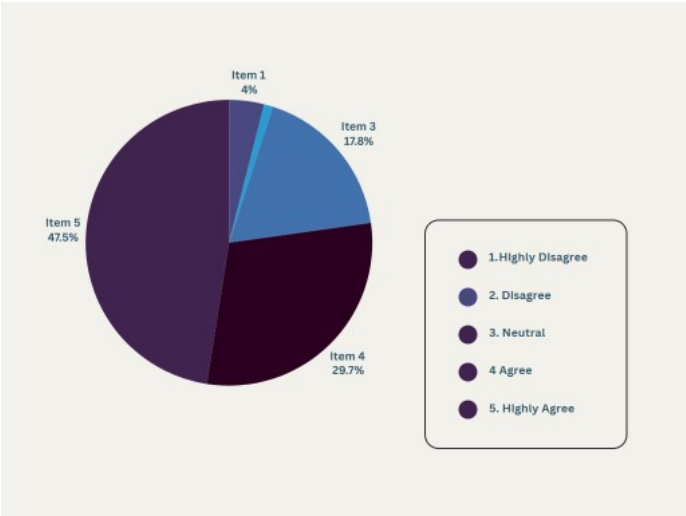
Interpretation: - The study states that a quarter of respondents (23.4%) disagree with inter school sports competitions, while nearly half (45.5%) agree that school organizes inter-school sports competitions. Another 30.7% are neutral. Despite some disagreement, a significant majority either supports or is neutral towards inter-school sports competitions, indicating general acceptance of the school's initiative.



2. Sports helps in gaining problem solving skill

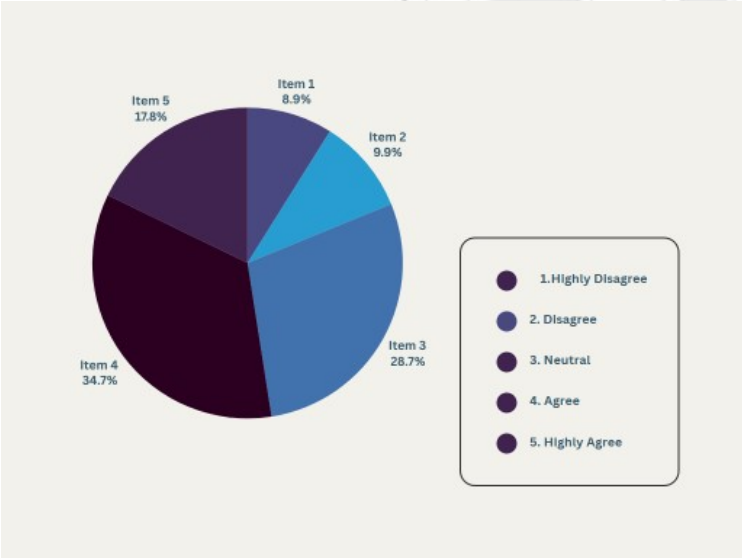
Interpretation:- The data reveals a strong consensus among students regarding the beneficial role of sports in cultivating problem-solving skills. A small minority (8%) express disagreement, with 5% highly disagreeing and 3% disagreeing. However, the majority of respondents (74.3%) either agrees (23.8%) or highly agrees (50.5%) that sports aid in the development of problem-solving abilities.

2. Sports helps in gaining leadership skills



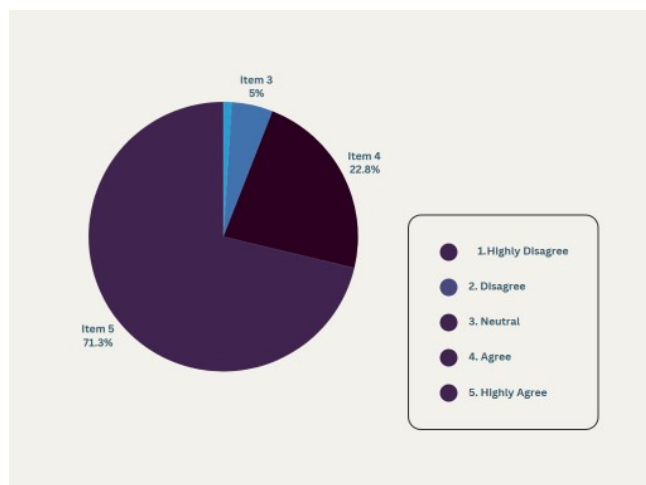
Interpretation:-The data analysis states that the whole of sports in fostering leadership skills. While a small percentage (3%) of students express disagreement, the vast majority (82.2%) either agrees (30.7%) or highly agrees (51.5%) that sports contribute positively to the development of leadership abilities.

3. Sports help in gaining decision making skill



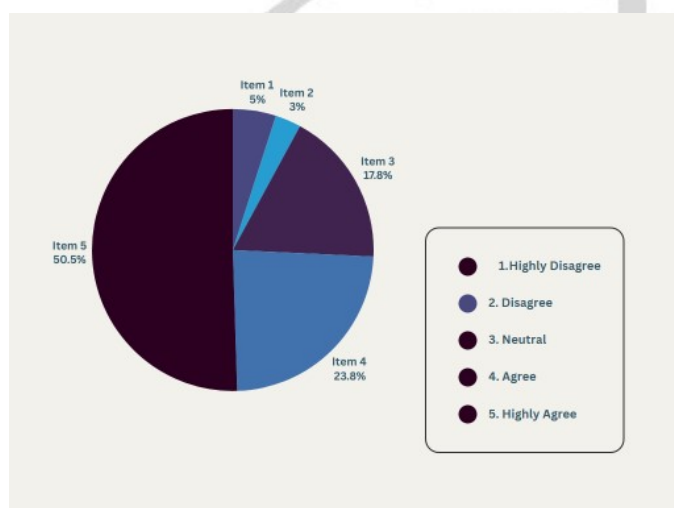
Interpretation The data reveal a strong inclination towards the belief that sports aid in developing decision-making skills among students. While a minority, comprising 4% (highly disagree), holds a contrary view, a majority of respondents totaling 77.2% (29.7% agree + 47.5% highly agree), firmly believe in the positive impact of sports on decision-making abilities.

4. I effectively manage my academics with sports



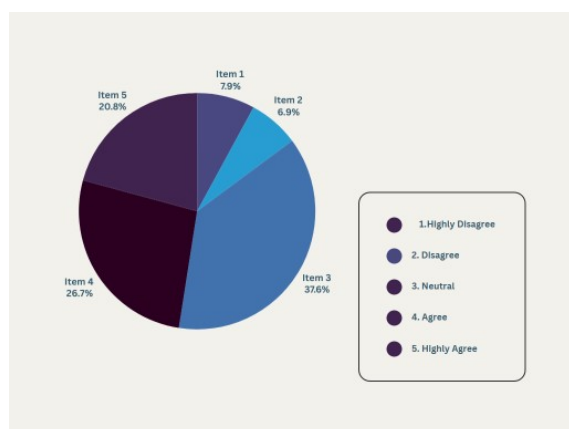
Interpretation:-The study stated that varied perspectives among students regarding their ability to effectively manage academics alongside sports activities. While a minority, comprising 18.8% respondents (8.9% highly disagree + 9.9% disagree), express difficulties in managing both aspects, a significant proportion of respondents, totaling 52.5% (34.7% agree + 17.8% highly agree), believe they can effectively balance academics with sports. However, a substantial percentage, 28.7%, remain neutral on this issue, suggesting a lack of clear consensus among respondents regarding the compatibility of academic and sports commitments.

5. Sports is very useful for physical development



Interpretation: - The Analysis states that there is a strong consensus among students regarding the utility of sports for physical development. While a small minority, constituting 5% respondents (0% highly disagree + 5% disagree), express disagreement with this notion, the vast majority, totaling 93.8% respondents (22.8% neutral + 71.3% highly agree), recognize the significant role of sports in enhancing physical development. This overwhelming agreement underscores the widely

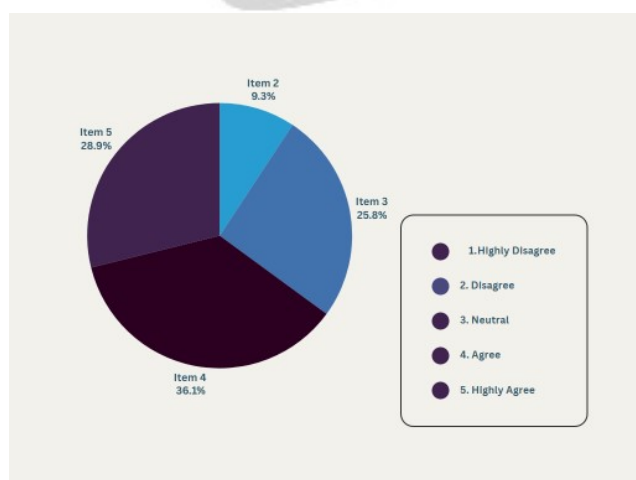
held belief among students that participation in sports contributes positively to physical well-being and development.



6. Sports is very useful for social development.

Interpretation:-The data reveals a spectrum of opinions regarding the usefulness of sports for social development. Notably, a minority, comprising 9.3% respondents (0% highly disagree + 9.3% disagree), express skepticism about this proposition. A significant portion of respondents, 36.1%, remains neutral on the subject. However, a notable majority of respondents, totaling 65% (36.1% agree + 28.9% highly agree), recognize the positive impact of sports on social development. This indicates a prevailing sentiment among students that sports contribute significantly to fostering social skills and interactions, despite some reservations expressed by a few respondents.

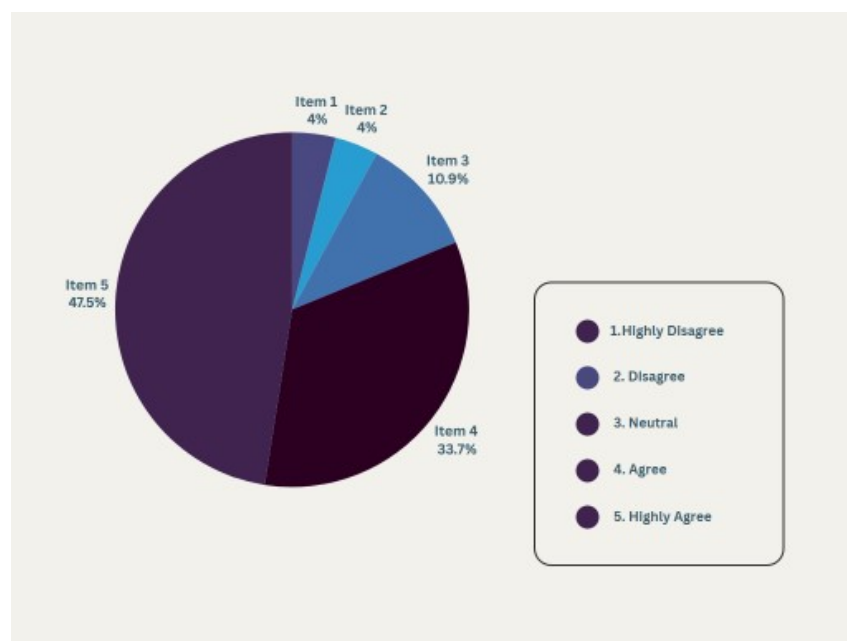
7. Sports is very useful for mental development.



Interpretation: - The study states that a prevalent acknowledgment among students regarding the utility of sports for mental development. Only a small fraction of respondents, comprising 8% (4% highly disagree + 4% disagree), express skepticism about this notion. A significant portion, 10.9%, remains neutral on the subject. However, a substantial majority of respondents, totaling 81.2%

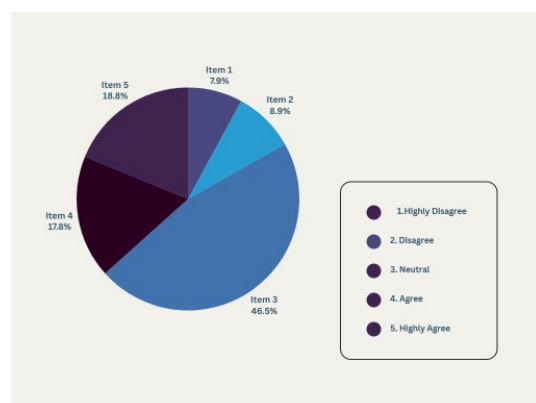
(33.7% agree + 47.5% highly agree), recognizes the beneficial impact of sports on mental development. This consensus underscores the widely accepted belief that sports play a crucial role in enhancing mental faculties among students

8. Sports can positively impact academic performance.



Interpretation: - The data reveals a varied perspective among students regarding the potential influence of sports on academic performance. A small minority of respondents, comprising 14.8% (7.9% highly disagree + 6.9% disagree), express skepticism about this correlation. A significant portion, 37.6%, remains neutral on the matter. However, a combined 47.5% of respondents (26.7% agree + 20.8% highly agree) recognize the positive impact of sports on academic achievement.

9. Students engaged in sports perform better academically.



Interpretation:-The data reveals that there is a divided perspective among students regarding the correlation between sports participation and academic performance. A set of respondents, comprising 16.8% (7.9% highly disagree + 8.9% disagree), express disagreement with the notion.

A set of 17.8% respondents, remains neutral on the topic. However, a combined 37.6% (17.8% agree + 18.8% highly agree) acknowledge a positive relationship between sports involvement and academic achievement. Overall, while a significant portion remains neutral, a notable percentage agrees that engagement in sports correlates positively with academic performance.

RECOMMENDATION

The Authors here present a model depicting the **Development of Value sets through Sports**. The Authors believe that Social Skills, Physical Fitness, Openness, Reciprocity, Team work and Scholarship may boost the value sets & morale of the students towards their overall personality development.

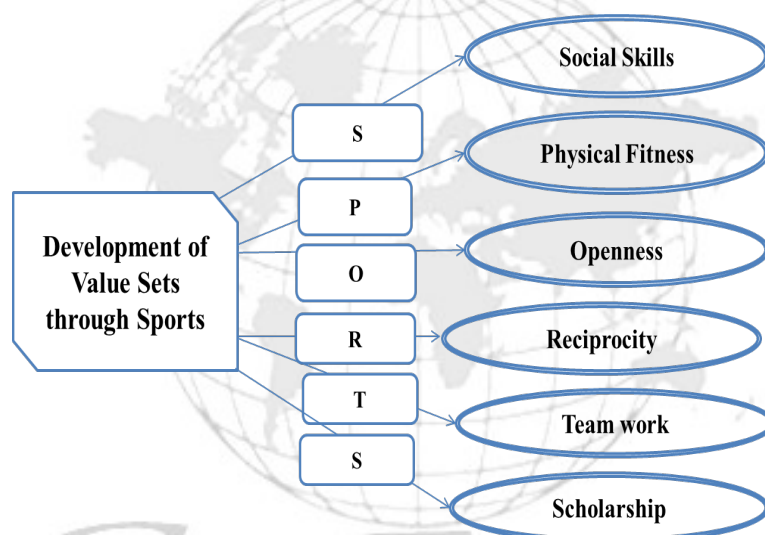


Fig.2: Development of Value sets through Sports

Source: Authors Understanding

CONCLUSION

The study underscores the multifaceted benefits of integrating sports into the holistic education of students in standard IX and X. Through a comprehensive analysis of student perspectives, it becomes evident that sports contribute significantly to physical, social, and mental development, fostering skills like problem-solving, leadership, and decision-making. Despite some variations in opinions, a prevailing sentiment recognizes the positive impact of sports on academic performance. The findings emphasize the importance of prioritizing sports in educational policies and practices to nurture well-rounded individuals. Moving forward, further research and implementation of targeted interventions are warranted to maximize the potential of sports in promoting comprehensive student development. The Authors have presented a model depicting the Development of Value sets through Sports. The Authors believe that Social Skills, Physical

Fitness, Openness, Reciprocity, Team work and Scholarship may boost the value sets & morale of the students towards their overall personality development.

FUTURE SCOPE OF STUDY

The current study is a survey-based study with respondents from class IX & X with a Sample Size 101. Such studies may have a future scope in the form of more number of respondents to the survey and across different classes in the school rather than just Class IX & X. It will attract significant results and robust understanding.

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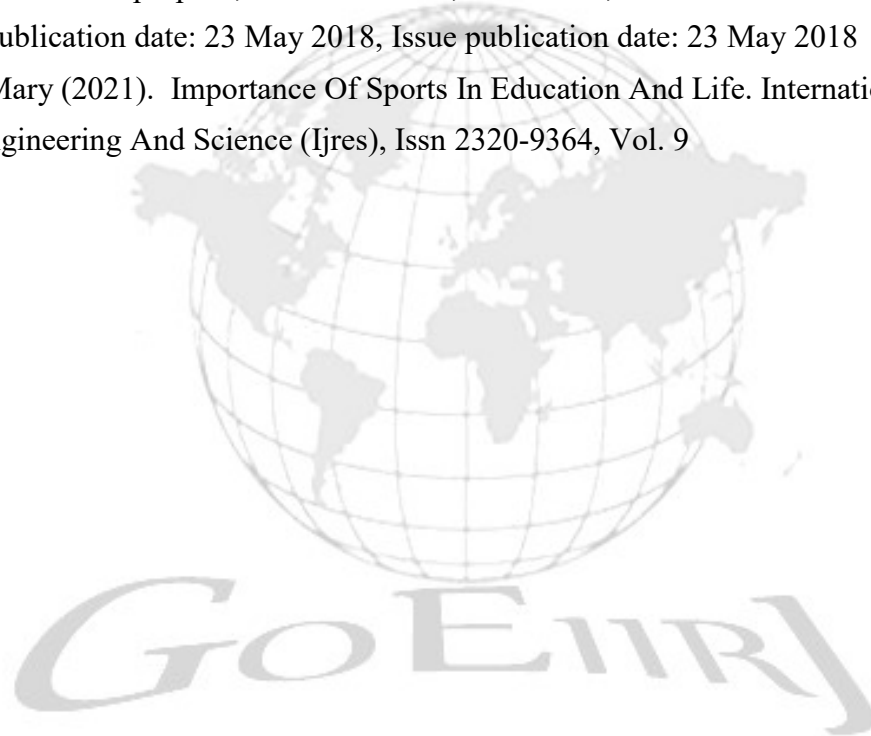
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Challenges in Implementing Indian Knowledge System for Human well-being

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ABSTRACT:

The Indian Knowledge System (IKS) offers a vast repository of wisdom on health, agriculture, and social well-being. Education has always been a developmental strength for mankind. The current era is hugely dependent on the educational inputs to human beings and making them survive the life challenges. The education system and the implementation of the same has undergone turmoil. The knowledge system once implemented properly makes the human being reap the benefits. This paper explores the challenges hindering the widespread implementation of IKS for improving human well-being. A key obstacle lies in the lack of awareness and understanding of IKS among educators and administrators. Additionally, the undocumented and orally transmitted nature of such IKS knowledge makes it difficult to develop standardized educational materials. Furthermore, resistance to change within educational institutions and a potential bias towards Western knowledge systems can impede the integration of IKS. This paper argues that overcoming these challenges requires a multifaceted approach. Increased funding for IKS research and education, alongside the development of user-friendly IKS curricula, are crucial. By fostering collaboration between IKS practitioners and academic institutions, we can bridge the knowledge gap and leverage the potential of IKS to enhance human well-being. The current NEP 2020 advocates the IKS.

Key Words: Indian Knowledge System (IKS), Western Knowledge System, Education, NEP, Human Well being

INTRODUCTION:

The Indian Knowledge System (IKS) stands as a reservoir of profound wisdom accumulated over millennia, encompassing insights into health, agriculture, and social well-being. In the contemporary landscape, education serves as the cornerstone of human development, offering pathways to navigate life's challenges. However, despite its immense potential, the widespread implementation of IKS faces multifaceted challenges, hindering its contribution to human well-being. This research endeavors to explore these impediments and propose solutions to bridge the gap between traditional wisdom and modern educational paradigms. Key obstacles include the lack of awareness and understanding of IKS among educators and administrators, the

undocumented nature of IKS knowledge, resistance to change within educational institutions, and a bias towards Western knowledge systems. Through a comprehensive examination of these challenges and a multifaceted approach to overcoming them, this paper aims to unlock the transformative power of IKS in enhancing human well-being. By fostering collaboration between IKS practitioners and academic institutions and advocating for increased funding and user-friendly curricula, we strive to harness the rich heritage of IKS to create a healthier, more fulfilled society.

LITERATURE REVIEW:

“Indian Knowledge System (IKS)”

According to **Dr. Pavan Mandavkar (2023)**, the Indian Knowledge System (IKS) is deeply rooted in Vedic literature and aims to address contemporary societal issues through a structured approach. It encompasses traditional wisdom from the Vedas and Upanishads, fostering interdisciplinary research and education. Efforts include syncing IKS courses with digital platforms, training educators, and promoting innovation through competitions and collaborations. IKS Centres in Higher Education Institutions (HEIs) will serve as hubs for research and outreach. The goal is to disseminate authentic knowledge, create employment opportunities, and showcase Indian heritage globally, contributing to national pride and cultural awareness.

Indian Knowledge System (IKS): Revitalizing India in Few Decades

As per **Prof. Kshitij Patukale (2023)**, India's journey towards revitalizing its education system through the Indian Knowledge System (IKS) is fueled by the recognition of its rich cultural heritage and intellectual traditions. Historically, British colonial policies had a detrimental impact on India's education system, leading to a decline in prosperity. However, recent efforts, notably under the National Education Policy (NEP), highlight the importance of integrating Indian knowledge traditions into contemporary education. One of the key challenges in this endeavour is the need for dedicated scholars, experts, teachers, and consultants to present ancient knowledge in a modern format. Comprehensive research on texts such as the Bhagavad Gita is essential for effective integration. The Bhishma School of Indian Knowledge System (BSIKS) is actively contributing to this cause, offering courses and resources to promote Indian knowledge dissemination. Despite challenges, the potential of IKS to provide valuable insights not only for Indian citizens but also for the global community is significant.

INDIAN KNOWLEDGE SYSTEM AND NEP: A BRIEF ANALYSIS

According to the study done by **Dr. Naresh Chandel and Kamlesh Kumar Prashar (2014)**, The New Education Policy (NEP) 2020 aims to transform India's education system by integrating the Indian Knowledge System (IKS), which encompasses diverse heritage knowledge. NEP recognizes the importance of interdisciplinary and transdisciplinary approaches, merging traditional wisdom with contemporary knowledge to address societal challenges. Despite historical

disruptions in knowledge transmission, efforts to revitalize IKS highlight the need for language resources and technology. Challenges include teacher training and organizing IKS data effectively. However, the integration of IKS into NEP holds promise in enriching education, fostering cultural understanding, and addressing real-world issues like climate change and food security. This transformative process requires a gradual approach, acknowledging the evolution of Indigenous Knowledge Systems over millennia.

Indian Knowledge System (IKS) as a Significant Corpus of Resources Useful for Personal and Professional Development

Dr Sandhya Tiwari's (2023) research explores the integration of the Indian Knowledge System (IKS) and indigenous resources to enhance socio-emotional intelligence (SEI) in education. SEI, crucial for personal and professional success, involves skills like self-awareness and empathy. While global initiatives prioritize SEI, challenges persist in implementation, requiring diverse approaches. Proposed solutions include incorporating Indian epics like the Ramayana and Mahabharata to impart valuable life lessons and promote holistic growth among learners. Integrating indigenous knowledge aids in nurturing emotional resilience and social skills essential for navigating complex societal dynamics.

Integrating Traditional Indian Knowledge into the Education System

Dr. Denis Vaz's (2024) research dives into revitalizing India's education system by integrating traditional Indian knowledge systems (IKS). Despite education being vital for national development, India faces challenges in providing high-quality education universally. Integrating IKS into the curriculum is considered essential for preparing for 21st-century challenges. While India's educational history is rich in IKS, formal integration into mainstream education is lacking, creating a gap between cultural heritage and education. Initiatives like those by the University Grants Commission (UGC) aim to address this gap by incorporating IKS into subjects like agriculture and customs, fostering pride in Indian heritage. Comparative analyses with countries like the United States, where indigenous knowledge is successfully integrated, provide valuable insights. Strategies such as the 1968 Bilingual Education Act in the US empowered Native American communities to enrich the curriculum with indigenous knowledge. Emulating such approaches could enhance India's educational landscape and contribute to its revitalization.

RESEARCH METHODOLOGY:

Problem Statement:

The Indian Knowledge System (IKS) holds immense potential to improve human well-being, but its implementation faces challenges. Lack of awareness, undocumented knowledge, and resistance to change within education systems hinder the integration of IKS. This research investigates how to bridge these gaps and harness the power of IKS for a healthier and more

fulfilling life.

Objectives of the Study:

1. To present the challenges posed by the undocumented and orally transmitted nature of IKS knowledge.
2. To understand the resistance to change within educational institutions and potential biases towards Western knowledge systems that may impede IKS adoption.
3. To propose solutions to overcome the identified challenges related to IKS implementation.

Research Process:

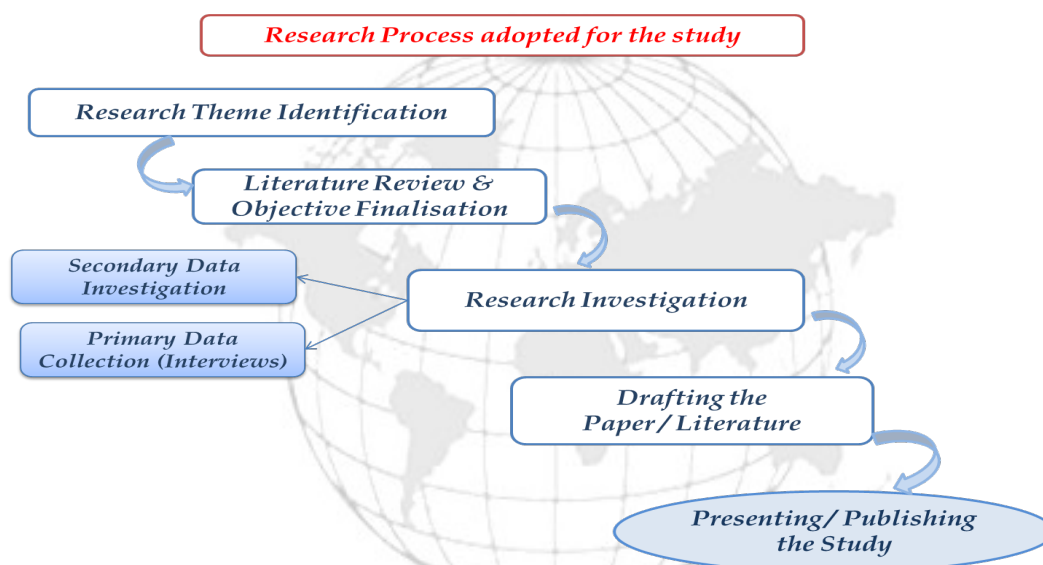


Figure 1: Research Process

Research Design:

- a. **Type of Research:** Descriptive and Exploratory Research
- b. **Type of Data Collection:** Secondary Data Collection.
- c. **Data:** Research Papers, Articles and Reports,

Scope of the Study:

This research paper will focus on investigating the challenges hindering the widespread implementation of the Indian Knowledge System (IKS) for enhancing human well-being. It will examine the awareness and understanding of IKS among educators and administrators, analyse the barriers posed by the undocumented nature of IKS knowledge, and assess resistance to incorporating IKS within educational frameworks. The study will propose solutions to overcome these challenges and evaluate the potential benefits of implementing IKS in human well-being.

Limitations of the study:

Limitations of this study include its focus on the educational system as the primary avenue for IKS implementation. This might not capture challenges faced in integrating IKS into other

areas. Additionally, the research may be limited by the availability of data on educator awareness and the undocumented nature of IKS knowledge itself. Finally, evaluating the potential benefits of IKS for well-being might require further research with specific interventions and measurable outcomes.

Data

The successful integration of Indian knowledge traditions into contemporary society requires dedicated scholars, experts, teachers, and consultants. The challenge lies in presenting ancient knowledge in a modern format and conducting comprehensive research on texts such as the Bhagavad Gita. By studying and presenting the Indian Knowledge System effectively, India can provide valuable insights not only for its own citizens but also for the world at large. The Bhisma School of Indian Knowledge System (BSIKS) is actively contributing to this cause, offering various courses and resources to promote Indian knowledge.

Challenges to implementing IKS in colleges in India:

- 1. Cultural Mindset and Priorities:** The traditional emphasis on academic achievement in Indian society often overshadows the importance of socio-emotional development. Shifting the mindset of parents, educators, and society at large to prioritise socio-emotional skills as essential for holistic growth can be a significant challenge.
- 2. Limited Awareness and Understanding:** Many stakeholders, including parents, educators, and policymakers, may have limited awareness and understanding of the concept of socio-emotional development. The lack of awareness about its benefits and effective strategies for implementation can hinder its integration into the education system.
- 3. Curriculum Overburden:** The existing curriculum in India is already demanding, leaving little room for the inclusion of additional subjects or activities. Incorporating socio-emotional learning into the curriculum may face resistance due to concerns over overcrowding the syllabus or neglecting other subjects.
- 4. Teacher Training and Capacity Building:** Teachers play a crucial role in fostering socio-emotional skills among students. However, many educators may require training and support to effectively integrate socio-emotional learning into their teaching practises. Providing comprehensive and ongoing training opportunities for teachers is essential but can be a challenge given limited resources and the vast number of educators in India.
- 5. Socioeconomic Disparities:** India's socioeconomic disparities pose challenges in ensuring equal access to socio-emotional development opportunities. Children from disadvantaged backgrounds may face additional barriers, such as limited resources, support systems, and exposure to stressful environments, which can impede their socio-emotional growth.
- 6. Assessment and Evaluation:** Developing effective methods to assess and evaluate socio-emotional skills can be challenging. Unlike academic subjects, socio-emotional skills are less

tangible and may require alternative methods of evaluation, such as observations, self-assessments, and feedback from peers and teachers.

7. **Scaling Up Successful Initiatives:** While several successful initiatives promoting socio-emotional development exist in India, scaling them up to reach a larger number of schools and students can be challenging. Limited resources, funding, and coordination between stakeholders may hinder the widespread implementation of these initiatives.

8. **The colonial legacy:** The British colonial education system in India was designed to replace Indian knowledge systems with Western knowledge systems. This legacy has created a bias against IKS in the Indian education system.

9. **Resistance to change:** A few people may be resistant to the idea of implementing IKS in colleges. They may view IKS as outdated or irrelevant. Additionally, a few faculty members may be reluctant to change their teaching methods and curriculum to accommodate IKS.

Solutions to Overcome Challenges in Implementing IKS in Colleges:

This section addresses the identified challenges by proposing solutions to facilitate the successful integration of IKS into college curriculums:

1. Building a Strong Foundation:

- **Awareness Campaigns:** Launch targeted campaigns to educate stakeholders, including educators, administrators, policymakers, and the public, about the value of IKS. Utilize different media channels, workshops, and seminars to highlight the relevance of IKS for contemporary issues and its potential to enrich the learning experience.

- **IKS 101 Courses:** Offer introductory courses on IKS for educators and administrators. These courses can provide a foundational understanding of IKS principles, core concepts across various domains (health, agriculture, social), and the historical and cultural context of IKS knowledge.

2. Collaborative Curriculum Development:

- **Faculty-IKS Practitioner Partnerships:** Foster collaboration between college faculty and IKS practitioners (experts, knowledge holders) in curriculum development. This collaborative approach ensures the curriculum is accurate, culturally relevant, and reflects the practical application of IKS knowledge.

- **Interdisciplinary Teams:** Create curriculum development teams that include faculty from relevant disciplines (science, social sciences, humanities), IKS experts, and curriculum development specialists. This interdisciplinary approach fosters a holistic understanding of IKS and facilitates its integration across various subjects.

3. Addressing Knowledge Documentation:

- **Oral History Projects:** Invest in projects to document IKS knowledge traditionally passed

down orally. This might involve recording interviews with IKS practitioners, creating detailed transcripts, and collaborating with them to ensure accurate representation.

- **Digital Archiving:** Develop digital repositories for storing documented IKS knowledge, including audio recordings, transcripts, videos, and multimedia resources. This ensures accessibility for educators, researchers, and students for future reference and curriculum development.

4. Building Faculty Capacity:

- **IKS Integration Workshops:** Organize workshops for faculty to explore strategies for integrating IKS into existing courses. These workshops can provide practical tools and resources for adapting teaching methods, developing lesson plans, and incorporating case studies based on IKS applications.
- **IKS Certification Programs:** Offer optional certification programs for faculty specializing in IKS education. These programs can equip educators with advanced knowledge, pedagogical skills for experiential learning, and expertise in specific IKS domains (e.g., Ayurveda, sustainable agriculture).

5. Fostering Student Engagement:

- **Interactive Learning Experiences:** Move beyond traditional lectures and textbooks. Design interactive learning experiences that engage students directly with IKS. This can include field trips to observe traditional practices (herbal medicine gardens, organic farms), workshops with IKS practitioners, and project-based learning where students apply IKS knowledge to real-world problems.
- **Case Studies and Problem-solving:** Integrate case studies and problem-solving activities that draw upon IKS principles. This allows students to critically analyze real-world challenges and explore potential solutions informed by IKS knowledge systems.

6. Promoting Research and Innovation:

- **IKS Research Grants:** Establish research grants to encourage and support collaborative research projects. These projects can explore the scientific basis of IKS practices, investigate potential applications in modern contexts, and bridge the gap between traditional and scientific knowledge.
- **University-Community Partnerships:** Forge partnerships between universities and IKS communities to facilitate joint research projects. This allows researchers to benefit from the knowledge and expertise of IKS practitioners, while ensuring communities have a voice in the research process and its outcomes.

7. Addressing Systemic Challenges:

- **Curriculum Flexibility:** Advocate for curriculum frameworks that allow for flexibility within IKS integration. This allows colleges to tailor IKS content to their specific disciplines,

regional variations in IKS practices, and student interests, while maintaining core IKS principles.

- **Resource Mobilization:** Partner with government agencies, NGOs, and private institutions to secure funding and resources for IKS education initiatives. These resources can support curriculum development, faculty training, research projects, and outreach programs, ensuring the sustainability of IKS implementation in colleges.

8. Building Advocacy and Public Support:

- **Showcase Success Stories:** Document and share success stories of colleges that have successfully implemented IKS education initiatives. This can serve as inspiration for other institutions and highlight the positive impact of IKS on student learning and well-being.
- **Alumni Engagement:** Engage alumni networks to promote the value of IKS education. Alumni can participate in mentorship programs, guest lectures, and fundraising initiatives to support the continued development and integration of IKS in their alma mater.

Conclusion:

In conclusion, the integration of the Indian Knowledge System (IKS) into educational frameworks holds immense promise for improving human well-being. Despite facing challenges such as limited awareness, undocumented knowledge, and resistance to change, our research has illuminated pathways to overcome these obstacles.

By fostering awareness through targeted campaigns, developing collaborative curriculum frameworks, addressing knowledge documentation gaps, and building faculty capacity, we can pave the way for successful IKS integration in colleges. Through student engagement, research innovation, and advocacy efforts, we can ensure the sustainability and impact of IKS initiatives. As we navigate the complexities of modernity, let us not overlook the timeless wisdom of our cultural heritage.

By embracing the synergy between tradition and innovation, we can harness the transformative potential of IKS to create a more resilient, holistic approach to education and human flourishing.

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Integration of Agriculture in Curriculum – A step towards Holistic Development

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Abstract:

Holistic is a Greek word derived from holos meaning “whole”, holistic development in an individual means the overall development in terms of social, physical, emotional, mental and intellectual. According to the National Education Policy (NEP 2020), the aim of education is not only to develop cognitively but also to build character and create holistic and well-rounded individuals equipped with 21st century skills.

To acquire 21st century skills one must know the ancient Indian Knowledge system. At ancient times our ancestors used to learn from the Gurukul system (traditional method) in which they were acquainted with the moral values, astronomy, war – craft, yoga etc. thus following such traditions inculcated them with the spiritual values too.

According to NEP 2020, knowledge of India will consist of ancient and modern Indian contributions, so that the future aspirants may acquire the skills and knowledge regarding education, health, environment etc. Agriculture is the field that enhances the overall development of the nation in terms of economy, food security etc. India is the country that has been following agricultural methods for thousands of years. There were various traditional cultivation methods, natural farming etc. practiced since ancient times. India is the largest producer of milk, pulses etc. in the world. Learning or acquiring agricultural skills may enhance the practical knowledge and motivate the future aspirants towards the agricultural field.

This paper addresses the Indian knowledge system, both ancient and modern, emphasizing the importance of agriculture. It explores the integration of agriculture into the curriculum and examines the role of NEP 2020 in enhancing holistic development at the secondary and higher secondary levels. Additionally, it discusses the challenges associated with integrating agriculture into education.

Keywords: Indian knowledge system (IKS), NEP 2020, Agriculture, Holistic development, Challenges.

Introduction:

The Indian knowledge system is the combination of **Jnan, Vignan and Jeevan Darshan**. These all are descended from generations to generations for thousands of years. The methods through which they are evolved are experience, observation, experimentation and rigorous analysis. (Ministry of Education).

The Indian knowledge system (IKS) has a strong foundation in Indian culture, philosophy and spirituality. The knowledge included in this are Ayurveda, Yoga, Vedanta and Vedic sciences (Rishi, 2003).

IKS (Ayurveda, Yoga, Vedanta and vedic sciences) is still applicable in the modern era in various ways, such as well-being, stress management, sustainable well-being, spiritual growth and innovation (Rishi, 2003).

IKS promotes **Holistic** well-being as it deals with the interconnection of mind, body and spirit. Other than this connection it signifies the management and ethical skills. Concepts from the ancient texts contribute to modern management philosophies, leadership, decision making qualities and organizing behavior understanding. IKS is vital for preserving and promoting India's rich cultural heritage. It provides a foundation for appreciating the depth of indigenous knowledge (Thomas, 2024).

Practices like yoga and meditation from IKS are increasingly integrated into modern lifestyles for stress management, enhancing focus and promoting mental well-being (Thomas, 2024). IKS is one of the significant aspects of the NEP curriculum. It encompasses diverse and rich heritage knowledge of India that covers various domains such as science and technology, literature, philosophy, culture, medicine (ayurveda) and yoga (Chandel & Prashar, 2024).

According to NEP 2020, "Indian knowledge system including tribal knowledge and indigenous and traditional ways of learning, will be covered and included in mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, as well as in governance, polity, conservation. Traditional (organic) crop cultivation, natural farming, etc. will also be made available".

The Ancient Indian Education System followed a traditional method of teaching known as **GURUKUL**. The word gurukul means family of the teacher in Sanskrit. In this system the teacher is not just an instructor but also a mentor and guide for students. This system created a feeling of home in which students used to live within the guru (teacher) in guru's home or ashram. The method mostly used was oral transmission in which knowledge was memorized by the students (Kumar, 2023).

The modern education system follows the updated knowledge, various strategies for medium of instruction, inculcating 21st century skills, involvement of students in school activities; it also promotes holistic growth among the students.

Agriculture is the science of cultivating the soil, producing high yield crops so as to sustain the needs of living beings. This practice has followed in India since years and has been the major part of the Indian economy. The main purpose of agriculture education is to bring skilled workers through training. The main concept behind the education is to make children understand the importance of agriculture in daily life, make students realize the value of crop cultivation, sustainability importance and the knowledge, practical experiences of ancient agriculture methods.

Agriculture Education in Ancient India:

Ancient times agriculture education was from the family itself, earlier $\frac{3}{4}$ of the family depended on agriculture (farming), so that they could obtain the needed sources from farming itself. crops such as rice, wheat, barley etc. The poultry farming, sericulture method was also part of livelihood for ancient times.

At this time the family members were also involved in the farming methods and used to pass the techniques of farming to their next generation, this way India is known for agriculture and it plays a major role in the economy of the country.

The techniques such as natural farming, crop cultivation, plowing, weeding methods etc were taught to their children so that they may get an exposure to their family profession (profession followed by family in ancient times for livelihood) and live their lives because at that time education was not an important aspect.

Agriculture Education in Modern India:

Agriculture in modern times has changed a lot since the beginning of formal agriculture education. Since there was no formal education in ancient times after the British ruling, in the twentieth century the first agricultural college was established at Coimbatore. Later due to the requirements of agricultural development, IARI (Imperial Agricultural Research Institute) was established for higher secondary level. The funds and appropriate facilities were being provided by UGC to foster among youth (Jena et.al 2021).

Measures were taken to foster teaching research and extension among students to cater the needs of rural India problems. This led to the increase in food production so as to make the country self-sufficient (Jena et.al 2021).

Need of Agriculture Education:

- Agriculture is the practice followed for thousands of years so it is important for students to know about the ancient practice, the procedures they adopted without the use of modern technologies.
- It enables the students to know about the various crops and its health benefits.
- It makes people aware of the fact that agriculture plays a major role in the Indian economy as it boosts the economy and makes the population of the country to be self-dependent.

- By the proper education in agriculture, individuals can themselves select their own stream accordingly thereby increasing chances of employment in agriculture.
- Agriculture is the field, where three-fourth of the population depends upon and in these three-fourth the whole population is dependent for their livelihood.
- India has achieved remarkable growth in agriculture, milk, fish, oilseeds, fruits and vegetables (Jena et.al 2021).
- Education in the agricultural field may innovate the farmers and enhance their skills for higher yield production.
- The different fields of agriculture can be analyzed and opted according to the interest of students; thus, education of agriculture is a significant factor of the Indian Knowledge System as agriculture is the major source of income in India.

Integration of Agriculture in Curriculum:

- Agriculture is the science of cultivating crops, livestock production etc. It includes the variety of crop cultivation, the science behind the cultivation such as climate, soil, weather etc. that may affect the crop varieties.
- It includes the natural farming method with the help of organic farming and the inorganic farming method too. The fertilizers both organic and inorganic, along with the harmful effect of the chemical fertilizer can be included in the curriculum for better comprehension and awareness.
- It includes health related knowledge such as harmful diseases from the chemical fertilizers, the benefit of the organic vegetables and fruits. By integrating agriculture in education, the students will get to know about the modern innovations and the ancient techniques used by our ancestors.
- It may create a sense of feeling in students about knowing the soil, sustaining the environment. thereby inculcating various moral values in them.
- The techniques of creating compost with the help of integration of agricultural knowledge may enhance the practical as well as theoretical knowledge in students. The composition of organic manure, organic fertilizer, biogas plant construction, and the sustainability aspect of the environment can also be taught to students through this curriculum modification.

Role of NEP 2020 in Integrating Agriculture in Secondary and Higher Secondary Level:

- The NEP 2020 role emphasizes the Indian Education system to enrich the source of knowledge by inclusion of practical and theoretical aspects into the curriculum.
- Through NEP 2020, the government tries to make the future aspirants efficient in any field according to their interest apart from their academics.
- In this, the students acquire one skill other than academics. Skilled farmers or the agricultural researchers are vital for agricultural development, hence an important facet of

NEP 2020 as well as in the agricultural field.

- The inclusion of such an engaging course on IKS available to students in secondary level as an elective course.
- Reformation in the curriculum enhance the chance of inclusion of agricultural courses and create an interest among the students.
- Practical as well as theoretical knowledge will be included in the curriculum so that the students may get a perception about the elective course. Based on that perception, students may select their interested field accordingly in their higher secondary level.
- In a study titled “A study on Interest in agriculture among the higher secondary students” it revealed the present position of higher secondary students and suggested that setting a positive attitude towards agriculture should be the aim of education (Saminathan et.al 2022).
- In recruitment and reservation for the higher educational courses, candidates’ interest in agriculture should be given a prominent ranking to motivate them to become involved in agriculture (Saminathan et.al 2022).

Scope:

According to the Department of Agriculture and Farmer welfare, the source of livelihood for about 70 percent of rural households in India. Agriculture sector has a major role to play in making India 'Atma Nirbhar' (self-reliant), making farmers both producers and entrepreneurs.

The income we raise from agriculture has an 18% contribution to our GDP.

The agricultural science curriculum includes modern as well as ancient techniques, the new innovative science technological assistance has made the agriculture field efficient.

Different areas of agriculture:

Agriculture and Farming, Estates and Tea Gardens, Agri Industries, Services Sector, Animal Husbandry, Agricultural Engineering and Research, Agricultural Consultancies, Dairy Farming, Poultry Farming, Handicrafts, Forestry,

Various job opportunities in Agriculture:

- Agriculturists
- Plant Geneticists
- Farm Managers
- Chartered Surveyors
- Estates Managers
- Agricultural Scientists
- Soil Surveyors and Scientists
- Agricultural Consultants
- Food Researchers

- Food Microbiologists

The agricultural graduates have the greatest chance of going abroad for further studies as well as research work.

New innovations such as hybridization of crops to develop a new crop that yields high production are also a part of agriculture. Similarly in the case of animals the variety of hybrid species is also part of it (Biotechnology).

There are also other field where the skilled agriculture graduates can work, they are

- Agricultural educator
- Agronomy sales manager
- Agricultural manager
- Agricultural field officer
- Agricultural research scientist
- Block development officer
- Indian forest service officer

The graduates scope also extends to sectors like horticulture, poultry farming, dairy farming, and agro-based industries.

According to the current education system the following are some of the jobs that graduates can work in both private and government sector

The most preferred job of the Agriculture Graduates is: -

Agricultural Officer: In government sectors, these professionals oversee agricultural practices, ensuring adherence to regulations and promoting sustainable methods.

Agronomists: These specialists focus on crop production and soil management, striving to increase crop yield and advising farmers on best practices.

Horticulturist: Specializing in garden crops, fruits, and ornamental plants, horticulturists work towards breeding, growing, and marketing plants and their products.

Quality Assurance Manager: Ensuring the quality and safety of agricultural products, these managers play a critical role in food safety and standards.

Research Scientist: Engaged in agricultural research, these scientists work on developing new farming techniques, pest control measures, and sustainable practices.

Agricultural Analyst: They analyze market trends, agricultural policies, and economic factors impacting the agriculture sector.

Farm Manager: Managing day-to-day operations of farms, farm managers are responsible for crop planning, supervising farm workers, and financial management.

Extension Officer: These professionals work closely with rural communities, providing education and resources to improve agricultural practices.

Challenges in Integration of agriculture in curriculum:★ **Lack of Interest**

● Students must have an interest in agriculture for that they must know the basic as well as advanced opportunities in agriculture education. due to improper knowledge on this field may reduce the interest among the students.

★ **Lack of Motivation**

● Students always need encouragement, reinforcement towards their skills because that act as a motivation for them to select their skilled based field.

★ **Poverty**

● Poverty is one of the major issues, as the financial setup of all the students may not be the same, some may be economically backward. Such students need help and motivation so that they can come forward and study their own interesting course. Due to the lack of financial support the students may not reach the level they need in their life.

★ **Lack of Teachers or Professors**

● Expert teachers or professors always play a major role in the success of an Institution. an efficient teacher or professor may enhance the teaching learning strategies that may create interest among students to move in the agricultural field.

★ **Lack of Awareness**

● Awareness creation is one of the major challenges, due to lack of awareness students are unaware of the job opportunities, facilities available in the agricultural course.

★ **Government Policies**

● More schemes and policies should be introduced in this field, job opportunities should be increased in this field by the government so that the future youth may build up their career.

● Fund should be provided by the government to the students as a scholarship.

★ **Implementation and Regulations**

● After the policy formulation it is important to implement the scheme and to regulate those policies, schemes whether they are being beneficial to the respective students.

★ Research Institutes

- Research institutes in the country must include the graduate course in agriculture in almost all areas so that the transportation factor that creates hindrance for students must be solved.
- Even the students of rural areas who get less exposure may come forward and access the education at the nearby colleges.
- Hostel facilities for the students from long distances is also a challenging factor. Due to this some students may not get the opportunities to access the education.

Conclusion:

Agriculture is the field that most of the Indian population depends upon. Due to this factor, it is very important to preserve this field along with modern innovations. The field of Agriculture is to be included in the curriculum at school level itself as it increases the chance of interest in school students. and thereby they can select their own skilled field for employment. This field includes various job opportunities. By enhancing and motivating students in agriculture, the students may get various skilled based opportunities and inculcation of agriculture in the curriculum may enhance the practical as well as theoretical knowledge in future aspirants as these future youth are the strength of the country. In this present scenario it is very important to be with organic farming and natural fertilizers, therefore such theories of ancient times and modern success may be the way for the youth to come up with a healthy generation.

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Curriculum Development For Integrating Indian Knowledge System

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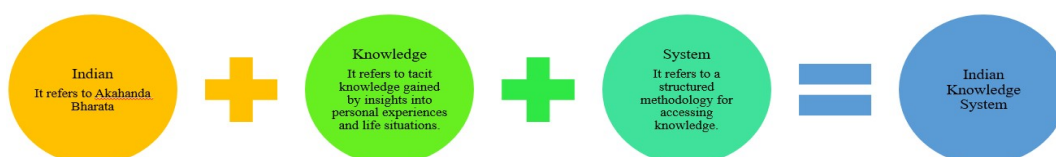
Abstract:

The New Education Policy (NEP) 2020, has been launched to transform the Indian education system using holistic development of the learners. This framework provides a comprehensive and integrated strategy for the growth of the education system. The Indian Knowledge System (IKS) is one of the significant aspects of the NEP curriculum. IKS encompasses diverse and rich heritage knowledge of India that covers various domains such as science and technology, literature, philosophy, culture, medicine (ayurveda), and yoga. NEP has focused on interdisciplinary and transdisciplinary knowledge, and it can integrate the contemporary knowledge vested with IKS to address current and future challenges. The IKS covers the knowledge assets from the pre-historic to the current period. NEP fosters the creation of language resources and technology to facilitate the IKS as it recognizes its importance for disseminating indigenous knowledge. The integration of IKS with NEP will help to understand the underlying contemporary societal issues and to carry out further research on these issues. It will foster the growth and understanding of rich and diverse indigenous knowledge among various stakeholders and rejuvenate traditional knowledge with the help of modern technology.

Key Words : Curriculum Development, Knowledge System

Introduction:

India is a country with an ancient civilizational history and practices that are known to mankind. It is expected to accumulate some knowledge throughout its existence. This ancient knowledge was preserved on palm trees and transferred from generation to generation orally. But over time there were abrupt changes in the knowledge transformation process and this indigenous knowledge was lost. The newly introduced education system has attempted to provide this knowledge to society as demanded. Indian Knowledge System (IKS) comprises three words namely: Indian, Knowledge, and System.



Indian:

It refers to Akhanda Bharata i.e. undivided Indian subcontinent. It covers the area that spans from Burma on the east, modern-day Afghanistan on the west, the Himalayas on the north, and the Indian Ocean on the south. Chanakya was instrumental in the establishment of the Mauryan Empire and Panini who wrote Sanskrit grammar got their education at Takshashila University of ancient India now in Punjab, Pakistan. Ancient Indian education included the teaching of eighteen Vidya Sthanas, or schools of learning, which were imparted in renowned centers such as Nalanda and Takshashila. India's global reputation has been derived from its contributions in the fields of Art, Architecture, Science, Technology, Craft, Engineering, Philosophy, and Practices. Most of the foreigners who visited India for knowledge and disseminated this knowledge to the West and other parts of the world. This is a part of IKS.

Knowledge:

Knowledge refers to the tacit knowledge and it lies in the wisdom of knowledge seekers. It is gained by insights into personal experiences, through observations, facing real-life problems, and solving them. Knowledge may exist in literary and non-literary forms. This tacit knowledge is transferred systematically by way of proposing new theories, and frameworks, and in the form of literary work i.e. in the form of explicit knowledge.

System:

System means a well-organized methodology and classification scheme used to access a body of knowledge. The codification and classification are based on the need, interest, and capacity of the knowledge seeker so that he may access the inherent knowledge. This will help them gain insights from overall knowledge and know-how that different knowledge components logically complement each other

The IKS is the systematic transfer of ancient and contemporary knowledge from one generation to another. It covers ancient knowledge from various domains to address current and future challenges. This knowledge exists in both literary and non-literary works. Literary resources cover Vedic and allied literature (Sanatana Dharma mainly in the Sanskrit Language), resources on other dharmic traditions (Buddhism and Jainism), and, knowledge that exists in Indian languages and dialects. Non-literary resources are present in oral traditions available across the country (B., RAJAT, & R.N., 2022).

NEP and Indian Knowledge System Inclusion:

The NEP 2020 has emphasized that IKS will be part of the curriculum and will be incorporated scientifically. IKS along with tribal knowledge will be included in mathematics, engineering, philosophy, yoga, medicine, sports, games literature, languages, and various other domains. NEP has focused on specific courses in tribal ethnomedicinal practices, forest

management, and organic and natural farming. Under NEP, IKS will be taught as an elective course for secondary school students. These inputs will be delivered through modern technologies, fun games, and cultural exchange programs among different states. NEP focuses on multilingualism and the IKS repository has many languages. Under NEP students will be delivered curriculum in their native languages and Sanskrit the most ancient language will be taught to all. By learning different languages, they will know the rich and diverse culture of the nation. It would be easy to include the history of Indian mathematics in normal math classes. The same could be done for architecture, philosophy, and Ayurveda. This is the goal of the NEP, but it will have to be done slowly.

How To Make Iks Part Of Mainstream Education?

IKS, being a vast & undivided source of knowledge and unattended for many decades, has been disassociated from societal memories. Though some parts of IKS were continued in teaching and learning in Sanskrit and other traditions, this kind of isolation made it inaccessible. Just revival or reinforcement of IKS in education will create a new compartment of learning which is more dangerous than preservation. It is, therefore, desired to integrate the IKS content into contemporary knowledge in a harmonious way. Such integration demands a lot of labour and clarity.

Kautilya's classification of schools of learning makes it explicit that every contemporary knowledge stream has a link with the ancient Indian knowledge tradition.

1. **Trayii-** the trio of fundamental Sciences including Hard and Soft sciences constitutes the school of science learning-Vijnana-vidya.
2. **Vaarta** is nothing but commerce which includes production and distribution of wealth through trading and other means.
3. **Danda Neeti-** Studies in Polity, society, state security, etc, become part of the school of Human or social sciences.
4. **Anveekshiki-** science of all branches of learning covers Mathematics, logic, language, art, and so on. This is common to all. All learners of different branches of learning must be exposed to these foundation programs. In this model, a new education system should be connected to various branches of IKS.

IKS in simple words teaches us how to inquire? In what way? To what extent? Fundamental sutras will guide and reorient our thinking process. IKS creates a new worldview that is rooted in axiomatic faith that “Vasudhaiva Kutumbakam” (the whole universe is a family) and “Sarve Bhavantu SukhinaH” (may all be happy).

The integration process involves the basic introduction to IKS, its nature and structure, Scope & History, an amalgamation of fundamental IKS concepts into modern textbooks, and

finally developing Indian Thought Models based on available IKS literature, and their application into various contemporary problem-solving methods.

In other words, IKS should not be taught in isolation for mere preservation purposes. Instead, it should be made part of larger missions of the country like 'Space-Science', 'Svastha-Bharat', and 'Atma-Nirbhar-Bharat' missions. This Mission mode IKS integrity will serve the purpose. Change of mode "from Preservation to Utilisation" will accomplish our goal of creating Bharat as the hub of emerging knowledge.

Conclusion:

The inclusion of IKS in India may help the stakeholders to know their cultural heritage and they may develop a deep understanding of the environment. As IKS is based on tacit knowledge it can help students to face and tackle the challenges they are going to face in their real life such as challenges of climate change and food security. But this inclusion of IKS has certain challenges and these challenges need to be addressed before inclusion. The Indian government has taken a step under NEP to integrate IKS into the curriculum. There is an emergent need for proper training of the teachers so that they have proper knowledge of IKS and can deliver it in a meaningful way. The data available about IKS needs to be streamlined with the help of information technology and making it available as per the needs and capacity of the stakeholders. This cannot be done overnight as the Indigenous Knowledge Systems have evolved in India over thousands of years. It will be replaced gradually over time.

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Exploring Factors Influencing Low Concentration and Strategies for Enhancement among Standard IX & X Students in Silvassa Schools

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Abstract

Concentration is crucial for students as it helps in learning new concepts. It means focusing your mind on one thing at a time, like actively listening and not getting distracted. Concentration is very much necessary for making the teaching learning process meaningful. Concentration is dependent on the mental, physical and emotional status of the students. Concentration helps one in retention, Organization of information, Problem solving skills. Students with a high level of concentration can recall previous information easily and excel in their studies. This Paper attempts to identify the factors of low concentration in class among students. The Researchers have adopted the exploratory and descriptive research type while collecting data from both secondary and primary sources. The primary data collection was attempted through a survey of 105 respondents across class IX & X selected through convenience sampling technique. The Researchers aim to understand the importance of concentration in education for students. The study aims to identify factors of low concentration in class among students of Standard IX & X at Schools of Silvassa City. The researchers aim to contribute measures to enhance students' concentration in Class. The study encompasses the analysis of responses from standard IX & X at Schools. The inferences are indicative in nature as they largely represent the expressions of selected students and not the entire world of Education, hence this would be the limitation of the study. The inferences aren't exhaustive.

Key Words: Low Concentration, Students, School Environment, Classroom, Enhancement, Silvassa.

INTRODUCTION:

Concentration is the key factor in a student's life. It helps in absorption of learning new things; it helps in dealing with problems. Concentrating means keeping your mind focused, steady, stable, being able to think of one thing and deal with it at a time. Concentration of students depends on the mental physical and emotional status of the students. Concentration is the key

factor over anything from studying to achieving goals. Concentration helps students in understanding more it helps in developing the interest of an individual. Higher the concentration higher will be the academic achievement of the students vice versa with lower concentration lower performance of students can be observed. The achievement of an individual depends upon the power of concentration. More concentrated umpire gives more clear and right decisions .Concentration plays an important role in overall development of students. It gives a brief of their own interest. The more interesting things are done in a much more focused manner. Concentration helps to know about their interest and work on it. Lack of concentration hinders the process of achieving a goal. It creates confusion .Concentration helps in the full filings of the objectives of teaching learning process.

LITERATURE REVIEW:

According to Servatyari et al.(2018) paying attention in class is crucial for effective learning. Factors like teaching methods, teacher behavior, student interest, and classroom environment impact concentration. Teachers who are engaging and create a conducive atmosphere enhance focus. Students' interest and active participation also play key roles. Research in Divandareh, Iran, confirms these factors significantly affect students' concentration in class. According to Rahmatullah and Rusli (n.d.) undergraduates struggle with absorbing information and managing time due to non-academic activities. Disinterest and anxiety can disrupt concentration. Hypno-teaching aims to engage the subconscious for better focus. Case study shows concentration differences based on suggestibility levels. Positive parental influence crucial for motivation. More research needed on suggestibility's impact on learning styles for better educational methods.

According to Arroyo et al. (2023) the environment in schools affects students' learning. It can impact how well students do in school and how they feel.

Siahi and Maiyo (2015) shows how the way students study can affect how well they do in school. It looks at different things that can impact how students do in their classes, like how they study, their teachers, their home life, and their school environment. The study uses a type of research called a survey to see if there's a connection between how students study and how well they do in school tests. The results show that students who have good study habits tend to get better grades. The study suggests that it's important to help students develop good study habits both at school and at home so they can do better in school.

Sari et al. (n.d.) study found that students often get bored and find it hard to pay attention during social science classes because they feel like they have to memorize a lot of information. To help them focus better, the researchers tried a fun activity called ice breaking. This activity involved doing something enjoyable and different during class to break up the monotony. They found that

when students did these ice breaking activities, they were more interested in learning and paid better attention to what the teacher was saying. This made the class more fun and helped students remember the information better. Overall, using ice breaking activities in class helps students concentrate more and makes learning social science more enjoyable.

OBJECTIVES OF THE STUDY:

The Researchers have adopted following objectives for the study:

1. To understand the importance of concentration in education for students.
2. The study further aims to identify factors of low concentration in class among students of Standard IX & X at Schools at Silvassa City.
3. The Researchers aim to contribute measures to enhance students' concentration in Class.

RESEARCH METHODOLOGY & PROCESS:

A study was conducted on identifying factors of low concentration in class among students of standard IX & X at schools and measures to enhance students' concentration with special reference to schools at silvassa city is a study attempted through exploratory and descriptive research with data collection from both secondary and primary sources. The primary data collection was attempted through a survey of 105 respondents across class IX & X selected through convenience sampling technique. The Researchers aim to understand the importance of concentration in education for students. The study further aims to identify factors of low concentration in class among students of Standard IX & X at Schools at Silvassa City. The researchers aim to contribute measures to enhance students' concentration in Class. The study encompasses the analysis of responses from standard IX & X at Schools. The inferences are indicative in nature as they largely represent the expressions of selected Students and not the entire world of Education, hence this would be the limitation of the study. The inferences aren't exhaustive.

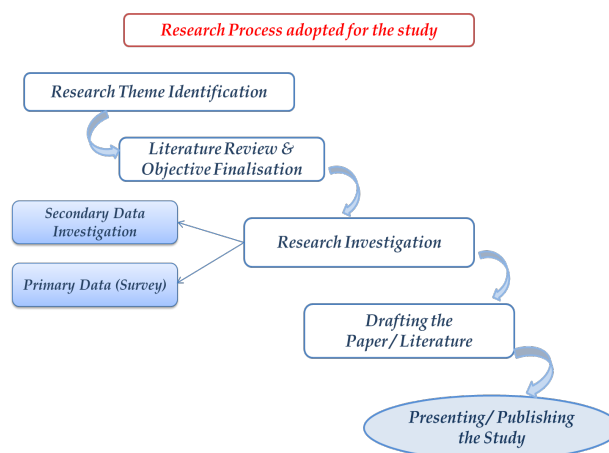


Chart No. 1: Research process Adopted

Source: Author's understanding

FACTORS OF LOW CONCENTRATION IN STUDENTS

Low concentration is not a disorder, it is just a state of mind in which a child is unable to focus on what is going on around them. There can be many factors due to which they are unable to concentrate. The lack of concentration is due to various distractions.

Various factors are as follows -

1. CONDUCTIVE ENVIRONMENT

The environment in which they are studying is not as per the students' need for knowledge gaining. They require a peaceful environment, safe, secured stress free, noise pollution free environment to study.

2. INSUFFICIENT SLEEP

Lack of proper sleep is one of the major factors for low concentration of students in the class. They feel sleepy during the class. Their few sleepiness might be due to the busy schedule from school to various classes, coaching etc. This is providing hindrance in concentration.

3. STRESS

Stressful conditions are also causing low concentration things. Due to stress students think about that stress all the time they are unable to focus what's going inside the class they are dealing with their inner chaos. Stress can be of financial conditions, failure, competition, family, peers etc

4. ADHD

ADHD refers to Attention Deficit Hyperactivity Disorder which affects the ability of students to concentrate. It takes a lot of hard work to let them focus again at their work or studies.

5. DISTRACTION

Various distractions are present outside but the conducive environment of the classroom, the surrounding of school should be such that it should not distract students. If students are studying and in surroundings to school they will be distracted by that street chaos. Family problems, mobile phone can also cause distractions

6. LEARNING DIFFICULTIES

Students with learning difficulties are dealing with various issue due to which they are unable to concentrate on studies. They understand at a slower pace than normal students. If teachers are teaching in the manner of students, understanding will lead to their full concentration.

7. HEALTH CONDITIONS

Health conditions of the students play a vital role in concentration as it is said that a healthy mind resides inside a healthy body. Healthy body + healthy mind = healthy life. Good health conditions need more concentration which will be more helpful in good academic achievement.

8. MONOTONOUS TEACHING

Most of the concentration of students in the classroom depends on the methods of teaching of students. The more interesting the way of teaching; the more interested students are in that

subject. Different methods keep class engaging and active. Make the teaching learning process interactive. Single and old methods of teaching cause students to concentrate.

9. MORE CLASS TIME

The duration of class time should be as per the psychology of the students how much they are able to focus and study. Ideally it should not be more than 40 minutes. More than that duration can cause students to become bored and they won't concentrate on what is going on in the classroom.

10. INTEREST IN SUBJECT MATTER

Psychology says that we do things better when it's as per our interest. We do such things in a very focused manner and when things are not as per interest we don't try to do such things or we don't concentrate on it or we do such things in a very liberal manner.

11. LACK OF MOTIVATION

Lack of motivation can lead to low concentration, a child with zero motivation or with great failure on that content unable to focus on the things. Motivation gives them the spirit to do such work and achieve their pre-decided goals.

12. PROPER PHYSICAL FACILITIES

For proper education proper physical facilities should be present in the school which helps them in their education purpose. Presence of ventilation and light will help them in stay at the class and study without getting distracted.

13. ADEQUATE NUMBER OF STUDENTS

Proper number of students should be present in the class. Higher the number of students more the chaos and lower the concentration. This leads to lower performance of the students. Needy students will not be able to get the guidance as per the need the ratio of student is more as per teacher. Adequate number of students will be more suitable for proper concentration and achieving goals.

MEASURES TO ENHANCE STUDENTS' CONCENTRATION:

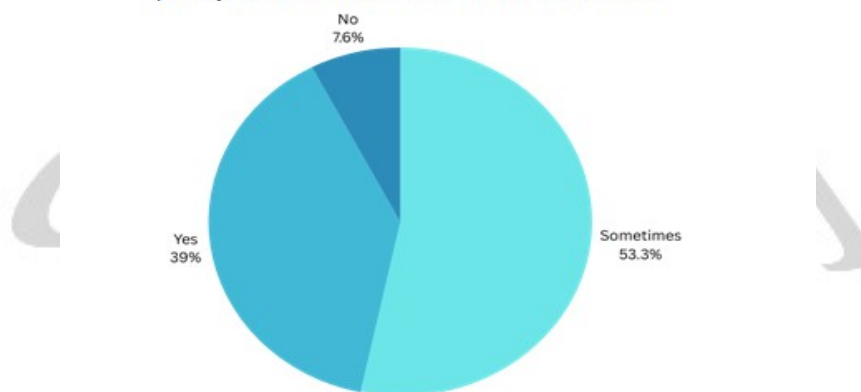
The measures to enhance student's concentration-

1. **Create Conducive Environment** –To ensure that classrooms are well organized, comfortable, well ventilation proper seating arrangements, appropriate lighting, support condition
2. **Provide Individualized support** - Identify the students with different needs and provide them assistance for their betterment. Provide them opportunities according to their abilities.
3. **Provide Regular breaks** – Give them short breaks during lesson to allow students to recharge or regain their attention. Assist them for doing stretching exercise or brief 2 minutes mindfulness games to help students stay alert and attentive.

4. **Diverse teaching methods**–Provide students instructional strategies to cater to different learning. Use of technology integrated learning, Model, different charts, strategy to make the subject interesting. Co relates their learning with real life.
5. **Implement active learning techniques** –Engage students in hands on learning activities, interactive session that stimulate their interests and involvement. Incorporate group discussion, problem solving tasks and practical exercise to keep students focused and actively participating.
6. **Collaborate with parents** – Involve parents in supporting students’ concentration and academic success. Share strategies for promoting concentration at home; communicate regularly about students’ progress and feedback about students’ performance
7. **Exercise Sessions** –Daily yoga and exercise should be conducted in morning or single period of day for exercise .Meditation session should be conducted in a week.
8. **Manageable class Size** – Reduce the class size the ratio of teacher and students should be fixed .Utilize teaching assistant. Class size should be fixed it should not be too long or too short.

RESULTS & ANALYSIS:

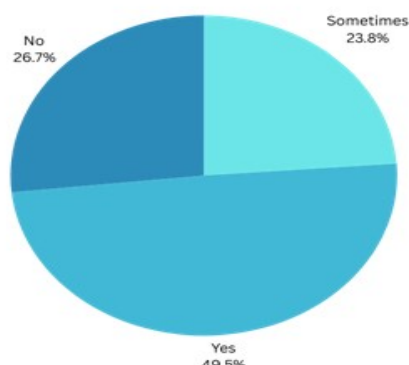
1) Are you able to concentrate in the classroom?



Interpretation

The Researchers aimed to understand whether the students are able to concentrate in the classroom. 53% of the respondents stated that their ability to concentrate in the classroom varies inconsistently. 39% of the respondents responded “Yes”, indicating that they are able to concentrate in the classroom. Rest 7.6% of the respondents responded that they are not able to concentrate in the classroom.

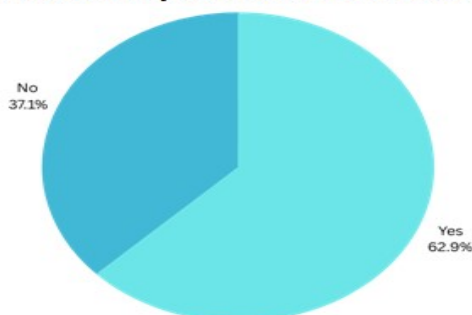
2) Are you able to bounce back from distraction?



Interpretation

The Researchers aimed to understand whether Students are able to bounce from distraction. 49.5% responded "yes," indicating that they feel capable of recovering or rebounding from distraction. 26.7% of the respondents stated "no" that they do not feel confident in their ability to bounce back from distraction and such a category of students may struggle with resilience or overcoming obstacles. 23.8% of the students responded "sometimes," implying that their ability to bounce back from distraction may vary depending on the situation or circumstances they encounter.

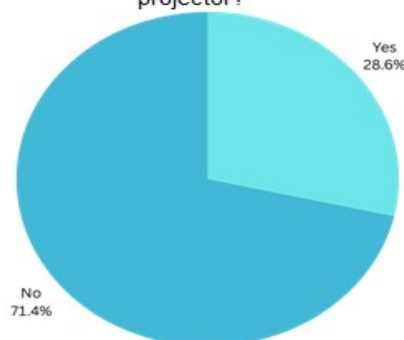
3) Do teachers only use the board for teaching??



Interpretation

The Researchers aimed to understand whether teachers exclusively rely on the blackboard as their primary teaching tool. The results indicate that 62.9% of the respondents surveyed answered affirmatively, and they believe teachers primarily use the blackboard for teaching. Conversely, 37.1% responded negatively, indicating that they believe teachers do not solely rely on the blackboard for teaching and use other methods or resources as well.

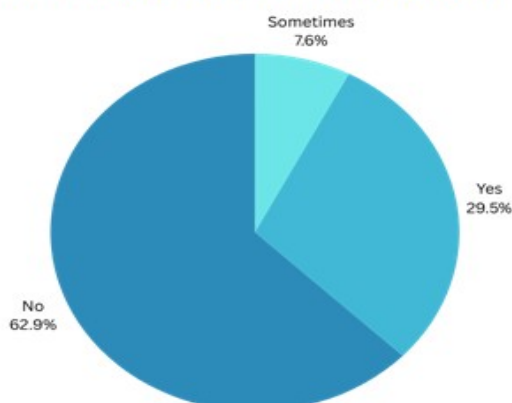
4) Does the teacher use technology to teach like smart TV, projector?



Interpretation

The Researchers aimed to understand whether teachers utilize technology, specifically Smart TV projectors, in the classroom for teaching purposes. The data reveals that 71.4% of the respondents answered "NO," indicating that the majority of teachers do not use Smart TV projectors in their teaching approach. On the other hand, 28.6% of respondents answered "YES," indicating that Teachers do incorporate Smart TV projectors into their teaching methods.

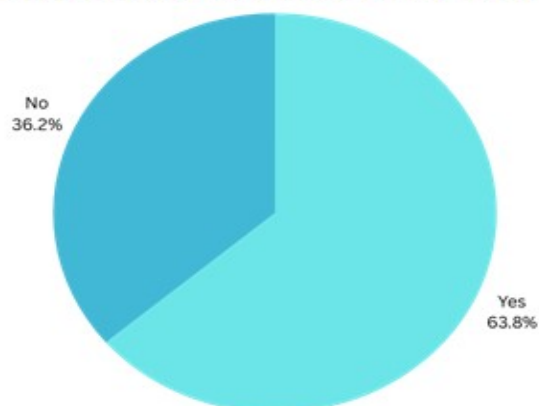
5) Do technologies contribute as a distractor?



Interpretation

The Researchers wanted to know whether technology contributes as a distraction. Analysis states that, 62.9%, believes that technologies do not contribute as a distractor. Meanwhile, around 29.5% of respondents believe that technologies do contribute as a distractor, and a smaller percentage, approximately 7.6%, believe that technologies sometimes act as a distractor. Overall, these responses indicate varying perspectives among students regarding the role of technology as a distractor in their learning or work environments.

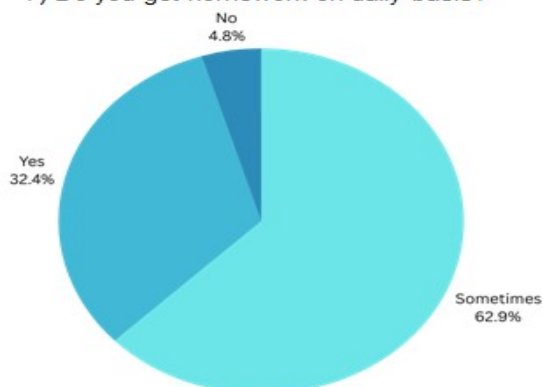
6) Does teacher ask you questions on daily interval?



Interpretation

The Researchers understand that teachers ask questions on a daily basis. Out of the surveyed 63.8% of respondents responded affirmatively, indicating that they are asked questions by the teacher on a daily basis. Conversely, 36.2% of the respondents answered negatively, indicating that they are not asked questions by the teacher on a daily basis.

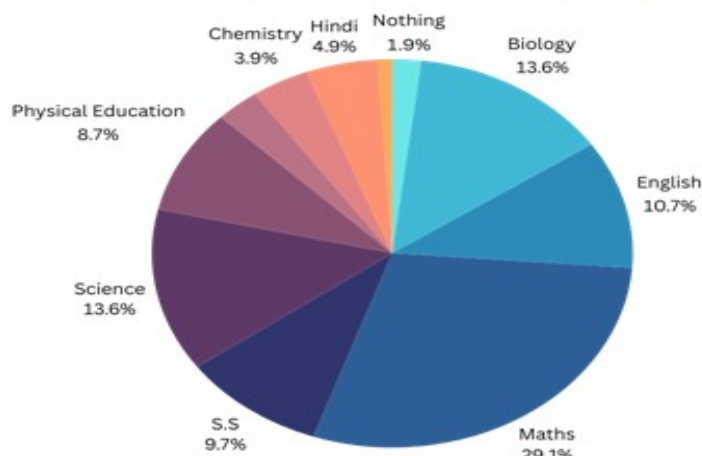
7) Do you get homework on daily basis?



Interpretation

The Researcher aimed to understand whether students get homework on a daily basis. The Data reveals that 62.9% of the respondents responded that they receive homework sometimes. 32.4% of the respondents responded that they receive homework daily. - 4.8% of the students responded that they do not receive homework at all. Here Researchers understand that somehow respondents seem confused with home work as the Homework process for the class must be the same. It further leads to the concentration issue of the students.

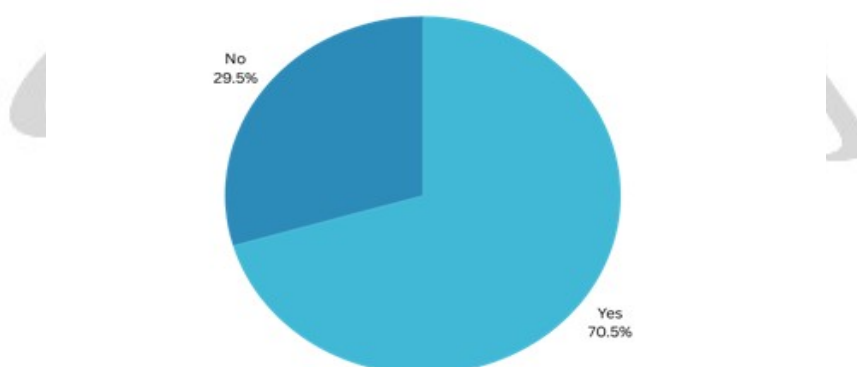
8) Which is your favourite subject? _____



Interpretation

The Researchers aimed to understand the inclination of Students towards subjects. The analysis states that the percentage of respondents who favor each subject are mentioned respectively - Mathematics: 29.1% - Science: 13.6% - Biology: 13.6% - English: 10.7% - Physical Education: 8.7% - Chemistry: 4.9% - Hindi: 3.9% - Other/None: 1.9%. So, the interpretation is that among the surveyed respondents, mathematics is the most favored subject, followed by science (which includes biology and chemistry), English, physical education, and Hindi, while a small percentage either preferred other subjects or didn't have a favorite subject.

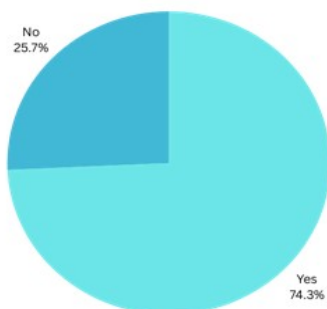
9) Do you find different teaching methods used by teachers in the classroom?



Interpretation

The Researcher wanted to know whether students find different methods used by teachers in the classroom. The data reveals that the majority, 70.5% of the respondents responded affirmatively, indicating that they do perceive different methods being used by teachers. Conversely, 29.5% of the respondents negatively responded, stating that they do not perceive a variety of teaching methods being utilized in the classroom. This information sheds light on the students' perspectives regarding the diversity of teaching approaches employed by their teachers.

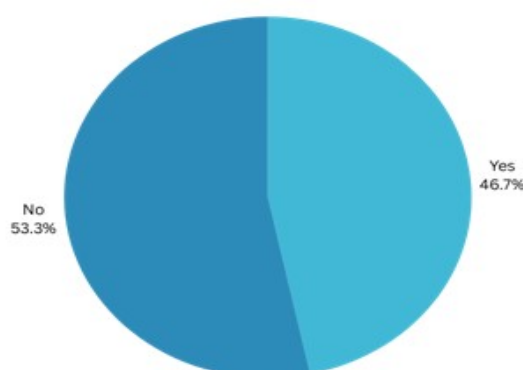
10) Is the number of students Adequate inside the classroom?



Interpretation

The Researchers aimed to enquire whether the number of students inside the classroom is adequate. The response indicates that 74.3% of the respondents stated "YES," indicating that they believe the number of students is adequate. Conversely, 25.7% of the respondents "NO," suggesting that they feel the number of students inside the classroom is not sufficient or appropriate.

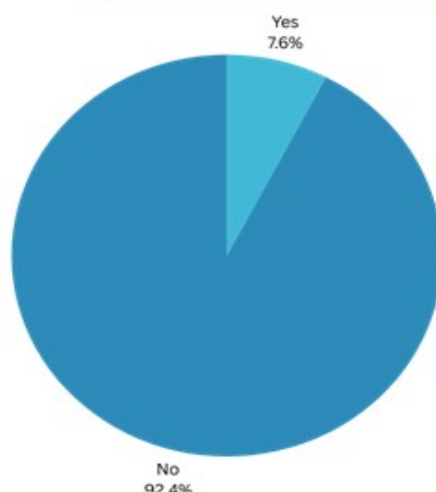
11) Do teachers take care individually?



Interpretation

The Researchers aimed to understand if individual care was received by the students from the Teachers. The responses indicate that 53.3% of respondents say "NO" stating that teachers do not take personalized care (Clearing doubt, explaining concepts guiding them time to time) and 46.7% say "YES" that teachers take personal listens to doubts, guide them regarding their queries.

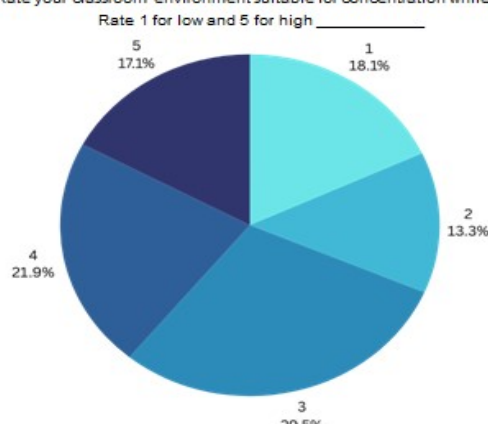
12) Is school placed at noisy place?



Interpretation

Researchers aimed to understand if the school was situated at a noisy place. “The collected data reveals that 92.4% of respondents perceive the noise level as low while 7.6% of respondents perceive it as noisy.

14) Rate your classroom environment suitable for concentration while studying



Interpretation

The Researcher aimed to understand whether the classroom environment is suitable while teaching. The study states that 18.1% of respondents rated the classroom environment as 1 (low) for concentration while studying, 13.3% of respondents rated 2, 29.5% of respondents rated it as 3, 21.9% of respondents rated it as a 4, 17.1% of respondents rated it as 5 (high), Overall it seems that the maximum i.e., 29.5% rated that classroom environment as a 3 indicating a neutral stance towards its suitability for concentration while studying.

RECOMMENDATIONS:

The Researchers recommend a self developed 6E Model towards Enhancement of Concentration among students to be adopted by school.

CONCLUSION:

The study explores the critical role of concentration in students' education, aiming to identify factors contributing to low concentration in class among standard IX & X students in Silvassa City schools and proposing measures for improvement. It emphasizes the multifaceted nature of concentration, influenced by various factors including environmental conditions, sleep patterns, stress, monotonous teaching methods, and individual interests. Through survey data analysis, it reveals insights into students' perceptions and experiences regarding concentration in the classroom. Recommendations include adopting the 6E Model for enhancing concentration among students, education, enthralling, empowerment, efficient, encouraging, and exercise in teaching practices. Overall, the study underscores the significance of addressing concentration challenges to facilitate more effective learning environments and promote academic success among students.

FUTURE SCOPE OF THE STUDY:

1. The current study is a survey based study with respondents from Class IX & X (Sample size 105). Such studies may have a future scope in the form of more number of respondents to the survey & across different classes in the school

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Role Of ICT For Integrating Indian Knowledge System

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Abstract

This article explores the role of Information and Communication Technology (ICT) in integrating the Indian knowledge system. It highlights as the ICT helps to preserve traditional knowledge by digitizing ancient texts and manuscripts. It also discusses the promotion of e-learning platforms that provide access to Indian cultural subjects. Moreover, it emphasizes how ICT connects scholars and experts, fostering collaboration and innovation. Lastly, it touches on how ICT revitalizes indigenous practices and traditional arts. Overall, ICT plays a crucial role in bridging the gap between traditional wisdom and modern advancements in India.

Key Words : ICT, Integrating Indian Knowledge System

Introduction

ICT stands for information and communication technologies, and includes computers, other helpful electronic devices, and internet connections used to manage and transmit information for instructional reasons. ICT has taken center stage in national and international discussions in the digital age. It has become a vital aspect for all industries and segments, and mostly related to education. ICT is shaping the role of future education in India in terms of teaching, learning, and evaluation. E-learning refers to online learning at all levels, both official and informal, that takes place through an information network such as the Internet, a local area network. E-portfolios, cyber infrastructures, digital libraries, and online learning object repositories are among the components. The Indian ICT industry contributed 5.9% of the nation's GDP. With 2.3 million people employed directly or indirectly, the sector is a major employer and pillar of the Indian economy. Lack of access to computers and software, insufficient time for course design, and insufficient technical and administrative assistance are the most typical external issues. ICT, refers to the extensive use of electronic delivery methods in the current educational system, such as radios, televisions, and projectors. Using information and communication technology (ICT) effectively is one strategy to raise educational standards and better connect classroom learning to real-world situations, according to several previous studies define learning as an activity that occurs constantly throughout a person's life and entails the modification of the learner's expectations via the pursuit of knowledge that differs from more traditional ways. Integrating

digital tools into the classroom helps to develop a classroom environment that is focused on the students' education. Because students in ICT classrooms actively participate in the learning process, the teacher allows them to make decisions, establish plans, and engage in other activities of this nature.

Digitalization of Indian Knowledge Systems resources

It involves converting and making available ancient Indian texts, manuscripts, and knowledge resources into digital formats, enabling easy access, preservation, and dissemination. Scanning and Digitization means preserving paper manuscripts, books, and documents to create digital images or PDFs. Optical Character Recognition helps Converting scanned images into editable text using OCR software. Transcription helps to manually transcribing texts from audio or video recordings or handwritten manuscripts. Digital Archiving is the most important as it Stores digital files in organized repositories, ensuring long-term preservation and accessibility for our upcoming students/generation for further use or information. One of the most important is Online Platforms as it helps in Creating websites, digital libraries, and online databases to host digitalized IKS resources. ICT helps in Digitization of Audio-Visual Resources like converting audio and video recordings of IKS-related content (lectures, performances, etc.) into digital formats. Another use of ICT is Digital Restoration it Enhances and restores damaged or deteriorated manuscripts and images using digital tools this helps most in preservation of old Indian Knowledge like literatures etc.

E-learning modules for Indian Knowledge Systems

Education with online educational resources that provide an immersive and interactive learning experience for students and scholars. These are designed to promote a comprehensive understanding of IKS, covering various aspects such as philosophy, science, art, and culture. It includes Interactive multimedia content, like videos, animations, and graphics, to engage learners and illustrate complex concepts. Audio recordings of lectures, discussions, and interviews with experts, providing insights into IKS principles and practices. Downloadable resources, including e-books, articles, and research papers, for further reading and reference. Quizzes, assessments, and evaluations to test learners' understanding and progress. Discussion forums and live chat facilities for learners to interact with instructors and peers, clarifying doubts and sharing perspectives. Virtual labs and simulations, enabling hands-on experimentation and exploration of IKS concepts and techniques. Case studies and project assignments, allowing learners to apply IKS principles to real-world scenarios and develop practical skills. Certificates of completion and credits, acknowledging learners' achievements and progress.

These e-learning cater to diverse learning styles and needs, making IKS education accessible and inclusive for a global audience. They facilitate self-paced learning, enabling

learners to progress at their own speed and convenience. By incorporating multimedia and interactive elements, e-learning modules create an engaging and immersive learning experience, enriching learners' understanding and appreciation of Indian Knowledge Systems.

Data repositories for Indian Knowledge Systems

It's centralized digital archives that store and manage vast amounts of data, information, and knowledge resources related to IKS. These repositories play a crucial role in preserving, organizing, and disseminating IKS content, making it accessible to researchers, scholars, and the wider community.

Data repositories for IKS typically contain a wide range of digital assets, including:

- Scanned manuscripts and rare books
- Audio and video recordings of lectures, performances, and events
- Images and photographs of artifacts, artworks, and cultural heritage sites
- Transcripts and translations of ancient texts and oral traditions
- Research papers, articles, and books on IKS topics
- Datasets and metadata related to IKS research and projects

These repositories employ robust metadata standards, ensuring easy search, discovery, and retrieval of IKS resources. They also incorporate user-friendly interfaces, enabling researchers to browse, search, and access resources efficiently. Data repositories for IKS often implement digital preservation techniques, ensuring long-term conservation and integrity of the stored data. By providing a single, unified platform for IKS resources, data repositories facilitate collaboration, innovation, and knowledge advancement, while promoting the preservation and dissemination of India's rich cultural heritage.

Conclusion

In conclusion, the integration of Indian Knowledge Systems (IKS) with modern education and research is crucial for preserving India's rich cultural heritage and promoting holistic learning. ICT plays a vital role in this integration by providing digital platforms for accessing and sharing IKS resources, enabling global collaboration and knowledge sharing. Digitalization of IKS resources, e-learning modules, and data repositories are key initiatives in this endeavor. By leveraging ICT, we can ensure the preservation and dissemination of IKS for future generations, promote cross-cultural understanding, and foster inclusive and sustainable development. Embracing IKS in modern education and research will enrich our understanding of the world, promote interdisciplinary approaches, and contribute to a more harmonious and interconnected global community. Furthermore, it will empower local communities, preserve cultural diversity, and promote India's soft power globally. By harnessing the potential of ICT and IKS, we can create a brighter future for all and contribute to a more equitable and sustainable world.

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NEP 2020 भारतीय ज्ञान प्रणाली द्वारे कला आणि संस्कृतीचे जतन**आशिष बारिया**

विद्यार्थी द्वितीय वर्ष बी.एड एस. एस. आर कॉलेज ऑफ एजुकेशन

आणि

करिश्मा नाकरे

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आणि

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सहायक प्राध्यापक एस. एस. आर कॉलेज ऑफ एजुकेशन

भारत ही कला आणि संस्कृतीने समृद्ध असलेली भूमी आहे, ज्याचा इतिहास हजारो वर्षांपूर्वीचा आहे. भारतीय ज्ञान प्रणालीने या समृद्ध वारशाचे जतन आणि संवर्धन करण्यात महत्त्वपूर्ण भूमिका बजावली आहे.

भारतीय राष्ट्रीय शैक्षणिक धोरण NEP 2020 चे उद्दिष्ट सर्वांगीण आणि बहुविद्याशाखीय शिक्षणावर भर देणे हे आहे तसेच सर्जनशीलता आणि गंभीर विचारसरणीला चालना देऊन आणि भारताच्या समृद्ध सांस्कृतिक वारशाचे जतन आणि संवर्धन करून देशाच्या शिक्षण प्रणालीमध्ये परिवर्तन घडवून आणण्याचे आहे. NEP 2020 भारतीय कला आणि संस्कृतीला शैक्षणिक अभ्यासक्रमात समाकलित करण्याचे महत्त्व ओळखले आहे आणि पारंपारिक ज्ञान प्रणालीचे जतन आणि संवर्धन करण्याची गरज आहे.

NEP 2020 भारतीय कला आणि संस्कृतीला आकर्षक तसेच परस्पर संवादीपद्धतीने सादर करण्यासाठी तंत्रज्ञान आणि डिजिटल साधनांचा वापर करण्यास प्रोत्साहन देते. विद्यार्थ्यांना वास्तविक अनुभव, मल्टीमीडिया सादरीकरण आणि ऑनलाइन संसाधनांद्वारे कला व संस्कृतीचे विविध प्रकार शोधण्यास सक्षम करते. तंत्रज्ञानाचा लाभ घेऊन NEP 2020 कला आणि संस्कृती विद्यार्थ्यांसाठी अधिक सुलभ व आकर्षक बनवते, ज्यामुळे भारतीय वारशदानाची विद्यार्थ्यांना जाणीव व कौतुक वाढवते.

की-वर्ड्स : NEP 2020, भारतीय ज्ञान प्रणाली, कला आणि संस्कृतीचे जतन

प्रस्तावना

राष्ट्रीय शैक्षणिक धोरण (NEP) 2020 भारताच्या समृद्ध आणि वैविध्यपूर्ण कला आणि संस्कृतीचे जतन व संवर्धन करण्यासाठी एक परिवर्तनकारी प्रकाशक म्हणून उदयास आले आहे. पारंपारिक ज्ञान प्रणालीचे आंतरिक मूल्य ओळखणे, सांस्कृतिक साक्षरता वाढवणे, संशोधन आणि दस्तऐवजीकरणाला समर्थन देणे, कला शिक्षणाला प्रोत्साहन देणे आणि सांस्कृतिक संस्थांसोबत सहकार्याला प्रोत्साहन देणे यावर भर देऊन, NEP भारताच्या कलात्मक वारशाचे रक्षण करण्यासाठी महत्त्वपूर्ण भूमिका बजावत आहे. हा सर्वसमावेशक दृष्टीकोन केवळ पारंपारिक कला प्रकारांचे संरक्षण सुनिश्चित करत नाही तर विद्यार्थ्यांमध्ये आणि भावी पिढ्यांमध्ये भारताच्या सांस्कृतिक वारशाची खोल प्रशंसा देखील करतो. या संदर्भात, NEP 2020 हे भारतीय कला आणि संस्कृतीला शैक्षणिक चौकटीत समाकलित करण्यासाठी, भारताच्या कलात्मक वारशाचे संवर्धन आणि संवर्धनासाठी योगदान देण्यासाठी एक महत्त्वपूर्ण व्यासपीठ म्हणून काम करते.

"राष्ट्रीय शैक्षणिक धोरण (NEP) 2020: भारतीय कला आणि संस्कृतीचे जतन व संवर्धन करण्यासाठी एक दिपस्तंभ"

भारतभूमी त्याच्या दोलायमान कलात्मक वारसा आणि समृद्ध सांस्कृतिक परंपरेसाठी ओळखली जाणारी भूमी, त्याच्या विविध कला, संगीत, नृत्य, साहित्य आणि वास्तुकला पूर्वीपासून साजरी केली जाते. नॅशनल एज्युकेशन पॉलिसी (NEP) 2020, एक परिवर्तनकारी दस्तऐवज आहे जे भारतीय शिक्षण व्यवस्थेत क्रांती घडवू पाहतो, देशाच्या कलात्मक वारशाचे जतन आणि संवर्धन करण्यासाठी दिपस्तंभ म्हणून उदयास आला आहे.

NEP आवश्यकता आणि महत्त्व

राष्ट्रीय शैक्षणिक धोरण (NEP) 2020 भारतीय कला आणि संस्कृतीच्या जतनासाठी भारतीय ज्ञान प्रणालीचे महत्त्व ओळखते. येथे काही विशिष्ट मार्ग आहेत ज्याद्वारे NEP 2020 भारतीय कला आणि संस्कृतीच्या संरक्षणास समर्थन देण्यासाठी भारतीय ज्ञान प्रणालीच्या गरजा पूर्ण करते.

1. पारंपारिक ज्ञान प्रणालीचे एकत्रीकरण: NEP 2020 सर्व स्तरांवर शैक्षणिक अभ्यासक्रमात पारंपारिक भारतीय ज्ञान प्रणालीचे एकत्रीकरण करण्यावर भर देते. शालेय आणि विद्यापीठीय शिक्षणामध्ये पारंपारिक कला, हस्तकला, संगीत, नृत्य, साहित्य आणि वास्तुकला यासारख्या भारतीय ज्ञान प्रणालीतील घटकांचा समावेश करून, विद्यार्थ्यांना भारताच्या समृद्ध सांस्कृतिक वारशाची सर्वसमावेशक आकलन आणि प्रशंसा करणे हे NEP चे उद्दिष्टे आहेत.
2. सांस्कृतिक साक्षरतेला प्रोत्साहन: NEP 2020 विद्यार्थ्यांमध्ये भारतीय कला आणि संस्कृतीशी संबंधित असलेल्या विविध सांस्कृतिक परंपरांशी ओळख करून सांस्कृतिक साक्षरतेला प्रोत्साहन देण्यावर भर दिला जातो. अभ्यासक्रमात भारतीय कला प्रकार, सांस्कृतिक पद्धती आणि वारसा स्थळांचा समावेश करून, NEP चे उद्दिष्ट भारताच्या कलात्मक परंपरांबद्दल आंत्यतिक अभिमान आणि आदरभाव निर्माण करणे आहे.
3. संशोधन आणि दस्तऐवजीकरणासाठी समर्थन: NEP 2020 पारंपारिक भारतीय कला प्रकारांचे संशोधन आणि दस्तऐवजीकरण आणि भविष्यातील पिढ्यांसाठी त्यांचे जतन आणि संवर्धन करण्यासाठी सांस्कृतिक पद्धतींना प्रोत्साहन देते. स्वदेशी ज्ञान प्रणालीचे दस्तऐवजीकरण आणि अभ्यास करणाऱ्या उपक्रमांना समर्थन देऊन, पारंपारिक कला आणि सांस्कृतिक पद्धतींचे संरक्षण भावी पिढ्यांपर्यंत पोचले जाईल याची खात्री करणे NEP चे उद्दिष्टे आहेत.

NEP 2020 भारतीय कला आणि संस्कृतीच्या जतनासाठी पारंपारिक ज्ञान प्रणालींना शिक्षणामध्ये एकत्रित करून, सांस्कृतिक साक्षरतेला चालना देऊन, संशोधन आणि दस्तऐवजीकरणाला समर्थन, कला शिक्षणाला प्रोत्साहन देऊन सांस्कृतिक संस्थांसोबत सहकार्य वाढवून भारतीय ज्ञान प्रणालीच्या गरजा ओळखते. या गरजा पूर्ण करून, NEP भारताचा समृद्ध कलात्मक वारसा जतन, साजरा आणि भावी पिढ्यांपर्यंत पोचला जाईल हे सुनिश्चित करण्याचे उद्दिष्टे आहेत.

राष्ट्रीय शैक्षणिक धोरण (NEP) 2020 भारतीय कला आणि संस्कृतीच्या जतनासाठी भारतीय ज्ञान प्रणालीचे महत्त्व ओळखते. या संदर्भातील भारतीय ज्ञान प्रणालीचे महत्त्व अधोरेखित करणारे NEP 2020 चे काही प्रमुख पैलू येथे आहेत:

1. सर्वांगीण आणि बहुविद्याशाखीय शिक्षणावर भर: NEP 2020 शिक्षणासाठी सर्वांगीण आणि बहुविद्याशाखीय दृष्टिकोनाचा पुरस्कार करते, ज्यामध्ये पारंपारिक भारतीय ज्ञान प्रणाली अभ्यासक्रमात समाकलित करणे समाविष्ट आहे. शैक्षणिक कार्यक्रमांमध्ये भारतीय ज्ञान प्रणालीच्या घटकांचा समावेश करून, विद्यार्थी भारतीय कला आणि संस्कृतीबद्दल सखोल आकलन आणि प्रशंसा विकसित करू शकतात.
2. सांस्कृतिक वारशाचा प्रचार: NEP 2020 पारंपारिक कला, संगीत, नृत्य, साहित्य आणि वास्तुकला यासह भारताच्या समृद्ध सांस्कृतिक वारशाचा प्रचार करण्याच्या महत्वावर भर देते. शैक्षणिक अभ्यासक्रमात पारंपारिक ज्ञान प्रणाली समाकलित करून, NEP चे उद्दिष्टे भावी पिढ्यांसाठी भारतीय कला आणि संस्कृतीचे जतन व संवर्धन करणे आहे.
3. स्वदेशी ज्ञान प्रणालींची ओळख: NEP 2020 कला, संस्कृती आणि वारसा यांच्याशी संबंधित असलेले स्वदेशी ज्ञान प्रणालींचे मूल्य स्विकारते करते. या ज्ञान प्रणालींच्या अभ्यासाला आणि जतनाला चालना देऊन, भारताच्या विविध सांस्कृतिक परंपरांचे संरक्षण व सण साजरे केले जातील याची खात्री करणे NEP चे उद्दिष्ट आहे.
4. मुख्य प्रवाहातील शिक्षणामध्ये पारंपारिक कलांचे एकीकरण: NEP 2020 विद्यार्थ्यांना उत्तम शिक्षण अनुभव देण्यासाठी पारंपारिक कला आणि हस्तकला मुख्य प्रवाहातील शिक्षणामध्ये एकीकृत करण्याचे महत्त्व अधोरेखित करते. शालेय अभ्यासक्रमात पारंपारिक कला प्रकारांचा समावेश करून, सर्जनशीलता, सांस्कृतिक प्रशंसा आणि भारताभूमी कलात्मक वारशाबद्दल अभिमानाची भावना वाढवणे हे NEP चे उद्दिष्टे आहेत.

एकूणच, NEP 2020 भारतीय कला व संस्कृतीचे जतन आणि संवर्धन करण्यासाठी भारतीय ज्ञान प्रणालीचे महत्त्व अधोरेखित करते. पारंपारिक ज्ञान प्रणालींना शिक्षणामध्ये समाकलित करून, सांस्कृतिक वारशाचा प्रचार करून, संशोधन आणि नवकल्पना प्रोत्साहित करून, स्वदेशी ज्ञान प्रणालींना मान्यता देऊन आणि पारंपरिक कलांना मुख्य प्रवाहात शिक्षणामध्ये एकीकृत करून, NEP चे उद्दिष्ट आहेत की भारताच्या समृद्ध कलात्मक परंपरांचा भरभराट आणि आधुनिक जगात विकास होत राहील.

NEP 2020 द्वारा भारतीय कला आणि संस्कृतीचे संरक्षण

NEP 2020 भारतीय कला आणि संस्कृतीच्या रक्षणासाठी महत्वाचे का आहे याचे एक महत्वाचे कारण म्हणजे पारंपारिक ज्ञान प्रणालींचे आंतरिक मूल्य ओळखणे. स्वदेशी कला प्रकार आणि सांस्कृतिक पद्धतींचे महत्त्व मान्य करून, NEP या घटकांना शैक्षणिक चौकटीत समाकलित करण्याची गरज अधोरेखित करते. हे एकीकरण केवळ पारंपारिक कला प्रकारांचे संरक्षण सुनिश्चित करत नाही तर विद्यार्थ्यांमध्ये भारताच्या विविध सांस्कृतिक वारशाची गूढ प्रशंसा देखील करते.

NEP 2020 भारतीय कला आणि संस्कृतीशी संबंधित असलेल्या सांस्कृतिक परंपरांच्या विस्तृत श्रेणीतील विद्यार्थ्यांना उघड करून सांस्कृतिक साक्षरतेवर जोरदार भर देते. भारतीय कला प्रकार, सांस्कृतिक पद्धती आणि वारसा स्थळांवरील मॉड्यूलसचा समावेश करून, विद्यार्थ्यांमध्ये सांस्कृतिक जागरूकता आणि अभिमानाची भावना निर्माण करणे हे NEP चे उद्दिष्ट आहे. हे प्रदर्शन भारताच्या कलात्मक वारशाची सर्वसमावेशक समज वाढविण्यास मदत करते तसेच पारंपारिक कला प्रकारांसह सक्रिय सहभागास घेण्यास

प्रोत्साहन देते.

NEP पारंपारिक भारतीय कला प्रकार आणि सांस्कृतिक पद्धतींचे संरक्षण आणि संवर्धन सुनिश्चित करण्यासाठी संशोधन व दस्तऐवजीकरणास समर्थन देते. स्वदेशी ज्ञान प्रणालींचे दस्तऐवजीकरण आणि अभ्यास करणाऱ्या उपक्रमांना प्रोत्साहन देऊन, पारंपारिक कला पद्धतींचे संरक्षण करणे आणि भावी पिढ्यांसाठी त्यांची सातत्य सुनिश्चित करणे हे **NEP** चे उद्दिष्टे आहेत. या क्षेत्रातील संशोधन भारताचा कलात्मक वारसा समजून घेण्यात आणि जतन करण्यात महत्त्वपूर्ण भूमिका बजावते, सांस्कृतिक परंपरांच्या संपूर्ण संवर्धनासाठी योगदान देते.

"भारतीय कला आणि संस्कृती ही देशासाठीच नव्हे तर प्रत्येक व्यक्तीसाठी गरजेची आहे. सांस्कृतिक जागरूकता हे मुलांमध्ये अभिव्यक्ती ची ओळख करून देते त्यांच्यात आपलेपणाची भावना जागृत करते".

याव्यतिरिक्त, **NEP** 2020 विद्यार्थ्यांमध्ये सर्जनशीलता, सौंदर्यविषयक संवेदनशीलता आणि सांस्कृतिक जागरूकता वाढवण्यासाठी शाळा आणि विद्यापीठांमध्ये कला शिक्षणाच्या प्रचारासाठी वकिली करते. विद्यार्थ्यांना पारंपारिक भारतीय कला प्रकार शिकण्याची आणि त्यात गुंतण्याची संधी उपलब्ध करून देऊन, **NEP** चे उद्दिष्ट आहे की भारताच्या कलात्मक वारशाची सखोल प्रशंसा करणे. कला शिक्षण केवळ पारंपारिक कला प्रकारांचे जतन करण्यास मदत करत नाही तर विद्यार्थ्यांमधील सर्जनशीलता आणि नवकल्पना यांना प्रोत्साहन देते, देशातील दोलायमान कलात्मक परिसंस्थेच्या सर्वांगीण विकासात योगदान देते.

NEP भारतीय कला आणि संस्कृतीला चालना देण्यासाठी शैक्षणिक संस्था आणि सांस्कृतिक संघटना यांच्यातील सहकार्याचे महत्त्व अधोरेखित करते. संग्रहालये, आर्ट गॅलरी, सांस्कृतिक केंद्रे आणि हेरिटेज साइट्ससह भागीदारी करून, शैक्षणिक संस्था विद्यार्थ्यांना अनुभव आणि भारताच्या विविध कलात्मक परंपरांचे प्रदर्शन प्रदान करू शकतात. हे सहकार्य विद्यार्थ्यांना ज्ञान अर्जीत करण्याचे अनुभव वाढविते आणि शिक्षण क्षेत्र , सांस्कृतिक संस्थांमधील संबंध मजबूत करते, ज्यामुळे भारतीय कला आणि संस्कृतीचे जतन, संवर्धन करण्यासाठी अधिक समग्र दृष्टीकोन निर्माण होतो.

निष्कर्ष :

भारतीय कला आणि संस्कृतीचे संवर्धन केवळ राष्ट्रासाठीच नाही तर व्यक्तीसाठीही खूपच महत्वाचे आहे. सांस्कृतिक जागरूकता आणि अभिव्यक्ती ही मुलांमध्ये विकसित होण्यासाठी महत्वाच्या मानल्या जाणाऱ्या प्रमुख क्षमतांपैकी एक आहेत, त्यांना ओळख, आपलेपणा तसेच इतर संस्कृती ओळखीचे कौतुक प्रदान करण्यासाठी. त्यांच्या स्वतःच्या सांस्कृतिक इतिहास, कला, भाषा आणि परंपरांबद्दलची तीव्र जाणीव आणि ज्ञान विकसित करूनच मुले सकारात्मक सांस्कृतिक ओळख आणि आत्मसन्मान निर्माण करू शकतात. **NEP** हे सुनिश्चित करत आहे की भारताचा समृद्ध कलात्मक वारसा जतन केला जाईल, साजरा केला जाईल आणि भावी पिढ्यांपर्यंत पोहोचवला जाईल, ज्यामुळे भारतीय कला आणि संस्कृतीचे संपूर्ण संवर्धन सामाजिक कल्याणासाठी विद्यार्थ्यांना महत्त्वपूर्ण योगदान मिळेल.

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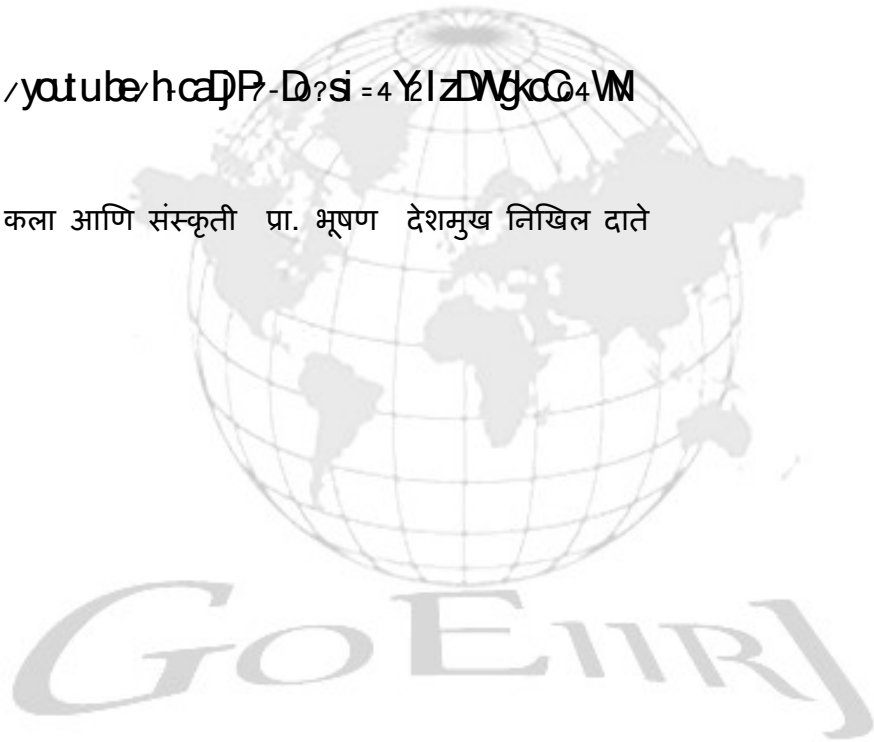
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Revitalizing Indian Languages and Literature in education: Challenges and Opportunities in the NEP 2020 ERA

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Abstract

India's rich linguistic and literary heritage is facing a critical problem with many Indian languages and literature struggling to survive in the modern education system. The National Education Policy 2020 (NEP 2020) has emphasized the importance of revitalizing Indian languages and literature, but the path forward is filled with many challenges. This paper examines the current state of Indian languages and literature in education, highlighting the opportunities and challenges in revitalizing these subjects. It analysis reveals that a multi-stakeholder approach, combining policy support, community engagement, and innovative teaching methods, is crucial for revitalizing Indian languages and literature. Revitalizing Indian languages and literature is essential for preserving India's cultural heritage, promoting linguistic diversity, and fostering inclusive education.

Key Words : Indian Languages, Literature, Challenges and Opportunities

Current State of Indian Languages and Literature in Education

Indian languages and literature have always been an integral part of the country's education system. However, over the years, the emphasis on these subjects has waxed and waned. Currently, Indian languages and literature are taught in schools, but the quality and depth of instruction vary greatly depending on the region, school type, and language etc.

Many students and parents view Indian languages and literature as secondary to English and other "practical" subjects, leading to a decline in interest and enrollment. Due to lack of resources Schools often lack qualified teachers, teaching materials, and infrastructure to effectively teach Indian languages and literature. In some parts of the Country teachers may not receive adequate training or support to teach Indian languages and literature, leading to a lack of confidence and competence. Another drawback is that the curriculum for Indian languages and literature is often outdated, dry, and not engaging, failing to inspire students to learn and appreciate these subjects. Unfortunately, there is a stigma attached to studying Indian languages and literature, with some viewing them as "less valuable" than other subjects. India is called diverse country so Linguistic diversity has a vast array of languages, making it challenging to develop

standardized curriculum and teaching materials that cater to all languages. Due to the Colonial Legacy the Indian education system was shaped by colonial powers, which emphasized Western languages and cultures over indigenous ones, leading to a lingering bias towards English and other foreign languages.

According to 2020 survey report by the National Council of Educational Research and Training (NCERT), only 44% of Indian schools offer Indian languages as a subject. Some Regional variations like Southern states like Tamil Nadu, Kerala, and Karnataka have a strong emphasis on Indian languages and literature, with many schools offering these subjects as a first language. In the north, states like Uttar Pradesh, Bihar, and Madhya Pradesh have a relatively weaker focus on Indian languages and literature, with many schools prioritizing Hindi and English.

The northeastern states have their own unique linguistic and cultural heritage, but often face challenges in preserving and promoting these due to limited resources and infrastructure. It highlights the needs to focus on Indian languages and literature in education, as emphasized in the NEP 2020.

Opportunities and Challenges in Revitalizing Indian languages and literature in education:

Opportunities

The National Education Policy 2020 emphasizes the importance of Indian languages and literature, providing a policy framework for their revitalization. Cultural preservation or Revitalizing Indian languages and literature can help preserve India's cultural heritage, including its rich linguistic diversity, myths, legends, and historical narratives. By promoting Indian languages and literature helps to assert the language rights of linguistic and cultural minorities, fostering inclusivity and diversity etc. Another Opportunity is the economic benefits which helps developing Indian languages and literature that can create new job opportunities in fields like translation, interpretation, content creation, and language teaching etc. Being in 21st century it gives opportunities to digital age which opens wide range of new techniques for Indian languages and literature, such as e-books, audio books, online courses, and language learning apps like Duolingo etc. Community engagement: Revitalizing Indian languages and literature can encourage community engagement, with local communities taking ownership of language preservation and promotion. Language education is must in India due to decreasing interests in students to learn Indian languages therefore Indian languages and literature should be integrated into language education, enhancing language learning and teaching in India etc. Revitalizing Indian languages and literature can lead to new research opportunities, innovative teaching methods, and interdisciplinary collaborations.

Challenges

As we know India is a diverse as well as developing country with all the major religions of

the world. There are close to 1600 languages spoken in India. With the opportunities there also comes the challenges like Infrastructure and resources as we try to bring the authentic Indian languages and literature it requires significant investment in infrastructure, resources, teacher training etc not only in rural areas or the metropolitan cities but also the backward regions too should also come to light. Standardized curriculum and teaching materials creating for Indian languages and literature is a complex task, requiring collaboration among experts and stakeholders. Teachers needs training and support to effectively teach Indian languages and literature, requiring significant investment in teacher capacity building. Language politics and conflicts hurdles in revitalizing Indian languages and literature which can be politically charged, with conflicts arising from issues like language dominance, regionalism, and identity politics Globalization and the dominance of English in India's education system and economy can make it challenging to promote Indian languages and literature which is increasing day by day. Another greatest challenge is India's linguistic diversity, with over 22 official languages and numerous dialects, can make it difficult to develop and implement language education policies. Technology offers opportunities for Indian languages and literature, the digital divide and unequal access to technology can hinder progress. Changing societal attitudes and perceptions of the upcoming generation is definitely a biggest challenge about the value and relevance of Indian languages and literature as it is very essential for their revitalization.

Conclusion

In conclusion, the revitalization of Indian languages and literature in education is a vital step towards preserving India's rich cultural heritage and promoting linguistic diversity. NEP 2020 provides framework for this revitalization, but challenges persist. By learning from best practices and case studies, and through a collaborative effort from policymakers, educators, and community leaders, we can overcome these challenges and create a more inclusive and diverse education system. Revitalizing Indian languages and literature is not only essential for preserving India's cultural heritage, but also for fostering critical thinking, creativity, and innovation in students. It can help to promote social cohesion, cultural understanding, and economic development.

The importance of Indian languages and literature in education cannot be overstated. They provide a window into India's rich cultural past, and offer a unique perspective on the country's history, philosophy, and values. By studying Indian languages and literature, students can gain a deeper understanding of India's cultural heritage, and develop a sense of pride and identity. Indian languages and literature offer a wealth of knowledge and wisdom that can help students navigate the complexities of modern life.

Therefore, we need to prioritize the revitalization of Indian languages and literature in education, and work towards creating a more linguistically diverse and inclusive society. This

requires a multifaceted approach that involves policymakers, educators, community leaders, and individuals. We should work together to develop and implement effective language education policies, provide resources and support for language teachers, and promote community engagement and participation in language revitalization efforts. By doing so, we can ensure that Indian languages and literature continue to thrive and flourish, and that future generations can benefit from the wisdom and knowledge they contain.

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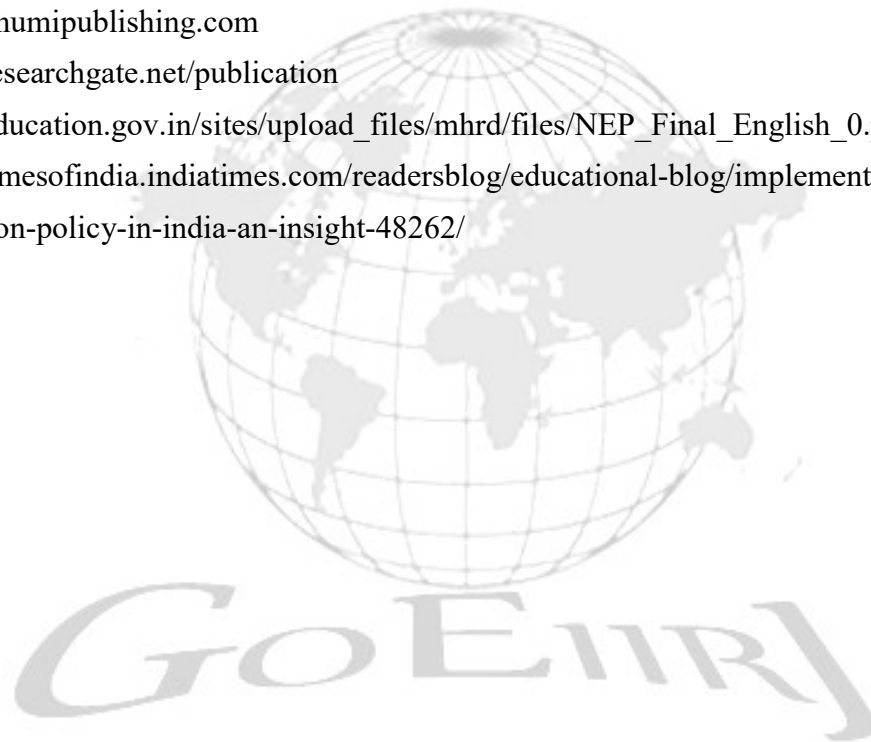
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Enhancing Learning Through ICT Integration in Indian Education

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Abstract

Classrooms are being revolutionized by Information and Communication Technology (ICT) because it provides dynamic tools and resources that improve student engagement and learning experiences. Traditional classrooms are changed into interactive spaces where students actively engage in their education through the integration of ICT. Offering interactive multimedia content is one of the main ways ICT improves the classroom. To accommodate various learning styles and hold students' attention, educators might use interactive simulations, films, and animations in their classes. Incorporating interactive and visual components not only improves learning engagement but also facilitates students' better understanding of difficult ideas. ICT also makes it possible to create virtual labs and simulations, giving students access to practical experiences that would not be possible in conventional classroom settings. By simulating real-world situations, conducting experiments, and exploring scientific ideas, these virtual settings help students gain a deeper knowledge of the material.

Key Words : Enhancing Learning, ICT Integration

Introduction

The term "information and communication technology," or "ICT," encompasses a wide range of technological tools used in information access, transmission, and management. It includes the networks and systems that facilitate communication and data processing, in addition to the hardware and software components. ICT is a major force in the development of contemporary society, having an impact on a range of spheres such as business, healthcare, education, and entertainment.

During the 20th century, computers were initially used in educational settings, which is when information and communication technology (ICT) in the classroom first emerged. Computer literacy instruction and administrative duties were the main uses of ICT in the beginning.

At all educational levels, ICT is now included into curriculum standards and learning objectives. Instructors can improve learning activities, monitor students' progress, and facilitate instruction with the help of ICT tools and resources. The COVID-19 epidemic has expedited the uptake of remote teaching technologies and online learning platforms. During times of school

closures and distant learning, the use of virtual classrooms, video conferencing, and learning management systems became crucial for providing instruction.

With the use of ICT, learning can be customized to meet the requirements and interests of each individual student. Students can learn at their own speed and ability level via adaptive learning systems, which use algorithms to give personalized learning routes and materials. Blended learning approaches have gained popularity as they integrate online learning elements with conventional in-person training. ICT tools facilitate blended learning by giving users access to internet materials.

Information and communication technology (ICT) is used extensively in education, according to India's National Education Policy 2020. Its goal is to improve education quality, equity, and accessibility by using technology into the teaching and learning process. To make learning more dynamic and interesting, the policy promotes the use of digital technologies, online materials, and e-learning platforms. Additionally, it encourages the use of ICT for professional development and facilitator preparation. NEP 2020 acknowledges that ICT has the ability to revolutionize education overall.

Methods can be used in classroom for teaching:

Interactive Multimedia Content:

Educators can use ICT to include interactive simulations, movies, and animations in their lessons. Students are visually and kinesthetically engaged by this, which improves their understanding of difficult ideas. For example, in science classroom facilitator can show whole process of digestion through animation video instead of picture.

Virtual Labs and Simulations:

Students can use ICT to access virtual labs and simulations that mimic events and experiments from the real world. Through this practical experience, students can investigate scientific ideas and phenomena in a secure setting, leading to a greater understanding.

Platforms for Collaborative Learning:

Information and Communication Technology (ICT) enables collaborative learning through online tools and platforms including wikis, virtual classrooms, and discussion boards. Pupils can collaborate on projects, engage with one another, and exchange ideas, all of which foster collaboration and improve the educational process.

Personalized Learning:

Information and Communication Technology (ICT) facilitates learning experiences that are customized to meet the unique needs and preferences of each student. Every student learns at their own speed and ability level thanks to adaptive learning platforms, which employ algorithms to assess student performance and offer materials and learning routes that are specifically tailored to them.

Gasification:

Adding gasification components to teachings can increase student engagement and enjoyment. In addition to offering immediate feedback and incentives for completion, educational games and quizzes encourage students to actively engage in learning activities.

Virtual and Augmented Reality:

Information and Communication Technologies (ICTs) like AR and VR may make theoretical ideas come to life and offer engaging educational opportunities. Through the exploration of historical sites, virtual worlds, and 3D models, students can engage in more dynamic and memorable learning experiences.

Global Resource Access:

Students can access a multitude of online resources and learning materials from around the globe by using ICT. They can widen their views and increase their grasp of numerous subjects by engaging with experts and educators outside of the classroom, exploring diverse perspectives, and accessing current information.

The use of ICT facilitates collaboration and communication among students and teachers, breaking down geographical barriers and fostering global connections. It allows for virtual classrooms, online discussions, and collaborative projects, enabling students to interact with peers from different countries and cultures. This exposure to diverse perspectives enhances their understanding of global issues and prepares them for an interconnected world. Educators may build dynamic and engaging learning environments that attract students' attention, increase their grasp of subjects, and encourage a lifetime love of learning by implementing ICT into the classroom in various ways.

Conclusion

ICT turns classrooms into dynamic, interactive learning spaces where students are encouraged to explore, create, and work together. They also become actively involved in the learning process. Facilitators may improve student learning, meet the requirements of each individual student, and equip pupils for success in a quickly changing digital environment by utilizing ICT (information and communication technology).

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The Role Of Indian Knowledge System In Preserving Indian Art And Culture

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Abstract:

This research article is about the role of The Indian Knowledge System In Preserving Indian Art And Culture. In the present paper the concepts like India's cultural heritage, art forms and customs are discussed. This article explores the pivotal role of the Indian Knowledge System in safeguarding India's art and culture, from handicrafts crafts to classical music and dance forms. Through a blend of oral tradition, documentation, community engagement, and adapting modern challenges, the Indian Knowledge System continues to serve as a beacon for the preservation and revitalization of India's cultural heritage.

Key Words : Knowledge System, Preserving Indian Art And Culture

Introduction:

उत्तरं यत् समुद्रस्य हिमाद्रेश्चैव दहिणम् ।

वर्षं तद् भारतं नाम भारती यत्र सन्तहतिः ॥

Source- हवष्णु पुराण २.३.१

“The country that lies north of the ocean and south of the snowy mountains is called Bhāratam there dwells the descendants of Bharata.”

The cultural understanding of India is evident from the given verse, from Vishnu Purana.

With the rapid changes and advancement in science and technology there is a dramatic change in the society. No doubt India has done remarkable growth in all sectors like commerce, technology and development and still in the process of adapting into the changes and accepting all the challenges coming in the journey of becoming a developed country, but at the same time it has stand strong to its roots of years old traditions and believe of Indian culture. The philosophies coming from the *Vedas, Yoga, the teachings from Mahabharata and Ramayan* has still its influence on one's mind. Today we draw our identity from such sprawling belief system which give our country a unique status and place in the global platform, thus attracting people's attention towards our country. India boasts a rich tapestry of art, culture, and heritage that spans millennia. From classical dance forms like Bharatanatyam to intricate architectural marvels like the Taj Mahal, India's cultural heritage is as diverse as it is extensive. At the heart of preserving this

heritage lies the Indian Knowledge System (IKS), a treasure trove of traditional wisdom, practices, and beliefs that have been passed down through generations. In this article, we delve into the significance of the IKS in safeguarding India's art and culture.

Roots Of The Indian Knowledge System:

The Indian Knowledge System is deeply rooted in ancient scriptures, texts and oral traditions that have been passed on from generations to generations and preserved through centuries. From Vedas and Upanishads to the epics of Mahabharata and Ramayana, these foundational texts have been the base of the Indian Knowledge System, including a wide variety of subjects like arts, science, philosophy and spirituality. Indian education system encourages the educators to remind children about the Indian Knowledge System, so the children realize that not all knowledge has been taken from the West.

Preservation Of Traditional Arts:

One of the important role of Indian Knowledge System is to preserve the traditional art forms, dance, music, paintings, sculptures and crafts that has been a attracting part of India's rich culture and heritage. According to the New Education Policy (NEP) para 22.3: the arts- besides strengthening cultural identity, awareness and uplifting society are well known to enhance cognitive and creative abilities in individuals. through the transmission of knowledge from one generation to the next along with the Guru- ShishyaParampara (teacher – student tradition) has helped to safeguard the art forms from generations. Additionally institutions such as Gurukuls have played an crucial role in imparting formal training and nurturing young talents.

Promotion Of Cultural Values:

Indian Knowledge Society also plays a crucial role in promoting cultural values and ethics. Concepts of Ahimsa, Seva and Dharma has deeply influenced the Indian society and is expressed through various art forms and cultural practices. Through storytelling, festivals, rituals and folk traditions, Indian Knowledge Society have foster a sense of identity in the people of India. Including ancient text and philosophies within the curriculum offers a unique lens to the students by which they can explore profound values and ethical principles. By introducing them to nation's culture, students gain broader understanding of the historical and philosophical ideas of his culture

Challenges And Opportunities:

At present our education system is reeling under Westernization, excessive privatisation and an exclusion from its cultural upbringings. We all know that just achieving the literacy targets is insufficient for intellectual enlightenment of the masses. Thus we need to incorporate Indian Knowledge and Tradition in the fold of education in such a way that it becomes our 'way of life'. Being home to one of the youngest populations in the world, we also need to realize the demographic dividend for the growth and development of our country. While the Indian Knowledge System has been instrumental in preserving India's art and culture, it faces several

challenges in the modern era. Rapid urbanization, globalization, and changing lifestyles pose threats to traditional practices and knowledge systems. Additionally, lack of institutional support, limited resources, and diminishing patronage pose significant challenges to the conservation and promotion of India's cultural heritage. However, amidst these challenges lie opportunities for innovation, collaboration, and revitalization. By harnessing the power of technology, engaging with the younger generation, and fostering partnerships between government agencies, academia, and civil society, India can leverage its rich cultural heritage as a driver of sustainable development, tourism, and soft power diplomacy on the global stage.

Conclusion:

The Indian Knowledge System stands as a beacon of wisdom and resilience, guiding the preservation and promotion of India's art and culture for future generations. By honouring and preserving traditional knowledge systems, India can ensure that its cultural heritage continues to thrive and inspire the world for centuries to come. Through a concerted effort to safeguard, celebrate, and innovate, India can truly become a custodian of its rich cultural legacy, enriching the tapestry of human civilization in the process.

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Integration Indian Knowledge System for Preservation of Art And Culture

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Abstract

NEP 2020 plays an important role in transforming the Indian Education system using holistic development of the learner's. Thus, NEP 2020 has emphasized the promotion of Indian languages, arts and culture and has recommended blending the Indian Knowledge System into curriculums at all levels of education. The integration of Indian Knowledge System with NEP 2020 will help to understand the underlying contemporary societal issues and to carry out further researches on these issues, mainly the Art and culture of Indian society play a vital role for the development of India without it the country cannot be merged through this the NEP 2020 has been gradually developed.

The main importance of the society and democratic country is the Art and craft of living being is mainly important related to the development of human living technique. According to the Ancient Era the culture mainly plays an important role in India. Here includes the benefits of Indian Art and culture, need and importance of Art and culture, Educational implications of Art and culture in curriculum Activities in the Education for the development of Children, challenges based system related to culture development. In order to preserve Art and culture the Ministry of Culture implements a "number of schemes and programmes aimed at providing financial support to individual's". "Art connects people to society, familiarises us with Heritage, and drives meaning into our lives" which is why the quote Art imitates life is relevant even today. Thus, scientifically, art and culture should be maintained according to the need and fulfillment of India so that the democratic country can feel proud of themselves by following the themes of their own art of living, which may be important for the future generations of their own preservation.

Keywords: NEP 2020, preservation of Indian Art and Culture, community, society

INTRODUCTION

According to (National Education Policy)NEP 2020 Integrating Indian Knowledge System, mainly the aspects from development and the preservation of Indian Knowledge System for preservation of Art and Culture is further most important for the preservation of our own constituent with best Culture for our upcoming generations. Thus, through many difficulties

Ancient forefathers have faced many problems to equip requirements of India based on Indian society and democratic country. The daily living style of people across the country without art and culture life span cannot be survived, the togetherness of family and society can bring the joy and auspicious days among themselves. Without the Art and Culture, India cannot be empty, only being in politics, freedom, rights, democratic country but, the Art and Culture is most important for the upcoming and running daily lives of human living style. In Educational implications mainly the Art and Culture plays a vital role in Dance, Drama, script, dialogues, etc. In the society the cultural heritage plays a vital role in different festivals of Indian Culture, those through the different successful aspects of scientific research the culture Heritage maintained in India develop the Educational and society living styles of human living style. The way of thinking of society has been developed by Art and Culture Heritage. Also in Education the Knowledge levels have been improved by the cultural Heritage. The Art and Culture Heritage brought many benefits and advantages for the constitution of India to full fill the need of Indian System According to NEP 2020 ; as it's the right of Indians to preserve the Art and Culture Heritage for upcoming generations as to be remarkable of India. So, that Integrating Indian Knowledge System can also be fully filled based on National Educational Policy.

INTEGRATION INDIAN KNOWLEDGE SYSTEM OF ART :

Art is where a traditional way of living activities can be improved gradually by creativity, critically, observations, design, crafting, painting, discovering, co relating, problem solving, analysis, etc. Therefore Art is the form of literature , musical, poetry , etc. “Art has even been called the avenue to the highest knowledge available to humans and to a kind of knowledge impossible to attain by any other means” Art is the acquisition of the truth. Whether you want to be the professional artists or just get really good at a new hobby you can create thoughtful highly-skilled, art with a little patience of and lot of practice by oneself and you need to practice and have an open minded skills about stepping into new developing skills with new sense of using creative thinking and critical thinking.

INTEGRATION OF KNOWLEDGE SYSTEM FOR CULTURAL HERITAGE :

The Cultural Heritage is most varied all over the India and country from the forefathers of our Ancient Era, mostly across the term Culture means which detect the people sense of living styles and a group of people in the society based on their customs and ideas of thinking level, the society develop the people living styles way of thinking and celebrating various types of culture to improve the Knowledge of own self that may be very much helpful for the society and their upcoming generations. The Culture system has been mainly developed in the Educational system where through the Culture the learning styles and thinking styles of people has been developed for the student in their academic activities according to the NEP 2020. The National Education Policy also stated that the Cultural Heritage which has been followed and celebrated by the Indian society

should be developed so that the education level also can be equipped according to their ways “Language is linked to art and Culture”. According to 21 st century “Languages influence the way people of a given culture speak with others” Culture is encased in our languages. “In order to preserve and promote culture, one must preserve and promote a culture’s languages”. Culture is mandatory, filled by the people every year during their own Culture seasons, the Cultural Heritage falls into two categories mainly as ; Tangible and Intangible. The tangible cultural heritage is the concrete or physical , the main tools included in the tangible cultural heritage are books , tools, clothing, customs , food are the part of tangible cultural heritage. The Culture may include many forms of society following the different kinds of customs based on their interest to develop their Knowledge System also, those Culture systems are mainly followed in Education to improve the children's Knowledge and skills.

BENEFITS OF ART AND CULTURE ON PRESERVATION:

Some benefits tips for the preserving art and culture,

- Preservation of Art and Culture Knowledge helps to maintain a sense of identity and continuity within the civilization.
- Preservation of At and Culture also helps to promote sustainability by reusing existing structures.
- Preservation of Art and Culture benefits the economic difficulties faced by the oneself by creating jobs and increasing property values in their own society.
- It ensures for the survival of future generations like Culture artefacts, traditions, practices that formed in the society scientifically.
- It benefits the community's sense of knowledge and society unity in local areas of the Indian System to fulfill the need of CULTURAL heritage.
- The further most important cultural heritage in Education benefit is for students to develop their skills and activities conducted beyond their curriculum and to detect the difference between curriculum and Extra- Co – curriculum.
- NEP 2020 (National Education policy) has taken the best role to fill the need of art and Culture forms.

NEED FOR PRESERVATION KNOWLEDGE FOR ART AND CULTURE:

There are many need that can full the Art and Culture in Knowledge According to NEP 2020 (National Education Policy) are as;

- Art is an essential component of human Culture and society ,providing diverse needs to enrich our lives in countless ways.
- Mainly fostering personal development in promoting social cohesion , also Art and culture

have the power to shape, mold and transform the world.

- Art can help to understand our society , family, and neighbours around us like
- Culture, our lives, and the “experience of others that cannot be achieved by other means”.
- Art and Culture Knowledge have “emerged as significant diversities of economic growth, both domestically and internationally”.
- Art and culture brings the different people of society together and helps to appreciate each other with their diversity needs based on society.

IMPORTANCE OF INTEGRATED KNOWLEDGE FOR PRESERVATION OF ART AND CULTURE:

There are many importance for the integrating System for preservation of art and culture as;

- Preservation of Art and Culture Knowledge strengthens a strong community’s sense of place and shows the interest of society around the world .
- “Art & Culture boast multiple opportunities for learning, entertainment, leisure, personal growth, skills , problem solving and communication skills with each other in the society”.
- Art and Culture is what makes society and communities a better place to live, “ they help define who we are, how we relate to one another and how we feel about ourselves and communities “. “Whether on stage , in front of the audience or in the communities that show the sense of our performance and confidence of oneself to promote the Indian in the top most of Cultural heritage.
- “Culture is a lifeblood of a vibrant society, expressed in many ways. We tell our stories , celebrate The past memories of our life, entertain ourselves, and imagine the future”.
- Culture provides individuals with a sense of identity and belonging like from where they are and what is the purpose to locate at the area in society.
- Art and culture provides the framework for social cohesion, Culture transforms, personal development, economic interdependence, social control, problem solving and collective.
- Culture is of great importance “as it plays a central role. In human behaviour and development, contributing to the diversity of human thought and society”. Scientifically mainly in human mental health issues for the development of communities.

HOW TO PRESERVE KNOWLEDGE OF ART AND CULTURE:

There are many aspects to preserve the art and Culture of India as ;

- By visiting different places and being part of the Culture heritage as followed by NEP 2020 so that the terms and policy can be equipped by different categories.
- The reforms of Indian constitution, the art and Culture can be preserved for further generations for their new styles and techniques of development in their physical and

emotional development.

- Thus, by going to the different places to learn about the art and collect the different art like drawing, arts, painting, glass making, paper making, art and craft work, etc.
- Creating awareness about the importance of art and culture according to the rule of NEP 2020.
- By participating in different events and forms of culture and enjoying the days of life which may be interesting by oneself.
- Collaboration with the society, by being part of one other traditions and cultures to implement in a good way to keep conserved the culture which may fulfill the knowledge of NEP 2020 of Integrating art and culture.

EDUCATIONAL IMPLICATIONS:

There are many aspects that may be helpful for a child development in Education as;

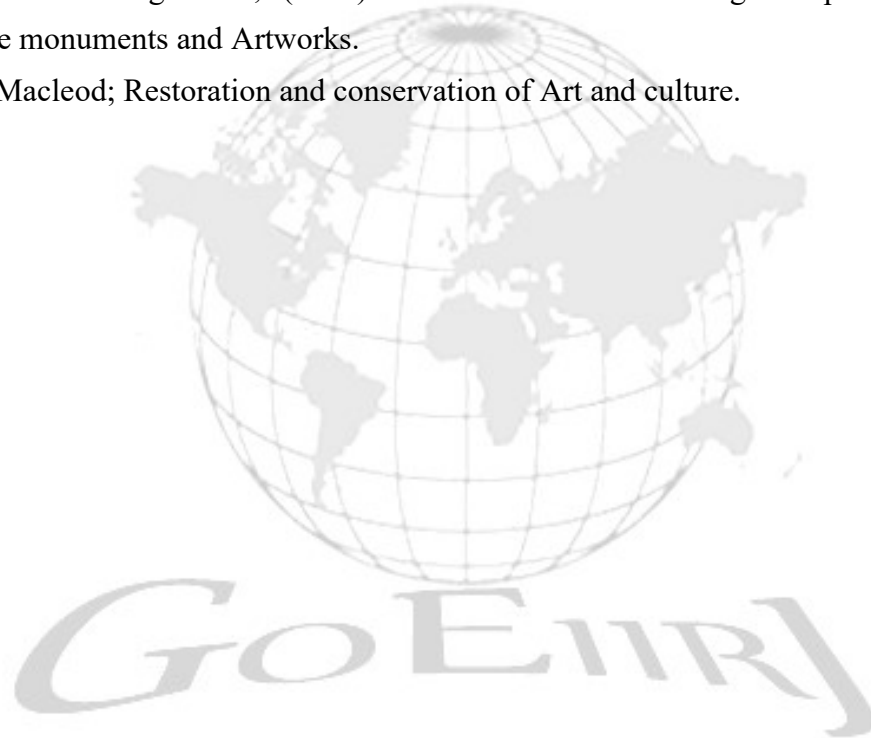
- The art and Cultures conducted in school may be important for the development of co-curricular activities of children.
- Through the culture the children can learn some moral lessons for their own culture.
- According to NEP 2020 Integrating Knowledge of art and Culture leads to the development of child skills, and they may be aware of the preservation of art and culture.
- The art assists the children in development of different skills like critical thinking, creativity, problem solving and other soft skills activities.
- Encourages the learning students in developing their motor skills and knowing the importance of culture activities which are held in their co-curricular activities.
- Art provides different unique ways of thinking, it inspires the society , communities and other faculty related to institutions.

CONCLUSION

The NEP 2020 Knowledge for art and culture have played a very important role in India to develop the Nation. “Art has shown a positive aspect on students in Education for the development of different skills like thinking, creating, understanding. Which implement the individuals learning styles in Education." Indian folk art and crafts which shows the diversity of Indian culture representing the way of performance; society enjoys the art and culture based on their own themes which has been organized from the Ancient of Era, no issues have been taken to practice and preserve their own culture in their own way.

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Challenges In Implementing Indian Knowledge System For Human Well-Being

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Abstract –

Indian Knowledge System is facing several challenges while implementation. The major hurdle that is the clash between traditional and contemporary education and knowledge. Due to the western decolonization and the policy brought by Britishers the majority population is now biased and not interested in learning about the ancient Indian system. It is noted that there are large number of teachers and educators who are not aware about the Indian Knowledge System and even not interested to learn about it. Also, there is lack of funds which is majorly hindering in the spread of Indian Knowledge System and its development. Lack of awareness, language barrier, funding, colonial legacy etc are the major challenges that is coming across in implementation of Indian Knowledge System.

Key Words : Challenges, Implementing Indian, Knowledge System

Introduction to Indian Knowledge System-

The Indian Knowledge system (IKS) consists of a vast amount of information about ancient India's knowledge and traditions that have been developed over thousands of years and passed ahead through generations in India. It includes information about various fields such as science, mathematics, arts, philosophy, medicine, spirituality, astronomy, and many others. IKS not only includes information about Vedas and Upanishads, but it has a vast amount of information about other fields. The Indian Knowledge system is known as one of the most important aspects of the NEP curriculum.

It is notable that on one hand where foreigners are adapting India's traditions on a larger level and on other hand the influence of western tradition and culture has made Indian youth forget their own roots. After a long period of time scholars and thinkers have analysed India's predicament, attributing the root cause to its education system. Western education has mostly overshadowed and criticized Indian education system and knowledge. However, in recent years after acknowledging the importance of Indian Knowledge system the Indian government has formulated the National Education Policy.

In the field of science and medicine India and ancient scholars had made an major

contribution. Ancient scholars such as Chanakya who wrote The Artha shastra which contains knowledge about military strategy, rules for ruling huge empire, diplomacy, economics and others provides immense knowledge. Advancements were made in mathematics which included the development of decimal system and the invention of zero. IKS majorly includes knowledge about classical music, dance and literature which have evolved over centuries while reflecting the cultural diversity and creativity of the country.

Challenges-

There are larger number of challenges coming ahead while implementation of Indian Knowledge System below mentioned are the major challenges.

1) Lack of Awareness-

India's culture has a rich heritage and diverse system. From yoga to ayurveda ancient Indian systems offers diverse options to be explored. There are large number of people who are not aware about IKS and its importance in today's era. The younger generation are not familiar with India's traditional system due to cultural disconnect and lack of exposure. Modern education system prioritizes scientific knowledge over traditional knowledge. As Indians, people are now confused between modernization and westernization and adapting the western culture on higher level. Rather than learning about ancient India's knowledge Indians are more interested to call their own country and compare it to USA. Social media is the best way now to spread knowledge about Indian Knowledge System in youths. Educating the people and letting them about the benefits and relevance of these practices can help ahead to tackle this challenge.

2) Language Barrier-

Language Barrier is the biggest challenge when it comes to know about Indian Knowledge System. As the Indian knowledge system consists of different regions and languages spoken in India are of different types, getting access and understanding the traditional texts and teachings can be difficult for those who are not familiar with the specific language for example Sanskrit, Pali and others which are known to people but they are unable to understand and speak it.

To tackle this challenge, initiatives can be taken such as translating and interpreting the ancient texts into widely spoken languages, both within India and at international level. This would help to make Indian knowledge more accessible to a wide number of audiences and help in facilitating cross-cultural understanding. Furthermore, promoting language learning and cultural exchange programs can help bridge the language gap. By encouraging and promoting the study of regional languages and facilitating interactions between practitioners and learners a deeper understanding of the Indian Knowledge System can be provided.

3) **The Colonial Legacy-**

During the British colonial administration English education policy was implemented by them to make their legacy stronger which made Indians to forget their roots. Britishers implemented this policy with a belief that English education would help them to rule over India for more years and make communications better between Britishers and Indians. English is considered as the global language which makes easier for people to get better job opportunities even after the independence. Even after learning in India there are lakhs of people who get settles in foreign. The legacy that Britishers had left behind is very hard to be vanished. For example, people speaking English are called as more knowledgeable and smarter rather than one who are not so fluent in the English language. It is also important to note that English has now taken over regional languages and day-by-day it is getting difficult to preserve regional languages and cultural diversity in India's education system. Bilingual education, language technology and government support are some initiatives that can help to tackle the challenge of language barriers.

4) **Modern Knowledge VS Traditional Knowledge-**

Modern Knowledge emphasizes on scientific research and enquiry, technology whereas traditional knowledge is based on cultural practices and holistic approaches to life and learning. While implementing the IKS it is important to balance the integration of traditional knowledge and modern education system and ensure about its relevance and career opportunities in future. Also, encouraging the invention of new ideas with the help of integration of traditional and modern knowledge in the field of medicine, agriculture, education, humanities can be very helpful. Researchers need to blend knowledge from both the systems and provide an adequate solution. It is very important to take both traditional and modern knowledge ahead and work on it to present it in front of future generations.

5) **Funding issues-**

A significant challenge in implementing Indian Knowledge System is funding . Limited funding is constantly hindering the development of IKS and dissemination of educational materials, infrastructure development and other research initiatives. Lack of funds is affecting the preservation and promotion of traditional knowledge system such as yoga, ayurveda and others. To continue these systems support is required for the purpose of research, documentation, inventions, and training programs to ensure its continuity and acceptance ahead. Also, the major faculty members of education system are not interested to include IKS in their school and colleges which is resulting in the funding issues. However, Indian government can allocate a higher amount of funds for this initiative. Other than this public-private partnership, international collaborations, crowdfunding, and community support can help in overcoming this challenge.

6) Implementing Indian Knowledge System in Education-

With the intention to pass the knowledge of ancient India from generation to generation Government of India has taken the initiative and included the Indian Knowledge System in NEP 2020 which provides diverse options to students to choose and study with number of options that are provided in various fields. The major challenge coming in front of this is about lack of faculty members as teachers are needed to be trained and made aware correctly about the Indian Knowledge system which is not at all easy. Along with textual learning of IKS it is very important to impart knowledge to students about the historical sites, museums, exhibitions, workshops, forests and live examples of how ayurvedic medicines are made without any harm and use of chemicals. There is a major need of collaborations with the local community and elders which could provide valuable insight and support. IKS needs to be implemented at Primary, Secondary and higher levels of education to provide proper guidance.

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Indian knowledge system for preservation of Indian Art & Culture**Jagre Shruti***UG Student (TYBA History Specialization)***And****Gopinath Malakar***UG Student (TYBA History Specialization)***And****Ms. Sunanda Kangane***Assistant Professor -History**SSR College of ACS, Sayli Road, Silvassa DNH & DD*

Abstract

Indian art encompasses a wide range of artistic disciplines, such as textile arts including woven silk, painting, sculpture, and pottery. Geographically speaking, it includes all of the modern-day countries of India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan, and occasionally eastern Afghanistan. Indian art is characterized by a strong sense of design, which is evident in both its traditional and modern forms. Indian art has its roots in prehistoric settlements from the third millennium BCE. On its way to modern times, Indian art has had cultural influences, as well as religious influences such as Hinduism, Buddhism, Jainism, Sikhism and Islam. In spite of this complex mixture of religious traditions, generally, the prevailing artistic style at any time and place has been shared by the major religious groups.

Keywords: - Art, Architecture, NEP, Heritage, Religion, Cultural

Introduction

Indian Art and culture The Bhartiya way is sustainable and strives for the welfare of all. It is important that we regain the comprehensive knowledge system of our heritage and demonstrate the 'Indian way' of doing things to the world. This requires training generations of scholars who will demonstrate and exemplify to the world a way of life so unique and peculiar to our great civilization.

- **NEP and Indian knowledge system**

The NEP, 2020 recognizes this rich heritage of ancient and eternal Indian knowledge and thought as a guiding principle. The Indian Knowledge Systems comprise of Jnana, Vignan, and Jeevan Darshan that have evolved out of experience, observation, experimentation, and rigorous analysis. This tradition of validating and putting into practice has impacted our education, arts, administration, law, justice, health, manufacturing, and commerce. This has influenced classical and other languages of Bharat, that were transmitted through textual, oral, and artistic traditions.

“Knowledge of India” in this sense includes knowledge from ancient India and, its successes and challenges, and a sense of India’s future aspirations specific to education, health, environment and indeed all aspects of life

The New Education Policy (NEP) 2020, has been launched to transform the Indian education system using holistic development of the learners. This framework provides a comprehensive and integrated strategy for the growth of the education system. The Indian Knowledge System (IKS) is one of the significant aspects of the NEP curriculum. IKS encompasses diverse and rich heritage knowledge of India that covers various domains such as science and technology, literature, philosophy, culture, medicine (ayurveda), and yoga. Traditional Knowledge (TK) is essentially culturally oriented or culturally based, and it is integral to the cultural identity of the social group in which it operates and is preserved. “Traditional knowledge”



is an open-ended way to refer to tradition-based literary, artistic or scientific works; performances; inventions; scientific discoveries; designs; marks, names and symbols; undisclosed information; and all other tradition-based innovations and creations resulting from intellectual activity. Indian art comprises various art forms like paintings like pitta Chitra, Mahbubani, ceramics, sculpture and textile arts such as woven silk. Indian art is acknowledged for its immense sense of design, which can be seen in both modern and traditional forms. Indian art can trace its origins to antiquity. Process leading to the creation of TK may not be formally documented in the way that much scientific and technological information is recorded. The apparent non-systematic manner of creation of traditional knowledge, does not diminish its cultural value, or its value from the point of view of technical benefit.

Despite the resilience of traditional knowledge systems, they face several challenges in the modern era. Economic pressures, changing lifestyles, and social transformations threaten the viability of indigenous practices. Additionally, issues such as intellectual property rights and cultural appropriation pose significant challenges to the preservation of traditional art forms.

However, amidst these challenges lie opportunities for innovation and collaboration. By integrating traditional knowledge with modern technologies and conservation methods, India can develop sustainable solutions for preserving its cultural heritage. Initiatives such as digital

archiving, community-based conservation projects, and cultural education programs can empower local communities while safeguarding their artistic traditions.

This prior art consisted of traditional knowledge that could not be identified by the patent-granting authority during the examination of the patent application. The term “prior art” generally refers to the entire body of knowledge which is available to the public before the filing date of an application for certain industrial property titles, principally patents, utility models and industrial designs. The identification of prior art constitutes a cornerstone for the substantive examination of applications for these titles, since requirements such as novelty and inventive step are established by comparing the claimed subject matter with the relevant prior art.

Turmeric (*Curcuma longa*) is a plant of the ginger family yielding saffron-colored rhizomes used as a spice for flavoring Indian cooking. Its unique properties also make it an effective ingredient in medicines, cosmetics and as a color dye. As a medicine, it is traditionally used to heal wounds and rashes.



Like Folk and tribal art in India takes on different manifestations through varied media such as pottery, painting, metalwork, paper-art, weaving and designing of objects such as jewelry and toys. These are not just aesthetic objects but in fact have an important significance in people's lives and are tied to their beliefs and rituals. The

objects can range from sculpture, masks (used in rituals and ceremonies), paintings, textiles, baskets, kitchen objects, arms and weapons, and the human body itself (tattoos and piercings). There is a deep symbolic meaning that is attached to not only the objects themselves but also the materials and techniques used to produce them

Conclusion

Indian art is known for its long legacy and diversity of form, as well as its heavy religious influence and spiritual influence. Traditionally, Indian art was produced for spiritual or religious purposes. It is also known for its bold colors and its intricacy--many traditional Indian artistic practices are time-consuming and laborious.

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भारतीय ज्ञान प्रणालीचा ऐतिहासिक दृष्टिकोन

गांवित राहुल वसंत

बी.एड. द्वितीय वर्ष विद्यार्थी

डॉ. भगीरथ पांडे

सहाय्यक प्राध्यापक

एस. एस. आर. कॉलेज ऑफ एज्युकेशन, सायली सिल्वासा.

गोषवारा :-

भारतीय ज्ञान प्रणालीचा इतिहास अत्यंत प्राचीन आहे. आणि या प्रणालीचे विकास लक्षणीय आहे. भारतीय संस्कृतीत ज्ञानाचा महत्त्व अत्यंत उच्च आहे. आणि इतिहासातील प्रत्येक कालात भारतीय ज्ञान प्रणालीने समाजाला आणि माणसाला आदर्श, मार्गदर्शन आणि संजीवन साधण्यात मदत केली आहे.

प्राचीनकाळात, भारतीय ज्ञान प्रणालीने वेद, उपनिषद, पुराणे, आणि इतर शास्त्रे या साहित्यांच्या माध्यमातून विविध क्षेत्रांतील ज्ञान आणि धार्मिक तत्वांचे अध्ययन केले. मध्यकाळात, भारतीय ज्ञान प्रणालीने ग्रंथकारांच्या संदर्भात अध्ययनाची ओळख केली. या काळात, आधुनिक शिक्षण व्यवस्था, वैज्ञानिक अभिगम, आणि समाजातील सुधारणांसह भारतीय ज्ञान प्रणालीने योगदान केले. भारत हा देश विश्वगुरु आहे.

मुख्यशब्द:- भारतीय संस्कृतीत, ज्ञानाचे महत्त्व, आदर्श, भारतीय ज्ञान प्रणाली , आधुनिक शिक्षण व्यवस्था, भारत विश्वगुरु

प्रस्तावना:-

भारतीय ज्ञान प्रणालीचा इतिहास अत्यंत विस्तृत आहे. आणि प्राचीनकाळापासून आजपर्यंत अस्तित्वात आहे. भारतीय ज्ञान प्रणालीने हजारों वर्षांपासून विविध क्षेत्रांतील ज्ञानाचा अभ्यास केला आणि त्याचे विकास केले.

प्राचीनकाळात, भारतीय ज्ञान प्रणालीने वेद, उपनिषद, पुराणे, आणि संस्कृत कथासाहित्याच्या माध्यमातून विविध क्षेत्रांतील ज्ञान आणि धार्मिक तत्वांचे अध्ययन केले. मध्यकाळात, भारतीय ज्ञान प्रणालीने ग्रंथकारांच्या संदर्भात अध्ययनाची ओळख केली. या काळात, विज्ञान, गणित, चिकित्सा, तंत्रज्ञान, औषध शास्त्र, कला, संगीत, नृत्य, शास्त्रीय संगीत, वास्तुशिल्प, शिल्पकला, आणि विविध शास्त्रे ह्या संस्कृतीत अविरत विकास होत राहिला.



इतिहासात, भारतीय ज्ञान प्रणालीच्या संबंधातील अद्भुत संशोधन, अद्भुत आविष्कार, विचार, आणि तत्वांच्या अद्वितीय योगदानांमध्ये विविधता आणि समृद्धता असून, भारतीय ज्ञान प्रणालीच्या इतिहासात अत्यंत महत्वाचे भाग आहे.

भारतीय ज्ञान प्रणाली ही ज्ञानाचा संग्रह आणि प्रसार करण्यासाठी योग्य प्रणाली आहे. त्याचा इतिहास वेगवेगळ्या कालखंडात विकसित झाला आहे. उदाहरणार्थ, गुरुकुल प्रणाली आणि नालंदा विद्यापीठासारख्या शैक्षणिक संस्था ही या परंपरेची प्रमुख उदाहरणे आहेत, ज्यांनी ज्ञानाच्या विविध क्षेत्रात शैक्षणिक दिले. यासोबतच वेद, उपनिषद, पुराण इत्यादी भारतीय ग्रंथांमधून भारतीय ज्ञान पद्धतीचा इतिहास दाखवता येतो.

भारतीय ज्ञान प्रणालीचा विकास:

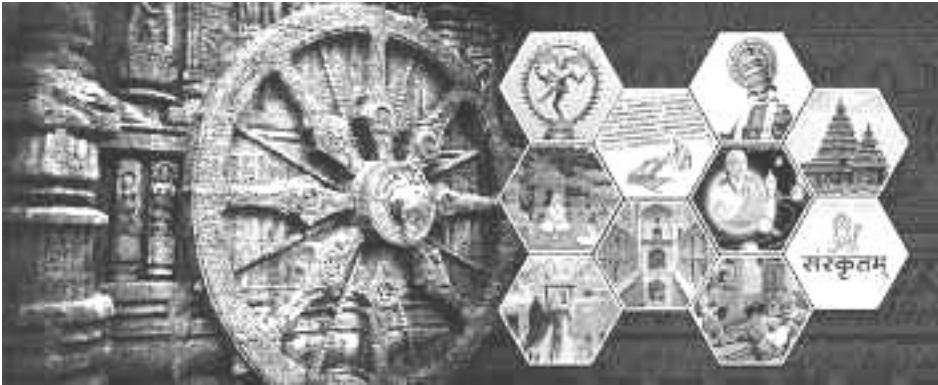
भारतीय ज्ञान प्रणालीचा विकास बहुचर्चित आणि विविध आहे. इतिहास, विज्ञान, तंत्रज्ञान, धर्म, कला, सामाजिक विज्ञान, आणि विभिन्न सांस्कृतिक क्षेत्रांमध्ये भारतीय ज्ञान प्रणालीचा विकास दर्शवते. भारतीय संस्कृतीमध्ये धार्मिक आणि दार्शनिक धारणांचा महत्वाचे आहे, ज्यामुळे ज्ञानाच्या अत्यंत प्रमुख आणि प्राचीन स्रोतांमध्ये विशेष लक्ष दिला जातो. अत्यंत प्राचीन काळापासून समजदारी, विचार, आणि विज्ञानाची प्रणाली भारतीय संस्कृतीचा महत्त्वपूर्ण अंग आहे.

भारतीय ज्ञान प्रणाली वेगवेगळ्या कालखंडात विकसित झाला आहे. उदाहरणार्थ, वैदिक काळात वेदांचा अभ्यास आणि शिक्षण प्रमुख होते, ज्यामुळे धार्मिक आणि तात्त्विक ज्ञानाचा विकास झाला. यानंतर गुरुकुल व्यवस्थेने ज्ञानाचा विस्तार केला, जिथे शिष्यांनी आपल्या गुरूंकडे जाऊन विविध क्षेत्रातील ज्ञान मिळवले.

मध्ययुगीन काळात, नालंदा, तक्षशिला, विक्रमशिला यांसारख्या विद्यापीठांच्या उदयाने भारतीय ज्ञान प्रणाली शिखरावर पोहोचली. या विद्यापीठांमध्ये विविध शास्त्रे, कला, विज्ञान आणि धर्म या विषयांचे शिक्षण दिले जाते.

आधुनिक काळात, भारतीय ज्ञान प्रणाली विज्ञान, तंत्रज्ञान आणि सामाजिक शास्त्रांच्या क्षेत्रातही विकसित झाला आहे. विज्ञानाच्या क्षेत्रात आधुनिक शिक्षण प्रणाली आणि अनेक विद्यापीठे उदयास आली आहेत, ही विशेषीकरण आणि नवकल्पनांना प्रोत्साहन देतात.

अशाप्रकारे, भारतीय ज्ञान प्रणालीने कालांतराने आपली उत्क्रांती सुरू ठेवली आहे, ज्यामुळे विविध क्षेत्रातील ज्ञानाचा विस्तार होत आहे.

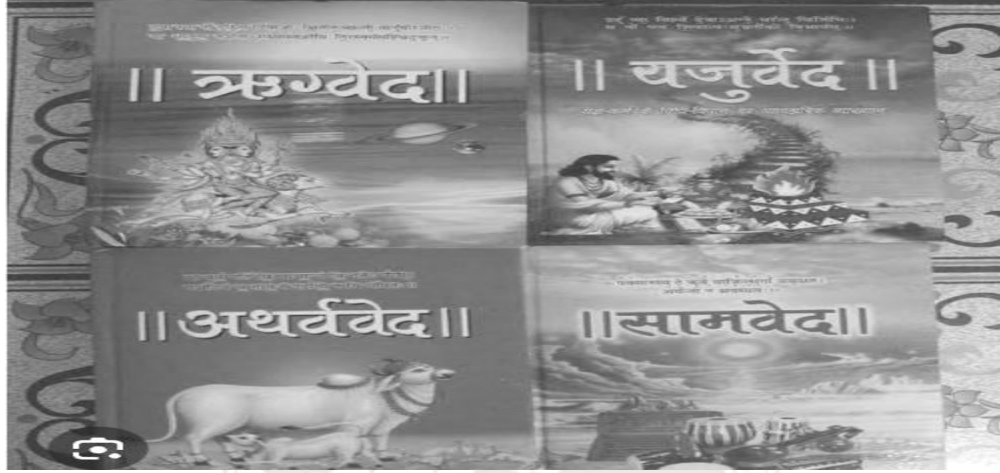


भारतीय ज्ञानाची संस्कृती एक अत्यंत महत्त्वपूर्ण भाग आहे, ज्यामुळे भारतीय समाज आणि सांस्कृतिक धारणांमध्ये सामाजिक, आर्थिक, धार्मिक, आणि राजकीय विकास होत. या संस्कृतीत विज्ञान, गणित, तंत्रज्ञान, औषधनिर्माण, कला, संगीत, धर्म, दर्शन, आणि सामाजिक संरचना समाविष्ट आहे. भारतीय संस्कृती विविधतेने समृद्ध आणि परंपरागत ज्ञानाच्या स्रोतांच्या संग्रहणात आणि प्रचारात महत्त्वपूर्ण भूमिका बजावते. त्यामुळे, भारतीय ज्ञानाची

संस्कृती ही एक महत्वाचे आणि असून आजार असलेलं संपत्ती म्हणून मानले जाते.

भारतीय संस्कृतीत ज्ञानाचे महत्त्व फार मोठे मानले जाते. येथे काही उदाहरणे आहेत जी त्याचे महत्त्व प्रकट करतात:

1. *वेदांचेमहत्त्व*: वेद हे संस्कृतीचे मुख्य धार्मिक ग्रंथ आहेत. आणि त्यात ऋग्वेद, अथर्ववेद, यजुर्वेद आणि सामवेद या महत्वाच्या शिकवणी आहेत. वेदांमध्ये ज्ञान, धर्म, अध्यात्म आणि समाजाचे नियम यांचे तपशीलवार वर्णन आहे.



2. *शास्त्रांचे महत्त्व*: भारतीय संस्कृतीत धर्मग्रंथांचे महत्त्व अपार आहे. शास्त्रांमध्ये अर्थशास्त्र, राज्यशास्त्र, नीतिशास्त्र, आयुर्वेद, ज्योतिष, इतिहास इत्यादी विविध क्षेत्रातील ज्ञानाचे नियम आणि नियमांचे वर्णन केले आहे.
3. *कला आणि साहित्य*: भारतीय संस्कृतीतही कला आणि साहित्याचे महत्त्व खूप जास्त आहे. विविध कला आणि साहित्यातून ज्ञान, भावना, वेळ्यांचा संवाद होतो.
4. *गुरु-शिष्य परंपरा*: गुरु-शिष्य परंपरेने भारतीय संस्कृतीत ज्ञानाला जीवन दिले आहे. गुरुचे शिक्षण आणि मार्गदर्शन द्वारे, शिष्यांना जीवनातील ज्ञानाची अधिक समज प्राप्त होते. या परंपरेतून ज्ञानाचा प्रसार होत असून एक चांगला समाज निर्माण होण्यास मदत झाली आहे.



या उदाहरणांवरून भारतीय संस्कृतीत ज्ञानाचे महत्त्व किती उच्च आहे हे स्पष्ट होते, आणि ते कोणत्याही क्षेत्रात आपले अनन्यसाधारण योगदान देते.

भारतीय ज्ञान प्रणालीने काळाच्या प्रगतीत भारतीय समाजाला आदर्श आणि मार्गदर्शन प्रदान केले आहे.

प्राचीन काळापासून भारतीय ज्ञान प्रणालीने विविध क्षेत्रांतील ज्ञान आणि अनुभवांच्या संग्रहातून निर्माण केले आहे, ज्यामुळे त्यांच्या समाजाला सामाजिक, आध्यात्मिक, आर्थिक, आणि राजकीय विकासाच्या दिशेने मार्गदर्शन केले आहे.

भारतीय ज्ञान प्रणालीने धर्म, दर्शन, आणि योगाचे सिद्धांत समाजाला आदर्श मार्गदर्शनाच्या रूपात प्रदान केले आहे. या प्रकारे, भारतीय समाजात नैतिकता, आत्मसमर्पण, संघर्षाचे स्वरूप, आणि आत्मसंयम ह्या मूल्यांच्या विकासात मार्गदर्शन केले आहे.

विज्ञान, गणित, आणि तंत्रज्ञानाच्या क्षेत्रातील भारतीय योग्यतेचे प्रमाण सामाजिक आणि आर्थिक विकासात मार्गदर्शन केले आहे. असे सांस्कृतिक, आर्थिक, धार्मिक, आणि राजकीय मार्गदर्शन भारतीय ज्ञान प्रणालीने समाजाला प्रदान केले आहे आणि ह्या मार्गदर्शनाने माणसांना आदर्श जीवनाच्या दिशेने चालवले आहे.

भारतीय ज्ञान प्रणालीने काळाप्रमाणे समाजाला आदर्श व मार्गदर्शन केले अनेक उदाहरणे आहेत. प्राचीन काळात, भारतीय संस्कृतीने विविध क्षेत्रांतील महान धार्मिक ग्रंथांचे रचना केले, ज्यात उपदेश आणि नैतिकता विषयक ज्ञान विस्ताराने दिले गेले. उदाहरणार्थ, भगवद्गीता आणि रामायण या ग्रंथांमध्ये माणसांना आदर्श जीवनाच्या मार्गदर्शनाबद्दल शिकवले आहे.

अशा प्रकारे, धर्मशास्त्रे, जैनधर्म, बौद्धधर्म, हिंदूधर्म, इस्लाम, आदि धर्मोमध्ये सामाजिक आणि नैतिक मूल्ये आणि आदर्श स्पष्ट केली आहेत. यासाठी उदाहरणार्थ, अहिंसा, सदाचार, धर्मपालन, आदि अभ्यास करण्याचे शिक्षण दिले गेले.

अत्यंत प्राचीन काळात, भारतीय दार्शनिक ग्रंथांमध्ये तत्त्वज्ञान, आध्यात्मिकता, विज्ञान, आणि सामाजिक व्यवस्थेविषयी ज्ञान समाहित आहे, ज्यामध्ये उदाहरणार्थ, उपनिषदे, योगसूत्रे, ब्रह्मसूत्रे, आदि आहेत.

एका विशेष उदाहरणाच्या परिस्थितीत, आधुनिक काळात, स्वामी विवेकानंद यांच्या विचारांनुसार, समाजात आदर्श माणसांना सामाजिक सेवा, नैतिकता, आणि आत्मनिर्भरतेवर लक्ष ठेवण्याची शिक्षा दिली आहे. त्यांचे ('अरिस्तो ओ व्हेल') म्हणजे 'उत्तम हो, विचार करा' हे मार्गदर्शन विशेषपणे युवा प्रतिष्ठित केले आहे.

भारत देश विश्वगुरू:-

अखिल विश्वातील अनेक विषयांवर भारतीय संस्कृतीची महत्वाकांक्षा आहे, आणि त्यातून काही उदाहरणे देता येतात:

1. *ध्यान आणि ध्यानाची प्रणाली (योग)*: भारतीय संस्कृतीत योगाची महत्वाकांक्षा आहे, ज्याने मानवी जीवनात आत्म-संयम, शारीरिक स्वास्थ्य, आणि मानसिक स्थिरता यासाठी महत्वपूर्ण असे मानले जाते.
2. *धार्मिक धारणांची आणि त्यांच्या प्रक्रियेची समज*: भारतीय संस्कृतीत धार्मिक धारणांची आणि त्यांच्या प्रक्रियेची महत्वाकांक्षा आहे, ज्याने जीवनात धार्मिकता, सहिष्णुता, आणि संघर्षरहितता हे महत्वपूर्ण मूल्ये समाविष्ट केली आहेत.
3. *वेद, उपनिषदे, आणि अन्य ग्रंथ*: भारतीय संस्कृतीमध्ये वेद, उपनिषदे, आणि इतर साहित्यामार्फत ग्रंथांची महत्वाकांक्षा आहे, ज्यांनी मानव बुद्धी, आत्मा विकास, आणि समाजातील सामर्थ्याचे विकास केले आहे.
4. *विज्ञान आणि तंत्रज्ञान*: भारतीय संस्कृतीमध्ये वैज्ञानिक धारणांची महत्वाकांक्षा आहे, ज्यामध्ये गणित, ज्योतिषशास्त्र, तंत्रज्ञान, आणि आधुनिक विज्ञानांचे अन्वेषण समाविष्ट केले आहे. इत्यादी. या त्यांच्या उदाहरणांनी, भारतीय संस्कृती विश्वगुरूची भूमिका आणि योग्यता दर्शवते.

नालंदा विश्वविद्यालयातील शिक्षण संस्कृती

नालंदा विश्वविद्यालय महान इतिहास आणि समृद्ध संस्कृतीचा घर आहे. इतिहासात, या विश्वविद्यालयात 5 व्या शतकात अत्यंत प्रसिद्ध महाविद्वान् आर्यभट्ट, चाणक्य, और महात्मा बुद्ध यांचे शिष्य होते. नालंदा विश्वविद्यालय हे विश्वातील एकमेव संस्थान होते ज्याने धार्मिक, तांत्रिक, कला, विज्ञान, आणि दर्शनांच्या क्षेत्रात सुशिक्षित लोकांना प्रशिक्षित केले. यात, अनेक भारतीय आणि विदेशी विद्यार्थी आणि शिक्षक आणि बौद्ध विचारशील संस्कृतीच्या उत्तम संवेदना साधल्या.



निष्कर्ष:-

प्राचीन काळातील भारतीय शिक्षण व्यवस्था अत्यंत समृद्ध आणि विविध होती. या काळात, शिष्य गुरुकुलांमध्ये गुरुशिष्यपरंपरेच्या आधारे शिक्षण प्राप्त करत होते, ज्यात अध्ययन, ध्यान, आणि वैदिक शिक्षण केले जात होते. गुरुकुलांमध्ये शिक्षणाच्या प्रमुख माध्यमांत कला, विज्ञान, धर्मशास्त्र व दार्शनिक विचार शिकवले जात होते.

संदर्भ:-

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Historical Perspective Of The Indian Knowledge System And Pedagogical Implications Of Indian Knowledge For Education

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ABSTRACT

The Indian knowledge system boasts a rich and diverse history that spans thousands of years, characterized by profound advancements in various fields such as science, mathematics, philosophy, medicine, and spirituality. From the ancient Vedic period to the present day, India has been a cradle of intellectual inquiry and innovation, contributing significantly to the world's store of knowledge.

The roots of India's knowledge system can be traced back to the Vedas, the oldest scriptures of Hinduism, composed between 1500 BCE and 500 BCE. These texts contain a wealth of philosophical insights, scientific observations, and practical wisdom, covering a wide range of subjects including astronomy, mathematics, linguistics, and ethics. The Rigveda, for example, contains hymns that describe the movements of celestial bodies and the principles of geometry.

During the classical period, from around 500 BCE to 500 CE, India witnessed a flourishing of intellectual activity with the emergence of several influential schools of thought. The six orthodox schools of Hindu philosophy, known as the "Shad-Darshanas," including Nyaya, Vaisheshika, Samkhya, Yoga, Mimamsa, and Vedanta, provided rigorous frameworks for understanding the nature of reality,

Consciousness, and the self. These philosophical systems engaged in debates and discussions, contributing to the refinement of logical reasoning and dialectics.

One of the most significant contributions of ancient India to the world's knowledge is the development of mathematics. The concepts of zero and the decimal system, which are fundamental to modern mathematics, were pioneered by Indian mathematicians such as Aryabhata, Brahmagupta, and Bhaskara. Their work laid the groundwork for advancements in algebra, trigonometry, and calculus.

In science, Indian scholars made notable contributions in disciplines such as astronomy, medicine, and metallurgy. The ancient astronomers accurately calculated the movements of celestial bodies and developed sophisticated astronomical instruments. Ayurveda, the traditional

system of medicine, emphasized holistic approaches to health and well-being, incorporating principles of diet, herbalism, and yoga therapy.

India's knowledge system has also been deeply intertwined with its spiritual traditions, such as Hinduism, Buddhism, and Jainism. These traditions have produced profound philosophical texts, mystical poetry, and contemplative practices that explore the nature of existence, consciousness, and liberation.

In conclusion, the historical perspective of the Indian knowledge system reveals a rich tapestry of intellectual inquiry, innovation, and cultural exchange. From the ancient wisdom of the Vedas to the classical insights of philosophical schools, and from the mathematical achievements to the spiritual teachings, India's intellectual heritage continues to inspire and enrich humanity's quest for understanding and enlightenment.

Keywords- Vedas, Upanishads, Ayurveda, Astronomy, Philosophy

INTRODUCTION

The Indian knowledge system, with its rich history and diverse traditions, offers valuable insights and practices that can significantly influence modern education. The National Education Policy (NEP) 2020 recognizes the importance of integrating traditional knowledge systems like the Indian knowledge system into the educational framework to promote holistic development, critical thinking, and innovation in higher education.

The Indian knowledge system is rooted in ancient wisdom and encompasses a holistic approach to education that goes beyond mere academic learning. It emphasizes the development of the whole individual, including intellectual, emotional, social, and spiritual dimensions. This holistic perspective aligns well with the goals of NEP 2020, which aims to foster a multidisciplinary approach to learning, emphasizing critical thinking, creativity, and ethical values. One of the key implications of integrating the Indian knowledge system with NEP 2020 is the promotion of critical thinking and logical reasoning among students in higher education. The Indian knowledge system encourages inquiry-based learning, questioning, and debate, which are essential for developing analytical skills and a deeper understanding of complex concepts. By incorporating these pedagogical approaches into the curriculum, educators can empower students to think critically, solve problems creatively, and approach learning with a sense of curiosity and exploration.

Furthermore, the integration of the Indian knowledge system in higher education can lead to the cultivation of reflective ideas among students. Practices such as introspection, mindfulness, and self-awareness, which are integral to the Indian knowledge system, can help students develop a deeper understanding of themselves and the world around them. By encouraging reflective thinking and introspection, educators can support students in making connections between their learning

experiences and personal growth, fostering a deeper sense of meaning and purpose in their education.

Incorporating elements of the Indian knowledge system in higher education also aligns with the NEP 2020's emphasis on promoting interdisciplinary studies and experiential learning. The Indian knowledge system has a multidisciplinary and interconnected approach to knowledge, recognizing the interplay between different fields of study. By integrating this approach into higher education, educators can help students see the relevance and interconnectedness of various subjects, promoting a more holistic and integrated understanding of the world.

In conclusion, the pedagogical implications of the Indian knowledge system for education, when integrated with NEP 2020, can significantly impact higher education by fostering critical thinking, logical reasoning, and reflective ideas among students. By drawing on the rich heritage of the Indian knowledge system and aligning it with contemporary educational practices, educators can create a learning environment that nurtures holistic development, creativity, and a deep appreciation for diverse forms of knowledge and wisdom.

The Indian knowledge system (IKS) is a comprehensive framework encompassing traditional wisdom, philosophical thought, and scientific practices developed in India over millennia. This vast repository of knowledge spans various disciplines, including mathematics, astronomy, medicine, literature, music, architecture, and philosophy. In recent years, there has been a renewed interest in reviving and integrating the IKS into modern educational practices, as it holds immense relevance in today's rapidly changing world.

The Indian Knowledge System

The IKS is deeply rooted in the cultural and intellectual heritage of India. It comprises ancient texts such as the Vedas, Upanishads, and Puranas, which offer insights into the nature of reality, ethics, and metaphysics. Additionally, it includes contributions from great thinkers like Aryabhata, who revolutionized mathematics and astronomy, and Sushruta, the father of surgery. The system is characterized by its holistic approach to knowledge, emphasizing the interconnectedness of different fields of study.

Relevance in Modern Educational Context

Incorporating the IKS into modern education can enhance critical thinking, logical reasoning, and reflective ideas. This integration offers students a unique opportunity to engage with a rich intellectual tradition that promotes interdisciplinary learning and ethical considerations. The holistic nature of the IKS fosters a deeper understanding of the interconnectedness of various subjects, enabling students to approach problems from multiple perspectives.

Overview of the National Education Policy (NEP) 2020

The National Education Policy (NEP) 2020 is a comprehensive framework for transforming the Indian education system. It aims to provide a holistic and multidisciplinary approach to

education, fostering critical thinking and creativity among students. The NEP 2020 focuses on equipping students with 21st-century skills, promoting experiential learning, and encouraging research and innovation.

Key Objectives of NEP 2020

Holistic Development: NEP 2020 emphasizes the holistic development of students, nurturing their intellectual, emotional, and ethical capacities.

Interdisciplinary Learning: The policy promotes interdisciplinary learning, allowing students to explore multiple subjects and gain a well-rounded education. **Flexibility and Choice:** NEP 2020 provides students with flexibility in choosing their subjects, enabling them to pursue their interests and strengths.

Integration of Technology: The policy encourages the use of technology in education to enhance learning outcomes and increase accessibility.

Promoting Indian Languages and Culture: NEP 2020 supports the promotion of Indian languages and culture, fostering a sense of identity and pride among students.

Thesis Statement

Integrating the Indian knowledge system with NEP 2020 for higher education is crucial for developing critical thinking, logical reasoning, and reflective ideas. By combining the holistic approach of the IKS with the objectives of NEP 2020, students can gain a deeper understanding of their cultural heritage while also acquiring essential 21st-century skills. This integration not only enriches the educational experience but also empowers students to address complex challenges with a multifaceted perspective.

The confluence of the Indian knowledge system and NEP 2020 presents a transformative opportunity for the Indian education system. By drawing from the profound wisdom of the IKS and aligning it with modern educational objectives, students can achieve a well-rounded education that prepares them for the challenges of the future. This integration promises to nurture a new generation of learners who are deeply rooted in their cultural heritage while being equipped with the skills needed for success in the global arena.

Indian Knowledge System in Education

The Indian knowledge system (IKS) is an ancient framework encompassing traditional wisdom, scientific practices, and philosophical thought developed over millennia in India. Key principles of the IKS include interconnectedness, holistic understanding, and a balance between material and spiritual knowledge. This system emphasizes learning through experience, observation, and reflection, fostering critical thinking and creativity. The IKS also values ethical considerations, self-discipline, and the pursuit of self-knowledge.

Incorporating elements of the IKS in contemporary education is crucial for nurturing well-rounded individuals who can navigate a complex world with confidence and wisdom. By

integrating traditional wisdom with modern educational practices, students can develop a deeper appreciation for their cultural heritage while gaining valuable skills in critical thinking and problem-solving.

The historical context and philosophical foundations of the IKS are rooted in ancient texts such as the Vedas, Upanishads, and Puranas, which offer insights into the nature of reality, ethics, and metaphysics. The IKS has contributed significantly to various disciplines such as mathematics, astronomy, medicine, and literature. By embracing this rich intellectual tradition, contemporary education can provide students with a comprehensive and meaningful learning experience.

Implications for Higher Education

Integrating the Indian knowledge system (IKS) into higher education has the potential to significantly enhance learning outcomes by fostering a holistic approach to education. IKS emphasizes the interconnectedness of all knowledge, promoting a deeper understanding of various disciplines and their relationships. This interdisciplinary approach can lead to more well-rounded and adaptable graduates who possess a strong foundation in traditional wisdom and modern scientific inquiry.

By incorporating IKS in higher education, institutions can promote holistic development among students, focusing on intellectual, emotional, and spiritual growth. IKS teaches values such as self-awareness, ethical conduct, and respect for nature, which can nurture students' character and worldview. This approach can prepare students to tackle complex global challenges with empathy, resilience, and innovative thinking.

Higher education institutions play a crucial role in promoting IKS integration by offering courses and programs that blend traditional Indian knowledge with modern academic disciplines. This can include subjects such as Ayurveda, Yoga, Indian philosophy, and ancient Indian sciences, providing students with diverse perspectives and insights. Additionally, partnerships with local communities and scholars can facilitate experiential learning opportunities and cultural exchanges. Incorporating IKS in higher education can also present challenges, such as bridging the gap between traditional and modern educational paradigms. There may be resistance from stakeholders accustomed to Western-centric approaches, and there could be a lack of resources and expertise in IKS fields. To address these challenges, higher education institutions should invest in faculty development and curriculum design to ensure that IKS is taught effectively and authentically.

Despite the challenges, the opportunities presented by integrating IKS in higher education are vast. This approach can revitalize interest in India's rich cultural heritage and contribute to the preservation and promotion of traditional knowledge. By fostering a sense of pride in their cultural roots, students can develop a stronger sense of identity and belonging.

Moreover, the integration of IKS can encourage research and innovation in areas such as sustainable development, alternative medicine, and ecological preservation. By drawing on the

wisdom of the past, students and researchers can explore novel solutions to contemporary challenges, contributing to global progress and well-being.

In conclusion, integrating the Indian knowledge system into higher education offers a transformative opportunity to enhance learning outcomes and promote holistic development. By embracing the principles and values of IKS, higher education institutions can nurture well-rounded individuals equipped with the knowledge and skills needed to thrive in an increasingly interconnected world. With careful planning and collaboration, the integration of IKS can pave the way for a more inclusive and culturally rich educational experience.

Promoting Critical Thinking and Logical Reasoning

Integrating the Indian knowledge system (IKS) into modern education has the potential to foster critical thinking skills and enhance logical reasoning abilities in students. The IKS encompasses a holistic view of knowledge, emphasizing a deep understanding of concepts, relationships, and the connections between various domains. This approach encourages students to think critically about the world around them and to engage in thoughtful analysis and inquiry.

By exposing students to the IKS, they can benefit from a rich tradition of philosophical and scientific thought that promotes inquiry and exploration. Ancient Indian texts such as the Vedas and Upanishads present complex ideas about the nature of existence, the cosmos, and human consciousness, challenging students to think deeply about abstract concepts and their applications to real-world scenarios. This engagement with traditional wisdom nurtures students' ability to question assumptions, consider alternative perspectives, and develop well-reasoned conclusions.

The IKS also provides students with exposure to logical reasoning through its emphasis on systematic methods of inquiry and problem-solving. For instance, ancient Indian scholars made significant contributions to mathematics and logic, including concepts such as zero, algebra, and binary numbers. By studying these contributions, students can appreciate the rigor and precision required for logical reasoning and learn how to apply these skills to various academic and practical challenges.

Pedagogical approaches that encourage critical thinking and logical reasoning based on IKS principles include:

Textual Analysis and Interpretation: Engaging students in close readings of ancient Indian texts, such as the Bhagavad Gita or the works of scholars like Aryabhata and Bhaskaracharya, can stimulate critical thinking and logical analysis. Students learn to interpret complex passages, identify underlying arguments, and apply these ideas to contemporary issues.

Socratic Seminars: Facilitating discussions based on open-ended questions allows students to explore different perspectives and articulate their reasoning. This approach encourages active listening, respectful debate, and the ability to critically evaluate various viewpoints.

Case Studies and Problem-Solving: Presenting students with scenarios rooted in Indian traditions,

such as ethical dilemmas in the Mahabharata or sustainable practices in Ayurveda, challenges them to apply critical thinking and logical reasoning to find solutions. This method fosters a deeper understanding of how traditional knowledge can inform modern decision-making.

Comparative Analysis: Encouraging students to compare and contrast IKS concepts with other philosophical and scientific traditions fosters a broader understanding of different perspectives. This approach promotes critical analysis and appreciation for diverse approaches to knowledge.

Project-Based Learning: Assigning projects that require students to research, design, and present solutions based on IKS principles encourages them to apply critical thinking and logical reasoning in practical contexts. This method allows students to engage with traditional knowledge while developing essential skills for the modern world.

In conclusion, integrating the Indian knowledge system in education can significantly promote critical thinking and logical reasoning skills in students. By embracing traditional wisdom and innovative pedagogical approaches, educators can cultivate a generation of thinkers who are equipped to navigate complex challenges with intelligence, creativity, and a deep appreciation for the richness of their cultural heritage.

Cultivating Reflective Ideas

The Indian knowledge system (IKS) encourages reflective thinking and introspection through its emphasis on holistic perspectives and self-awareness. Ancient Indian texts and philosophies promote deep contemplation on fundamental questions about the nature of the self, existence, and the universe. This tradition nurtures students' ability to reflect on their thoughts, feelings, and experiences, fostering personal growth and a deeper understanding of their place in the world.

Strategies for promoting reflective ideas in educational settings based on IKS principles include:

Meditative Practices: Introducing students to meditation techniques and mindfulness exercises helps them develop focus, awareness, and inner calm. These practices encourage introspection and allow students to process their thoughts and emotions more effectively.

Journaling: Encouraging students to keep a reflective journal allows them to document their thoughts and insights over time. This practice promotes self-examination and helps students track their learning progress and personal development.

Socratic Dialogues: Facilitating dialogues centered around open-ended questions allows students to explore their own beliefs and values. These discussions promote critical self-reflection and enable students to articulate their thoughts with clarity. **Case Studies with Ethical Dilemmas:** Presenting students with case studies that involve ethical dilemmas rooted in Indian traditions challenges them to reflect on their values and beliefs. This approach fosters ethical reasoning and self-awareness. **Narrative Approaches:** Using storytelling and traditional narratives to illustrate

philosophical concepts helps students connect with the ideas on a personal level. This method encourages students to reflect on the relevance of these ideas to their own lives.

Case studies and examples illustrating the impact of reflective practices on student learning and growth include:

Increased Self-Awareness: Students who engage in reflective practices demonstrate a deeper understanding of their strengths and areas for improvement. This self-awareness helps them set meaningful goals and take ownership of their learning journey.

Improved Decision-Making: Reflective students tend to make more thoughtful decisions, considering the potential consequences of their actions. This skill is valuable in both academic and personal contexts.

Enhanced Empathy and Emotional Intelligence: Reflective practices help students develop empathy and emotional intelligence, as they learn to understand their own emotions and those of others. This leads to more respectful and supportive interactions with peers and teachers.

In conclusion, incorporating Indian knowledge system principles in educational settings can effectively cultivate reflective thinking and introspection in students. By promoting practices such as meditation, journaling, and ethical case studies, educators can foster students' personal growth, self-awareness, and overall well-being.

Conclusion

In summary, the paper highlights the pedagogical implications of the Indian knowledge system (IKS) for contemporary education and its integration with the National Education Policy (NEP) 2020. Incorporating elements of IKS in educational practices can provide a holistic and culturally relevant approach to teaching and learning, fostering critical thinking, logical reasoning, and reflective thinking among students. By aligning with NEP 2020's goals, such integration supports a comprehensive and multidisciplinary approach to education.

The potential benefits of incorporating IKS in higher education settings are vast. Students can gain a deeper appreciation for India's rich intellectual heritage, develop a stronger sense of cultural identity, and acquire valuable life skills such as self-awareness, ethical reasoning, and empathy. Additionally, IKS encourages an inquiry-based approach, promoting curiosity and lifelong learning.

To maximize the impact of IKS integration, further research and practical applications are essential. Educators should explore innovative pedagogical strategies, such as combining traditional Indian teaching methods with modern instructional practices, to create dynamic and engaging learning environments. Collaborative efforts between educators, policymakers, and scholars can help ensure the successful implementation of IKS principles in educational contexts, ultimately enriching the educational experiences and outcomes for students.

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Indian knowledge system and AI**Neeraj Gupta***UG Student (TYBA History Specialization)***And****Sweta Dubey***UG Student (TYBA History Specialization)***And****Ms. Sunanda Kangane***Assistant Professor -History**SSR College of ACS, Sayli Road, Silvassa DNH&DD*

Abstract: -

Indian' knowledge System: - The Indian knowledge system is the ancient Indian knowledge tradition, refers to the vast body of knowledge, wisdom, and teachings that have been developed and preserved in India over thousands of years. It encompasses various fields such as philosophy, spirituality, science, mathematics, astronomy, medicine, literature, and more.

Keywords: - Astronomy, Artificial Intelligence, Technique, Transformation

Introduction

The Indian knowledge system is deeply rooted in ancient texts and scriptures, such as the Vedas, Upanishads, Bhagavad Gita, Yoga Sutras, and various other scriptures and treatises. It emphasizes holistic learning and the interconnectedness of different disciplines. The main aim of this system is to cultivate wisdom, understanding, and self-realization.

The Indian knowledge system is characterized by its focus on experiential learning, reflection, contemplation, and inquiry. It encourages students to develop critical thinking, analytical skills, and a deeper understanding of the self and the world. It also emphasizes the importance of moral values, ethics, and social responsibility.

AI: - When it comes to AI (Artificial Intelligence), it is a branch of computer science that focuses on creating intelligent machines capable of performing tasks that typically require human intelligence. AI involves the development of algorithms, models, and systems that can process, analyze, and utilize vast amounts of data to perform tasks such as problem-solving, decision-making, speech recognition, natural language processing, image recognition, and more.

AI has rapidly advanced in recent years, transforming various industries and sectors such as healthcare, finance, transportation, and communication. It has the potential to automate complex tasks, improve efficiency, and facilitate innovation. AI systems can learn from data, adapt to new situations, and make predictions or recommendations based on patterns and trends.

The Integration of the Indian knowledge system and AI can be a powerful combination. It can incorporate the wisdom and insights from the Indian knowledge tradition into the development and application of AI technologies. This can lead to the creation of more ethical, socially responsible, and human-centric AI systems. The Indian knowledge system's emphasis on holistic learning, self-realization, and moral values can help shape AI to align with human values and serve the betterment of society.

The New Education Policy (NEP) 2020 recognizes the importance of the Indian knowledge system and its integration with modern technologies like Artificial Intelligence (AI). Here are a few key aspects of the NEP 2020 pertaining to Indian knowledge systems and AI:

1. Preservation of Indian Knowledge Systems:

1. The NEP 2020 emphasizes the preservation, promotion, and integration of Indian knowledge systems, including ancient wisdom, traditions, and local culture.
2. It acknowledges the need to incorporate the rich heritage of India into the curriculum to provide students with a holistic and well-rounded education.

2. Integration of AI in Education:

1. The policy acknowledges the transformative potential of AI in education and emphasizes its integration at all levels.
2. AI and technology will be used to enhance the teaching-learning process, personalized learning, and performance assessment.
3. The NEP 2020 aims to make AI an integral part of the curriculum and urges the development of AI-related skills among students

3. National Educational Technology Forum (NETF):

1. The NEP 2020 proposes the establishment of a National Educational Technology Forum (NETF) to facilitate the integration of technology, including AI, in education.
2. The NETF will provide a platform for collaboration among various stakeholders and encourage the development of technology-driven solutions in the education sector.

4. Research and Development in AI:

1. The NEP 2020 emphasizes the need for research and development in emerging technologies, including AI.
2. The policy aims to create a vibrant research ecosystem to foster innovation and technological advancements in AI for education.
3. It promotes collaborations between educational institutions, industry, and research organizations to harness the potential of AI in providing quality education.

5. Skill Development in AI:

1. The NEP 2020 recognizes the importance of developing skills related to AI and

emerging technologies.

2. It emphasizes the integration of skill-based courses in AI, data science, and coding into the curriculum.
3. Vocational education will focus on developing skills relevant to AI-driven industries and occupations.

6. Holistic Education:

1. The NEP emphasizes holistic and multidisciplinary education, focusing on the cognitive, social, emotional, and ethical development of students. It encourages students to explore and understand their cultural and traditional roots.

7. Teacher Development:

1. The NEP emphasizes the importance of continuous professional development for teachers. It encourages the integration of Indian knowledge systems and modern approaches into teacher training programs.
2. While the NEP acknowledges the significance of incorporating Indian knowledge systems and AI into education, it does not provide detailed guidelines on how to implement these ideas. However, it sets the stage for further discussions and policy development in these areas.

To delve deeper into the New Education Policy 2020 and its implications for the Indian knowledge system and AI integration, it is recommended to refer to official government documents and scholarly articles from educational institutions and think tanks. These sources are likely to provide more elaborate information and analysis on the specific topics you are interested in.

The NEP 2020 envisions the integration of Indian knowledge systems and AI to create a harmonious blend of traditional wisdom and modern technological advancements in the education system. It aims to harness the potential of AI to provide innovative, personalized, and inclusive education while preserving the cultural and intellectual heritage of India.

The Indian knowledge system, with its rich heritage of ancient wisdom and philosophies, can be effectively integrated with Artificial Intelligence (AI) to enhance various aspects of education and research. Here are a few ways in which the Indian knowledge system can intersect with AI:

Indian Knowledge System: The Indian knowledge system is rooted in ancient Indian traditions and philosophies. It encompasses diverse fields such as philosophy, arts, sciences, astronomy, medicine, mathematics, yoga, and more. It is based on texts like the Vedas, Upanishads, Ayurveda, and works of great scholars like Charaka, Sushruta, Aryabhata, and Nagarjuna.

The NEP 2020 emphasizes the integration of Indian knowledge systems into education. It recognizes the value of traditional knowledge in fostering a comprehensive understanding of

Indian culture and heritage. By incorporating ancient wisdom and indigenous practices, the NEP aims to provide a more holistic and culturally relevant education.

AI Integration in Indian Education: The NEP 2020 acknowledges the transformative potential of AI and promotes its integration into the Indian education system. Here are some key aspects

AI Education: The NEP advocates for the inclusion of AI education and computational thinking across all levels of education. It emphasizes the need for students to understand the fundamentals of AI technologies, their applications, and ethical considerations.

1. **Language Processing:** Indian knowledge systems like Sanskrit possess rich grammatical structures and linguistic theories. AI techniques can be applied to analyze and understand these intricate languages, aiding in translation, language preservation, and even developing intelligent language processing systems.
2. **Data Analysis:** Indian knowledge systems often involve extensive textual and qualitative data. AI techniques such as Natural Language Processing (NLP) and Data Mining can be utilized to analyze these vast repositories of information, extract meaningful insights, and develop computational models that enhance our understanding.
3. **Knowledge Representation:** Indian knowledge systems, such as Vedas and Upanishads, contain profound philosophical concepts and intricate knowledge structures. AI can be used to represent and model this knowledge, making it more accessible and allowing for computational reasoning and analysis.
4. **Personalized Learning:** AI can be leveraged to personalize education in alignment with Indian knowledge systems. By utilizing adaptive learning algorithms and student data, AI can tailor educational content, methods, and assessments to individual learners, incorporating aspects of Indian knowledge systems into their educational experiences.
5. **Cultural Preservation:** AI technologies can aid in the preservation and digitization of ancient texts, artworks, manuscripts, and artifacts, thereby safeguarding the cultural heritage of India. This includes the development of AI-driven techniques for digitizing, analyzing, and preserving historical and cultural materials.
6. **Socio-economic Impact:** AI can be harnessed to address socio-economic challenges prevalent in Indian society. By integrating Indian knowledge systems, AI applications can provide solutions for healthcare, agriculture, energy, and other sectors, applying traditional wisdom and AI-driven innovation to bring about positive change.
7. **Skill Development:** The NEP recognizes the importance of equipping students with skills relevant to the rapidly evolving technological landscape. AI education helps foster critical thinking, problem-solving, coding abilities, and data analysis skills, which are crucial in the digital age.

8. **Research and Innovation:** The NEP encourages the integration of emerging technologies like AI into research and innovation activities. This facilitates the development of AI-based solutions to address societal challenges, promote economic growth, and encourage interdisciplinary collaborations.
9. **EdTech Ecosystem:** The NEP recognizes the potential of EdTech platforms and digital resources to enhance learning outcomes. AI-powered educational tools, virtual reality, augmented reality, and online learning platforms can provide immersive and interactive learning experiences.

Conclusion

The NEP 2020 aims to integrate the rich Indian knowledge system into education and embrace the transformative potential of AI. By synergizing traditional wisdom with modern technologies, India seeks to provide a well-rounded, future-ready education to its students.

It is vital to collaborate with academic institutions, researchers, policymakers, and experts in both Indian knowledge systems and AI to explore the synergies between the two. This collaboration can lead to the development of AI technologies that are not only technologically advanced but also culturally sensitive and rooted in the Indian knowledge system.

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Sustainable Development and Indian Knowledge System

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ABSTRACT

India boasts a rich intellectual heritage, woven from the threads of its ancient knowledge system. This intricate tapestry stretches back millennia, with its roots firmly planted in the Vedic period (1500 BCE). Here, the Vedas, the foundational scriptures of Hinduism, were composed. These sacred texts encompassed a vast spectrum of knowledge, from hymns and rituals to the mysteries of the cosmos and the quest for ethical living. The Indian knowledge tradition, unlike a stagnant pool, resembles a mighty river, the Ganges, flowing uninterrupted for centuries. From the profound wisdom of the Vedas to the insights of modern thinkers like Sri Aurobindo, the pursuit of knowledge has remained the lifeblood of India's intellectual and spiritual exploration. But the questions also arise regarding significance of the Vedic period, whether there is enough emphasis on pre-Vedic civilizations like the Indus Valley Civilization, which might have contributed to the knowledge system's foundation? Does the introduction sufficiently acknowledge the contributions of other Indian philosophical and religious traditions like Jainism, Buddhism, and Sikhism to the knowledge system? Does the focus on Jñān (knowledge) adequately capture the emphasis on spiritual and experiential knowledge within the Indian knowledge system? India's knowledge system is experiencing a resurgence, with its principles being integrated into education, applied to modern problems, and digitized for wider accessibility, while ongoing discussions address its relevance and potential biases in the 21st century. This paper idea suggests exploring how India's ancient knowledge system can be a resource for sustainable development. It proposes examining how Indian Knowledge system principles like resource management, holistic well-being, and ethical consumption align with modern sustainability goals. Finally, it encourages considering how Indian Knowledge System can be integrated with modern knowledge and technology for innovative solutions.

Keywords: Sustainable development, Indian Knowledge System.

KNOWLEDGE ACROSS CULTURES: A BRIDGE TO UNDERSTANDING

Culture, that vibrant tapestry of human experience, thrives on a vital foundation: knowledge. This knowledge isn't just a collection of memorized facts; it's the accumulated understanding, passed down through generations, that defines a society's identity and guides its actions. Imagine a community of hunter-gatherers. Their knowledge of animal migration patterns, edible plants, and crafting tools isn't simply written down in a textbook; it's woven into their stories whispered around crackling fires, sung in their chants echoing through valleys, and demonstrated in the intricate techniques used to fashion weapons and shelters. These cultural expressions become vessels for transmitting knowledge about survival, social values, and the natural world. This knowledge serves as a lens, shaping how cultures perceive and interact with the world around them. Take the concept of time, for example. Western cultures tend to view time as linear and segmented, with a focus on efficiency and productivity. This is reflected in our regimented schedules, emphasis on deadlines, and the ever-present tick of the clock. However, some indigenous cultures have a more cyclical view of time, interwoven with the rhythms of nature and the seasons. This cyclical understanding is evident in their agricultural practices that follow planting and harvesting cycles, their ceremonies tied to solstices and equinoxes, and even their artistic expressions that often depict natural phenomena in a continuous flow. Similarly, knowledge about the celestial bodies might lead one culture to develop a sophisticated calendar system for agricultural planning, while another might focus on using these same celestial bodies for navigation, shaping their seafaring traditions and their understanding of the cosmos.

However, knowledge can also be a bridge between cultures. Sharing knowledge and fostering intercultural dialogue can lead to greater understanding and respect. Studying different cultural knowledge systems broadens our own perspectives and enriches human experience as a whole. Imagine a collaboration between Western medical practitioners and traditional healers from the Amazon rainforest, each bringing their unique knowledge sets to bear on improving healthcare outcomes for indigenous communities. Similarly, cross-cultural exchanges in agricultural practices can lead to the development of more sustainable and efficient food production systems. By fostering knowledge exchange, cultures can learn from each other, fostering innovation and mutual respect.

Cultures thrive on knowledge, which forms the bedrock of their practices, beliefs, and values. This knowledge shapes how cultures interact with their environment and adapt to new challenges. By appreciating the diverse wellsprings of knowledge across cultures, we gain a richer understanding of humanity and the intricate web we weave together. This web is not a fixed display; it's a dynamic creation, constantly evolving as knowledge is shared, challenged, and integrated.

FROM VEDAS TO MODERNITY: THE ENDURING LEGACY OF INDIAN KNOWLEDGE

India, a land known for its vibrant colours, diverse cultures, and rich tapestry of traditions, also boasts a remarkable intellectual heritage. This heritage transcends a mere collection of isolated facts or practices; instead, it represents a dynamic and interwoven system of knowledge that has flourished for millennia. The roots of this system can be traced back to the Vedic period (1500 BCE), where the foundational scriptures of Hinduism, the Vedas, were composed. These sacred texts encompassed a vast spectrum of knowledge, ranging from hymns and rituals to philosophical inquiries into the nature of reality and the pursuit of ethical living. Unlike a mighty river, the Ganges. This river flows continuously, nourishing the land with its wisdom stagnant pool reflecting only the sky above, the Indian knowledge tradition is more akin to and sustaining life. Similarly, the pursuit of knowledge has been a lifeblood of India's intellectual and spiritual exploration for centuries. From the profound wisdom of the Vedas to the insights of modern thinkers like Sri Aurobindo, this ongoing quest has enriched and shaped the lives of countless individuals across generations. The Vedas form the cornerstone of the Indian knowledge system. These four collections of hymns, composed in Sanskrit, are considered to be divinely revealed texts. However, their significance extends far beyond the realm of religion. The Vedas offer a window into the intellectual pursuits of the Vedic people. They contain hymns of praise to various deities, philosophical inquiries into the nature of reality, and practical knowledge concerning astronomy, medicine, and social organization.

One of the most significant contributions of the Vedas is the concept of Dharma. Dharma, a multifaceted concept, encompasses right conduct, moral duty, and universal law. It is the guiding principle that underpins not only individual lives but also societal order and cosmic harmony. Understanding and fulfilling one's Dharma is central to achieving a meaningful and fulfilling life. It is crucial to acknowledge the role of vibrant oral traditions in transmitting knowledge across generations within the Indian knowledge system. These traditions encompassed not only religious stories and philosophical teachings but also practical knowledge related to crafts, agriculture, and social customs. These oral traditions ensured the dissemination of knowledge beyond the confines of formal education, making it accessible to a broader section of society. The Indian knowledge system is not a static entity frozen in time. It has continuously evolved and adapted to changing circumstances. The encounter with other cultures, such as the Greeks and the Persians, led to a cross-pollination of ideas, enriching the intellectual landscape. The arrival of Islam and later, Christianity, further enriched India's intellectual landscape.

ROLE OF INDIAN KNOWLEDGE SYSTEM IN SUSTAINABLE DEVELOPMENT

India's knowledge system is deeply rooted in the concept of reverence for nature. The Vedas, the foundational scriptures of Hinduism, advocate for "Vasudhaiva Kutumbakam," which

translates to "the world is one family." This philosophy emphasizes the interconnectedness of all living beings and the dependence of human well-being on a healthy ecosystem. Traditional agricultural practices in India, developed over generations, exemplify this principle. Techniques like crop rotation, intercropping (planting multiple crops together), and organic farming methods promote soil fertility, minimize environmental degradation, and ensure long-term agricultural productivity. Indigenous communities across India possess a wealth of knowledge about their local ecosystems, forming a vast body of traditional ecological knowledge. This knowledge encompasses a detailed understanding of plant and animal life, weather patterns, and resource management strategies. Communities like the Bishnoi people of Rajasthan have a long-standing tradition of protecting wildlife and preserving natural resources. Their practices, deeply rooted in local beliefs and customs, offer valuable lessons in conservation and sustainable living. The value of the Indian knowledge system extends beyond living in harmony with nature. Ancient Indians made significant advancements in various fields that hold promise for addressing contemporary sustainability challenges. Ayurveda, the traditional Indian medical system, emphasizes the use of plant-based remedies and promotes a holistic approach to health and well-being, aligning with the growing interest in sustainable healthcare practices. Water management techniques like rainwater harvesting and traditional irrigation systems demonstrate an understanding of the importance of water conservation. These techniques can inform modern water management strategies, particularly relevant in the face of climate change and water scarcity. India has a rich history of vernacular architecture that utilizes locally available materials and incorporates passive cooling techniques. These traditional design principles can inspire sustainable construction practices that minimize environmental impact and reduce energy consumption.

Despite the wealth of knowledge offered by the Indian knowledge system, integrating it into contemporary systems presents challenges. Much of the Indian knowledge system is passed down through oral traditions, making it vulnerable to loss with each generation. Systematic documentation and dissemination of this knowledge are crucial to ensure its continued relevance. Additionally, integrating traditional practices with modern scientific methods is vital for wider acceptance. Research efforts are needed to understand the scientific basis behind some Indian knowledge system practices, promoting evidence-based approaches to sustainability. Finally, some traditional practices may be embedded in social hierarchies that require re-evaluation. The focus should be on extracting the sustainable elements of the Indian knowledge system while addressing potential social inequities. The potential of the Indian knowledge system for addressing sustainability concerns is immense. Collaboration between traditional knowledge holders, scientists, policymakers, and local communities is essential. This collaborative approach can ensure the respectful integration of the Indian knowledge system with modern knowledge systems, fostering a more inclusive and effective pursuit of sustainable development.

DISCUSSION

Indigenous communities across India possess a wealth of knowledge about their local ecosystems, forming a vast body of traditional ecological knowledge. This knowledge encompasses a detailed understanding of plant and animal life, weather patterns, and resource management strategies. Communities like the Bishnoi people of Rajasthan have a long-standing tradition of protecting wildlife and preserving natural resources. Their practices, deeply rooted in local beliefs and customs, offer valuable lessons in conservation and sustainable living. The value of the Indian knowledge system extends beyond living in harmony with nature. Ancient Indians made significant advancements in various fields that hold promise for addressing contemporary sustainability challenges. Ayurveda, the traditional Indian medical system, emphasizes the use of plant-based remedies and promotes a holistic approach to health and well-being, aligning with the growing interest in sustainable healthcare practices. Water management techniques like rainwater harvesting and traditional irrigation systems demonstrate an understanding of the importance of water conservation. These techniques can inform modern water management strategies, particularly relevant in the face of climate change and water scarcity. India has a rich history of vernacular architecture that utilizes locally available materials and incorporates passive cooling techniques. These traditional design principles can inspire sustainable construction practices that minimize environmental impact and reduce energy consumption.

Despite the wealth of knowledge offered by the Indian knowledge system, integrating it into contemporary systems presents challenges. Much of this knowledge is passed down through oral traditions, making it vulnerable to loss with each generation. Systematic documentation and dissemination of this knowledge are crucial to ensure its continued relevance. Additionally, integrating traditional practices with modern scientific methods is vital for wider acceptance. Research efforts are needed to understand the scientific basis behind some Indian knowledge system practices, promoting evidence-based approaches to sustainability. Finally, some traditional practices may be embedded in social hierarchies that require re-evaluation. The focus should be on extracting the sustainable elements of the Indian knowledge system while addressing potential social inequities. The potential of the Indian knowledge system for addressing sustainability concerns is immense. Collaboration between traditional knowledge holders, scientists, policymakers, and local communities is essential. This collaborative approach can ensure the respectful integration of the Indian knowledge system with modern knowledge systems, fostering a more inclusive and effective pursuit of sustainable development. By harnessing core principles like resource management, holistic well-being, and ethical consumption, and by bridging the gap between ancient wisdom and modern challenges, we can chart a course towards a more sustainable future.

CONCLUSION

The tapestry of India's knowledge system offers a vibrant legacy teeming with potential for navigating the complexities of sustainable development. This review has explored the core principles and practices embedded within India's knowledge system, highlighting their relevance for contemporary challenges. From the reverence for nature embodied in traditional agriculture to the wealth of ecological knowledge held by indigenous communities, India's knowledge system offers a treasure trove of wisdom waiting to be harnessed. Furthermore, advancements in healthcare, water management, and architecture within India's knowledge system demonstrate its applicability beyond environmental concerns. However, unlocking the full potential of India's knowledge system necessitates acknowledging and addressing existing challenges. The oral tradition of knowledge transmission makes it vulnerable to loss, emphasizing the need for systematic documentation and dissemination. Furthermore, wider acceptance requires a bridge between traditional practices and modern scientific methods. Research efforts focused on validating the scientific basis behind India's knowledge system practices can foster evidence-based approaches to sustainability. Finally, a critical evaluation of potential social inequities embedded within some traditional practices is crucial. The focus should be on extracting the sustainable elements while ensuring inclusivity and social justice.

The path forward lies in collaboration. Building partnerships between knowledge holders, scientists, policymakers, and local communities is essential. Knowledge holders, the custodians of India's knowledge system, bring invaluable insights and practical wisdom. Scientists can provide the tools and methodologies for validation and integration with modern knowledge systems. Policymakers have the power to create frameworks that encourage the application of India's knowledge system principles. Local communities, with their deep understanding of local contexts, hold the key to successful implementation. Through a collaborative approach that fosters respectful exchange and acknowledges the inherent value of both traditional and modern knowledge systems, we can unlock the immense potential of India's knowledge system for a more sustainable future. This collaborative effort can pave the way for the development of innovative solutions that address contemporary challenges. Imagine integrating traditional water management techniques with modern technologies to create more efficient irrigation systems. Envisioning healthcare systems that incorporate the principles of Ayurveda alongside conventional medicine could lead to a more holistic approach to well-being. Sustainable architecture inspired by vernacular design principles, coupled with advancements in renewable energy, could revolutionize the construction industry. These are just a few examples of the possibilities that lie ahead when we embrace India's knowledge system not as a relic of the past, but as a vital resource for the future. India's knowledge system offers a powerful roadmap for a sustainable future. By acknowledging its strengths, addressing its vulnerabilities, and fostering collaboration between diverse

stakeholders, we can unlock its true potential. Let us not relegate this rich legacy to the pages of history, but rather transform it into a living testament to the enduring power of tradition in the face of contemporary challenges. By embracing the wisdom of the past and integrating it with the knowledge of the present, we can collectively chart a course towards a more sustainable future for all.

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Integrating Indian Knowledge System With Indian Language System Through Nep- 2020

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Abstract

The new education policy NEP- 2020 has been launched to transform the Indian education system using holistic development of the learners. The Indian knowledge system is one of the significant aspects of the NEP curriculum. IKS encompasses diverse and rich Heritage knowledge in India. That covers various domains such as science and technology, literature, philosophy, culture, medicine (Ayurveda) and yoga. IKS covers the knowledge aspects from the prehistoric to the current period.

Language is the foundation of the human thinking process. Thinking is impossible without language. In order to make the human being think in a proper way, good grounding in language is needed. Therefore, language education has been considered to be an integral part of the education system. In the context of IKS based education, Indian languages play a very crucial role. IKS is understood with the understanding of basic categories. Such basic categories of any Indian knowledge system are expressed through Indian language terms. The translation of these ideas into English will lead to misconception. The discontinuation of Indian language education will make the IKS education feeble. Therefore, a judicious balance of IKS and ILS will be made part of Indian education that stimulates quality research.

This integration will help us to achieve the main objective of NEP-2020 to develop a holistic education through which Bharat attains Vishva guru position once again.

Keywords- Indian knowledge system, new education policy, Indian language system.

Introduction

The main objective of integrating IKS into the education system is to ensure that India's ancient knowledge systems, such as Ayurveda, yoga and traditional arts, are preserved and promoted for future generations. The Indian knowledge system is one of the significant aspects of the NEP curriculum. IKS compasses diverse and rich Heritage knowledge of India that covers

various domains such as science and technology, literature, philosophy, culture, medicine (Ayurveda) and yoga.

The Indian knowledge system prioritizes inclusivity and accessibility ensuring that education transcends socio- economic barriers. Special provisions are in place to guarantee that every student regardless of their background, has access to quality education.

India's improved education system is often cited as one of the main contributors to its economic development. At the primary and secondary level, India has a large private school system complementing the government run schools with 29% of students receiving private education in the 6 to 14 age group.

The national education policy 2020 aims at promoting multilingualism through English and local languages as well as hastening the importance of languages of India through teaching and learning.

NEP envisages the promotion of Indian languages through regular use, preparation of pedagogical materials, training of teachers, adoption of mother tongue as medium of instruction, innovative methods, judicious use of technology and development of positive attitude towards all languages and their remarkable unity.

Indian knowledge system-

India is a country with an ancient civilizational history and practices that are known to mankind. It is expected to accumulate some knowledge throughout its existence. This ancient knowledge was preserved on palm trees and transferred from generation to generation orally. But over time there were abrupt changes in the knowledge transformation process and this indigenous knowledge was lost. The newly introduced education system has attempted to provide this knowledge to society as demanded. The Indian knowledge system comprises three words namely India, knowledge and system.

Indian- It refers to akhund Bharat that is the undivided Indian subcontinent. It covers the area that spans from Burma on the east, modern day Afghanistan on the west, the Himalayas on the north and the Indian Ocean on the south. Ancient Indian education included the teaching of eighteen Vidya stanzas, or school of learning. Which were imported in renowned centers such as Nalanda and Takshila. India's global reputation has been derived from its contributions in the field of art, architecture, science, technology, craft, engineering, philosophy and practices. Most of the foreigners who visited India for knowledge discriminated this knowledge to the west and other part of the world. This is a part of IKS.

Knowledge-Knowledge refers to the tacit knowledge and it lies in the wisdom of knowledge seekers. It is gained by insights into personal experience through observations facing real life problems and solving them. Knowledge may exist in literary and non-literary forms. This tacit knowledge is transferred systematically by the way of proposing new theories and frameworks

and in the form of literary work.

System-System means a well-organized methodology and classification scheme used to access a body of knowledge. The codification and classifications are based on the need, interest and capacity of the knowledge seeker. So that he may assess the inherent knowledge. This will help they gain insight from overall knowledge and know how different knowledge components logically complement each other.

The Indian knowledge system is the systematic transfer of ancient and contemporary knowledge from one generation to another. It covers ancient knowledge from various domains to address current and future challenges. This knowledge exists in both literary and non-literary works. Literary resources cover Vedic and allied literature, resources on other hand dharmic traditions and knowledge that exist in Indian languages and dialects. Non-literary resources are present in oral traditions available across the country.

The colonial system of education has created a basis against the Indian knowledge system in the Indian education system. The Indian education system is largely focused on the Western knowledge system and it can create difficulty in accommodating this system. There is also a shortage of well-qualified teachers to teach the IKS because it is not widely adopted yet.

Indian language system-

Learning begins at home where we observe our first language from our family, shaping our identity and sense of belonging. This mother tongue is a source of comfortable and cultural connection for all children. However, when children step into preschool or school at the age of 3 or 4, they may face doubting challenges. They were suddenly immersed in a new language environment, struggling to comprehend words they have never heard, spoken or written before. Their parents, often unfamiliar with this language, struggle to support them, leading to higher risk of children dropping out of school within a few years.

India's national education policy (NEP)2020 recognizes the significance of learning in one's mother tongue. Most children are enrolled in school, yet many are not learning effectively. Children from tribal communities perform poorly in school compared to others.

Early education in the mother tongue could serve as a crucial factor in learning new languages, fostering understanding, confidence and alone for learning. It enables a deeper grasp of concepts, encourages critical thinking and strengthens cultural connections.

The NEP 2020 focuses on multilingualism and the use of familiar languages for learning until at least grade 5 but preferably till grade 8 and Beyonce. The police recommend preparing textbooks and related reading material in home language and ask teachers to use them for communication in the classroom.

NEP2020 emphasizes-

The continuation of the three-language formula in school and teaching learning in bilingual and trilingual format. Skill development of teachers and teacher educators and involvement of modern technology for enhancing learning outcomes and making learning enjoyable. Teaching learning of classical languages like Sanskrit, Tamil, Telugu Kannada, Malayalam and Odia. Efforts in preparing high quality bilingual textbooks in Indian languages and offering of courses in foreign languages. Preparation of innovative pedagogical materials and launch of online languages course for various levels. The involvement of translation and the use of modern technology for making language learning easy and interesting.

Pedagogy of Indian languages-

NEP recommends the teaching of Indian languages with English and foreign languages. NEP envisages the promotion of Indian languages through regular use, preparations of pedagogical materials, training of teachers, adopting of mother tongues as a medium of instruction, innovative methods, judicious use of technology and development of positive attitude towards all languages and their remarkable unity. NEP also recommends linguistic empowerment of hearing-impaired population through teaching of the Indian language with its local varieties.

Languages in school education-

The linguistic diversity of India necessitates linguistic diversity in school too. Schools can play an important role in sustaining multilingualism in India. Therefore, the relatively high trust that the new education policy gives on languages in school does not require any justification. In doing so, the NEP 2020 has also amply focused the promotion of all Indian languages and mother tongues. Irrespective of their status. For the same NEP recommends development of skilled teachers through 4-year integrated B.Ed. programs.

Promotion of Indian languages

Promotion of Indian languages: The preservation and promotion of Indian languages must be considered a high priority for the country, as it is truly important for the Identity of nations as well as for its economy. The road map for proper upgradation of Indian languages is an important aspect of National Education Policy-2020. A high-level steering committee constituted by UGC to promote Indian languages in higher education institutions is working to develop, promote and propagate Indian languages, local languages.

National education policy-2020 recommends the study of foreign languages such as Korean, Japanese, Portuguese and Russian as additional languages.

Language learning is a valuable skill that can enhance cognitive, social and cultural development. However, many students face challenges and barriers when learning a new language, especially in school settings. In this article, we will explore some of the best practices for promoting language learning in school, based on linguistic research and pedagogical principles.

Motivate and engage learners-one of the key factors that influence language learning is motivation. To promote motivation, teachers should provide meaningful and relevant tasks that connect the language to the learners' lives, interests and needs. Teachers should also create a supportive and positive learning environment that fosters learners' confidence and self-efficiency.

Enhance learners' metalinguistic awareness-Factor that affects language learning in metalinguistic awareness. Metalinguistic awareness refers to the ability to reflect on and analyze the language system, such as its sound structure, meanings and functions. Metalinguistic awareness helps learners to notice and understand the patterns and rules of languages as well as to compare and contrast it with their own language.

Three language formula-The three language formula states that every student in India should learn three languages of which should be native Indian languages including one regional language and this third should be English. This formula is adoptable to both government and private schools and the medium of instructions can be any of three languages.

Importance of local language-The importance of regional languages holds immense significance in India for several reasons. Firstly, it plays a crucial role in preserving the rich cultural heritage and diverse identities of various regions. Secondly it enables effective communication and fosters inclusivity within local community. Lastly it contributes to education, economy, growth and political representations by providing a medium for imparting knowledge facilitating local trade and empowering regional voice in governance.

Regional languages in India hold vital roles in different aspects. The preservation and promotion of regional language alongside the official language to maintain linguistic diversity and uphold the cultural fabric of society let's understand the importance of regional languages.

Cultural identity-Regional languages in India are closely tied to cultural heritage and identity of specific regions or communities. They preserve and transmit unique customs, traditions, folk art, literature and oral heritage that contribute to the rich cultural diversity of the country.

Communication and inclusion- Regional languages serve as a means of communication for millions of peoples who may not be fluent in the official or National languages. They enable effective communication within local communities fostering social cohesion and inclusion.

Education and literacy- Learning in one's mother tongue and regional languages has proven benefits for education and literacy. Children tend to grasp concepts better when taught in languages they understand well. This is one of the importance of regional languages in education. Regional language instructions also help preserve indigenous knowledge and encourage the development of bilingual or multilingualism.

Preserving linguistic diversity- Regional languages represent the linguistic diversity of a country or region. Protecting and promoting regional languages is essential for maintaining the richness of human languages and ensuring their survival for future generations.

Emotional connection- Regional languages in India often evoke a sense of belonging, emotional attachment and Pride among speakers. The faster a dipper connection to one's roots, heritage and local community, strengthening individual and collective identities.

Why should regional languages be taught in school- In an era when the entire world is quickly globalizing, what role does regional language play? Should not be focusing on educating pupils to speak global languages like English and Spanish? This is compelling question but the answer requires carefully pragmatic analysis of spread and reach of these languages in the inner working of a country, as well as how much efforts needs to be put into retaining the majority of working population in that languages which requires not only and additional blog but also a lot of linguistic and cultural research which is not the subject of this blog.

This is presented not as a counter argument to the claim mentioned above, but rather as an alternative approach for its positive Paradigm: what's the advantage of learning regional languages.

Importance of regional language in education- As they facilitate better understanding and comprehensions of concepts, leading to improved learning outcomes. Additionally learning in one mother tongue promotes cultural presentation, identity and inclusive education.

The regional variety of language refers to the specific form or dialect of language that is spoken in a particular reason or geographic area. It encompasses the unique vocabulary, pronunciation, grammar and expressions used by speakers in that specific location distinguishing it from other regional varieties of dialects of some language. Regional languages may differ in terms of accent vocabulary choices and certain grammatical structures reflecting the linguistic diversity within a language.

Conclusion

The integration of the Indian knowledge system and Indian language system may help the stakeholders to know their cultural heritage and they may develop a deep understanding of the environment. As the Indian knowledge system is based on tacit knowledge it can help students to face and tackle the challenges of climate change, food security. The Indian government has taken a step under national education policy to integrate the Indian knowledge system into the curriculum in local languages. There is an emergent need for proper training of teachers so that they have proper knowledge of Indian knowledge system and Indian language system and can deliver it in a meaningful way.

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Challenges In Implementing Indian Knowledge System For Human Well – Being

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ABSTRACT

The Indian way is sustainable and works with a mission ‘Welfare of all’. It is our responsibility to introduce the comprehensive knowledge system of our heritage and demonstrate the ‘Indian method’ of doing things to the world. This requires a generation of trained scholars who will demonstrate and exemplify to the world a unique and peculiar way of life of our great civilization.

The NEP, 2020 recognizes rich ancient heritage and comprehensive Indian knowledge and thought as guiding principles. The Indian Knowledge System includes Knowledge, Science and Vision of life that have evolved out of experience, observation, experimentation and extensive analysis. This tradition of sanctioning and putting into practice has impacted our education, arts, law, justice, administration, health, manufacturing and commerce. This has influenced classical and other ancient languages of India that were transmitted through textual, oral and artistic traditions. Knowledge of India in this sense includes knowledge of ancient India, its successes and challenges and a sense of India’s future aspirations towards education, health, environment and different aspects of life.

The main goal of drawing from our past and integrating the Indian Knowledge System is to ensure that our ancient systems of knowledge are represented by an unbroken tradition of knowledge transmission and providing a distinguished perspective to solve the current and emerging challenges of India and the World.

Key Words : Ancient Heritage, Future aspirations, Knowledge transmissions

Introduction :

Indian culture and philosophy had an important effect worldwide. The contribution of these iconic legacies to the world heritage, on one hand need to not only be supported and conserved for future generations but systematically researched, improved and put to new uses through our developing education system and the New Education Policy 2020.

What are the biggest challenges facing humanity? Climate change, Unemployment, Terrorism, Mental depression etc. suddenly come to our mind. These problems are continuously increasing without having a permanent solution. The western world is unable to address them. The reason behind it is that their world view and societal structure do not provide the knowledge about the solution to overcome the challenges. Our approach should be integrated that results in harmony with one self and with nature. Indian Knowledge System's core concept is to connect with yourself, your community and the creation. Subjects like Yoga, Ayurveda and the rituals that allow knowledge to be practiced in a simplified and detailed manner by the larger population. Inculcating and practicing knowledge will be the key trait of aspiring leaders of the future. If we want to introduce reforms other than Yoga, Ayurveda and the rituals should be introduced in our curriculum for the betterment of our future generation.

Indian Knowledge System help to preserve India's rich and ancient legacy

After the independence in 1947, there was an opportunity to create a constitution and design a state that aligns best with our nation. However, we adopted a policy of colonial state with few criticisms of the ideals and institutions. Right from the notion of nation state and union of states to rights to ideals like equality, choice of democracy to secularism, mostly the modern systems known at that time were adopted in the Indian constitution. There has not been analysis or debate of whether they align with our national aspirations. Consequently, today we have dissonance between the state apparatus and the aspirations of the nation. Our system and institutions need to be rooted in the civilization ethos, i.e. we need swaraj to make India a powerful nation of the world yet again. This needs a thorough study based on the Indian knowledge systems to present a new theory of the state economic philosophy, societal structure etc.

Lack of Education System in providing versatile experience and skills

Swami Vivekananda famously said "Education is the manifestation of perfection already existing in man". The education system today is designed for the atomized individual serving the industrialized world. It is not aimed at bringing to blossom the true potential of the student. It creates self centered job seeking individuals who are focused on making a great platform. How can making a living be the highest aspiration of everyone? We are capable of doing much more than our capability but education limits us. Our ancestors have drilled deep into human nature. Mahabharat says, "A student learns one-fourth from his teacher, one-fourth from his own intelligence, one-fourth with the passage of time and one-fourth from his peers". We need to create an education system that is based on this concept.

Indian Knowledge System for Modern India "To deal Holistic and Complex issues"

How do we unlearn and relearn quickly, how can we adapt our habits in changing contexts, how do we look at things holistically given unlimited information and limited attention spans, how can we watch scenarios through the complexities – these are certain important questions of our

times. Our faculties have not evolved to manage the ever – increasing uncertainties and volatility. The tragedy of our times is that we have been disconnected from our knowledge heritage. The rigorous study requires that we reconnect with the language in which our knowledge lies i.e. Sanskrit. We need to create new curriculum, textbooks and content in multimedia that can be taught in educational institutions and various digital platforms. And most importantly we need to create a practice of habits, rituals and festivals that can bring this knowledge into our day to day life.

Future Role of India in establishing Advanced Knowledge Society

Beside the Chinese, the Indian civilization is the only unbroken living civilization on this planet. It has experienced a great fall, survived them and thrived. It is now lying down due to its injuries, but will rise again. It has always been a “Knowledge civilization”, our biggest strength being the Indian Knowledge System. With the recent decades of economic growth, our confidence as a civilization has increased. At the moment, most importantly we need thought leadership grounded in the Indian Knowledge System. To enable this we need independent Knowledge generating academic institutions. I see how the seeds of this ideas have been sown in due time, they are sure to germinate and spread into the rest of the world. That is the duty of our generation to resolve it.

Indian Knowledge system and its focus towards Mental Health

It is unfortunate that over the years there has been a reduced emphasis on mental health in India, which is the need of the hour especially in the post covid era. The technological advances in the domains of biomedical engineering and cognitive science are already well established all over the world to address mental health concerns.

In the Indian system, health is not just physical resuscitation but has deep psychosomatic (mind-body) connection. We are moving from competition to cooperation and focusing on spiritual aspects of human life and the community's holistic needs. As more and more graduates suffer from lifestyle diseases, it is increasingly important to be incorporated. Yoga and Ayurveda which are among the 20 Indian Knowledge System domains in the Indian pedagogy. This will help students rediscover their spiritual selves and focus on health and wholeness drawn from our centuries old civilization.

Macaulay's education system v/s Indian knowledge system

For decades, the flaws of Macaulay's education system have been criticized, drawing attention to its detrimental effects. Numerous mystics and educationists have shed light on how the British not only neglected India's rich Indian Knowledge System, which had flourished for centuries but also actively sought to destroy and corrupt it. The British were well aware of the profound wisdom and achievements of Indians in fields such as art, music, literature, justice, philosophy, architecture, yoga, chemistry, mathematics, astronomy, astrology and more. They

understood that nurturing this knowledge would prevent Indians from becoming independent and subservient in a true sense. Unfortunately, even after gaining independence, the colonial mindset continued to dominate the systemic policies and procedures. Education and the revitalisation of the Indian Knowledge System plays a crucial role in recognising, embracing and assimilating the nation's 'Self'. The Subjects within the Indian Knowledge System once dismissed as backward and regressive, now rejoice in the much needed attention they are all receiving.

Scholars such as Charak, Sushrut, Aryabhata, Varahmihir, Chanakya, Panini, Patanjali and Gargi are among those mentioned. It is worth noting that the recommended modern subjects under the Indian Knowledge tradition encompass various disciplines including Ancient algebra, Astrology, Indian linguistics, Indian architecture, Ancient Indian Vedas, Medicines, Agriculture, Water management and more. Indian scholars associated with each subject will be acknowledged and their contributions will be highlighted. Teachers will be encouraged to incorporate examples or information related to ancient Indian knowledge while teaching their subjects. The curriculum of the school education also prioritizes the inclusion of the Indian Knowledge System, which is evident even at the foundation level where Indian toys have been included to help children connect with their immediate surroundings.

Numerous ancient knowledge traditions encompass various fields such as Yoga, Ayurveda, Ritual karma, Priesthood, Handicraft, Animal husbandry etc. These traditions can prove highly valuable from both an employment perspective and in revitalising India's traditional sources of livelihood. It is essential to acknowledge that for a populous country like India, these traditional livelihoods hold their own significance.

Presently, Indian society bears witness to several inconsistencies resulting from blind western imitation, excessive materialism and detrimental mechanical approach. The Indian Knowledge System possesses the potential to rectify these anomalies and establish a more harmonious relationship and balance between humanity, nature and environment.

Conclusion :

The inclusion of the Indian Knowledge System in the curriculum at various education levels is unquestionably a commendable and necessary step forward. Indian Knowledge system help us to know the importance of preserving India's rich and ancient legacy. Indian Knowledge System also shows the path to deal with holistic and complex issues of Modern India along with focus towards Mental Health.

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Resurgence of Indian Knowledge

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Abstract:

The NEP (National Education Policy) 2020 encourages the mainstreaming of India's rich knowledge systems in the education curriculum to promote holistic development among students. In this conceptual paper, we explore the history of Indian knowledge systems (IKS) and their relevance to contemporary education reforms. Examining the philosophical bases, scientific progress, cultural heritage and spiritual wisdom found in Indian texts, we seek to understand how ancient wisdom can be harnessed to improve contemporary education practices and policies.

From the Vedas and Upanishads to the Artha-Shastras, India has a rich intellectual legacy spanning centuries. From mathematics and astronomy to medicine and philosophy, India has a wealth of knowledge to offer its students. However, due to colonialism and subsequent modernization, India's knowledge systems were marginalized and replaced by Western paradigms.

In order to bridge this gap, NEP 2020 recognizes the importance of India's historical knowledge systems in defining India's identity and promoting pride in its indigenous heritage. This Resurgence of Indian Knowledge includes elements of Indian philosophy and arts, sciences and ethics in the curriculum, NEP 2020 seeks to provide a comprehensive education that encourages critical thinking, creativity and cultural appreciation. By embracing the historical perspectives of Indian knowledge systems (IKS) under NEP 2020, India is paving the way for an inclusive and holistic approach to education that nurtures students not just academically but spiritually, ethically and culturally.

Keywords: Indian Knowledge System (IKS), Resurgence of Indian Knowledge, National Educational policy 2020, Integration, Indian heritage and culture.

Introduction:

The National Education Policy (NEP) 2020 marks a pivotal moment in the Indian education landscape, advocating the integration of Indian knowledge systems to promote inclusive development. Rooted in the philosophy of inclusion and indigenous wisdom, NEP 2020 recognizes the rich heritage of Indian knowledge systems, with the aim of reviving them and integrating them into the traditional educational framework. Delving into the historical perspective of the Indian knowledge system reveals a tapestry woven of intellectual, spiritual and cultural richness over

many centuries. From the ancient Vedas to the profound ideas of Ayurveda, Yoga and Vedanta, India's intellectual heritage has stood the test of time, providing profound understanding of human existence, social harmony and sustainable living. NEP 2020 recognizes the need to restore and celebrate this heritage, not only as a relic of the past but also as a source of living wisdom adapted to contemporary challenges. Viewed from the perspective of the history of the Indian knowledge system, this policy seeks to bridge the gap between tradition and modernity, promoting a holistic approach to education that nurtures not only academic excellence academics but also moral values, emotional well-being and environmental awareness. Throughout history, the Indian knowledge system has served as a beacon, offering holistic solutions for individual and collective well-being. Whether it is the principles of Ahimsa (non-violence), Dharma (justice) or the complex knowledge of ecology embedded in texts like the Charaka Samhita, Indian wisdom encapsulates a worldview Holism resonates with the interdependence of all life forms. Furthermore, NEP 2020 recognizes the need for a paradigm shift in educational pedagogy, moving from rote learning to experiential learning rooted in indigenous wisdom. By integrating the curriculum with lessons from the Indian knowledge system, students can deepen their understanding of their cultural heritage while developing critical thinking and global citizenship. In essence, the historical perspective of the Indian knowledge system offers a profound roadmap for holistic development, emphasizing the interconnectedness of mind, body, spirit and environment. By adopting this perspective, NEP 2020 paves the way for a transformative educational journey that empowers individuals to tackle the complexities of the modern world with intelligence, empathy and resilience.

Unveiling the tapestry of Indian knowledge:

Dating back thousands of years, Indian civilization has been characterized by a deep reverence for learning and a holistic understanding of the world. One of the earliest manifestations of Indian knowledge systems can be found in the Vedas, ancient scriptures that not only contain hymns and rituals but also serve as repositories of knowledge encompassing diverse fields such as mathematics, astronomy, medicine, and philosophy. The Vedas laid the foundation for the development of various branches of knowledge, including Ayurveda, Yoga, and Jyotish (astrology), which emphasized the interconnectedness of the body, mind, and spirit.

Throughout its history, India has been a melting pot of diverse cultures, languages, and traditions, leading to a vibrant exchange of ideas and the assimilation of knowledge from various sources. This cultural synthesis gave rise to institutions such as the Nalanda and Takshashila universities, which attracted scholars and students from across the world and served as centers of learning and innovation.

The medieval period witnessed further advancements in Indian knowledge systems, with notable contributions in fields such as mathematics (e.g., the concept of zero and the decimal system), medicine (e.g., the development of Ayurvedic treatments), and literature (e.g., the works

of Kalidasa and Mirabai).

Indian knowledge can be categorized into various types, each representing different aspects of the country's rich intellectual heritage. Here are some broad categories:

1) **Traditional Knowledge Systems:**

- Ayurveda: Ancient system of medicine focusing on holistic health and well-being.
- Yoga: Spiritual and physical discipline aimed at achieving harmony between mind, body, and spirit.
- Jyotish (Astrology): Study of celestial bodies and their influence on human affairs.
- Vastu Shastra: Architectural principles for designing buildings in harmony with natural forces.
- Sangeet (Music) and Natyashastra (Drama): Theoretical and practical knowledge of music, dance, and drama.

2) **Philosophical and Spiritual Traditions:**

- Vedanta: Philosophical texts exploring the nature of reality and the self.
- Samkhya: System of metaphysics and cosmology delineating the principles of creation and existence.
- Nyaya: Logical and epistemological system dealing with methods of reasoning and inference.
- Mimamsa: Hermeneutics and philosophy of rituals and religious practices.
- Buddhism, Jainism, and Sikhism: Major Indian religions with their own philosophical traditions.

3) **Scientific and Mathematical Knowledge:**

- Mathematics: Indian mathematicians made significant contributions such as the concept of zero, decimal system, algebra, and trigonometry.
- Astronomy: Ancient Indian astronomers developed sophisticated theories of planetary motion and timekeeping.
- Medicine: Ayurveda is one of the oldest systems of medicine, encompassing herbal remedies, diet, and lifestyle practices.

4) **Literature and Language:**

- Sanskrit Literature: Rich corpus of epics, poetry, dramas, and philosophical texts.
- Tamil Literature: Classical literature in Tamil language comprising poetry, prose, and epics.
- Regional Languages: Diverse literary traditions in languages such as Hindi, Bengali, Telugu, and Kannada.

5) **Art and Culture:**

- Classical Indian Dance: Various dance forms such as Bharatnatyam, Kathak, Odissi, and Kathakali.

- Visual Arts: Painting, sculpture, and architecture reflecting diverse regional styles and influences.
- Folk Traditions: A wide range of folk arts, music, dance, and oral traditions passed down through generations.

6) **Ethical and Moral Values:**

- Dharma: Moral and ethical principles governing individual conduct and societal harmony.
- Ahimsa: Principle of non-violence, central to Indian philosophical and spiritual traditions.

These are just a few examples of the types of Indian knowledge that have been developed and nurtured over thousands of years, contributing to the country's rich cultural heritage and intellectual legacy.

However, with the advent of colonial rule, Indian education underwent a significant transformation, as Western ideas and pedagogical methods were imposed upon the indigenous system. The British introduced a curriculum that prioritized English language education and promoted a Eurocentric worldview, marginalizing indigenous knowledge and traditions in the process.

Hurdles in Infusing Indian knowledge into current education system:

Bringing Indian knowledge into our modern education system comes with its fair share of obstacles.

Given below may be a few challenges that we might face in Integrating Indian knowledge with modern education system:

- 1) **Curriculum Rigidity:** Think of our curriculum like a big, old ship—it's hard to turn quickly. Our current system tends to focus more on Western ideas, so adding Indian knowledge feels like trying to fit a square peg into a round hole.
- 2) **Language Barrier:** Ever tried reading an ancient text in a language you're not familiar with? It's like decoding a secret message. Translating and understanding texts like Sanskrit requires special skills and resources that many educators don't have.
- 3) **Lack of Teacher Training:** Picture teachers as the captains of our educational journey. But if they're not equipped with the right maps and tools, it's tough to navigate the waters of Indian knowledge. They need support and training to lead the way effectively.
- 4) **Standardized Testing:** Imagine trying to measure the depth of the ocean with a ruler—it just doesn't work! Our current testing methods might not capture the depth and richness of what students learn from Indian knowledge.
- 5) **Perception and Bias:** Sometimes, people see traditional knowledge as old-fashioned or less valuable. Changing these views is like turning a big ship—it takes time and effort to shift course towards recognizing the importance of Indian wisdom.

- 6) **Resource Allocation:** Like setting sail without enough supplies, limited resources can hold us back. We need the right tools—like funding for materials, training, and curriculum development—to make this journey successful.
- 7) **Cultural Sensitivity:** Our country is a melting pot of cultures, each with its own flavor. We need to make sure that integrating Indian knowledge respects and celebrates this diversity, creating an inclusive environment for everyone on board.

By addressing these challenges with understanding and teamwork, we can chart a course towards a more enriched and inclusive education system that honors our Indian heritage.

Bridging gaps between Ancient Indian knowledge and Modern Education system:

Initiatives to revive Indian knowledge systems have been taken through policies like the National Education Policy (NEP) 2020, establishing institutes and centers for research and scholarship, fostering international collaboration, promoting cultural revival, leveraging digital platforms for accessibility, and engaging communities in preserving indigenous knowledge. These efforts aim to preserve and promote India's rich heritage of wisdom and traditions for future generations.

With different approaches, we can create an education system that not only imparts knowledge but also fosters a deep appreciation for our cultural heritage and identity.

Following are few approaches that may help achieve our goal:-

- 1) **Curriculum Development:** Let's bring the wisdom of our ancestors into the classroom! Imagine students diving into ancient texts like the Vedas and Upanishads alongside their regular subjects. It's about making our education richer and more meaningful.
- 2) **Interdisciplinary Approach:** Picture students exploring the fascinating connections between Ayurveda and modern medicine or getting excited about the mathematical puzzles hidden in Vedic mathematics. It's like discovering hidden treasures in our own backyard!
- 3) **Teacher Training:** Let's empower our teachers with the tools they need to bring traditional knowledge to life in the classroom. Through workshops and exchanges with experts, they can become the guides who help students navigate this journey of discovery.
- 4) **Language Preservation:** Languages are more than just words; they're vessels of culture and heritage. By embracing and preserving Indian languages as mediums of instruction, we're preserving our identity and connecting with our roots.
- 5) **Experiential Learning:** Imagine students immersing themselves in the vibrant culture of our country, from exploring historical sites to learning traditional crafts firsthand. It's not just about books; it's about experiencing the richness of our heritage.
- 6) **Research and Innovation:** Let's encourage curiosity and creativity in exploring the intersection of traditional knowledge and modern challenges. Who knows what

groundbreaking innovations might emerge when we combine ancient wisdom with cutting-edge technology?

- 7) **Community Engagement:** Our communities are repositories of wisdom passed down through generations. By partnering with them, we can create learning experiences that honor and celebrate our diverse heritage.
- 8) **Policy Support:** Change starts from the top, and advocating for policy reforms is crucial to making our vision a reality. Let's work together to ensure that our education system reflects the values and traditions that make us who we are.

Conclusion:

The National Education Policy (NEP) 2020 represents a landmark shift in India's approach to education, recognizing the importance of integrating Indian knowledge systems into the mainstream curriculum. By promoting a holistic and multidisciplinary approach to learning, the NEP seeks to nurture the intellectual, emotional, and ethical dimensions of students, drawing upon the insights of ancient Indian wisdom traditions leading to the Resurgence of Indian Knowledge. Through the integration of Indian knowledge systems into education, the NEP 2020 aspires to foster a sense of pride and identity among learners, while also equipping them with the skills and knowledge necessary to address contemporary challenges in a rapidly changing world. By embracing India's diverse cultural heritage and indigenous wisdom, the NEP 2020 holds the promise of creating a more inclusive, equitable, and sustainable education system for the holistic development of the nation.

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Integrating Indian Knowledge System for Holistic Development through NEP 2020- A step towards preserving Indian art & culture

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Abstract

Education is fundamental for realizing full human potential and for achieving economic and social mobility, inclusion, and equality. The aim of India is to provide an accessible, equitable and highest-quality education for all learners for promoting society and national development. We are living in the postmodern virtual world where the boundary of the education of a country is blurred and enriched with affluent global thoughts. Whereas the Indian Knowledge system (IKS) is based on Vedic literature, the Vedas and the Upanishads. Existing IKS courses may be synced to digital learning platforms. IKS aims to support and facilitate further research to solve contemporary societal issues. The present study will focus on the incorporating Indian Knowledge system (IKS) in education for preservation of Indian art and culture which will instil a sense of Indian-ness and will help foster cross - cultural understanding, appreciation and respect for diverse indigenous cultures as well as to develop knowledge, skills, and values to become a truly global citizen. The study concentrates on diverse methods for integrating Indigenous Knowledge Systems (IKS) into education through various approaches.

Key words: Indian Knowledge system (IKS), Holistic Development, Vedic literature, Upanishads, culture, art, society

Introduction

New Education Policy 2020 is a large step in the field of education focusing on the elementary-level of education to higher education in India. New Education Policy 2020 has been introduced by the Indian government to flourish all human potentials, qualities and possibilities of the child. The policy makers “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. Indian Knowledge System is a well-structured system that helps in transmission of knowledge from one generation to another. The Vedic literature - Upanishads, Vedas, and Up Vedas are all part of the Indian Knowledge System. This knowledge encompasses a wide range of subjects, including traditional ecological knowledge, oral histories, spiritual beliefs, language, and sustainable practices, all of which have been developed and passed

down through generations within indigenous cultures.

The education in ancient India was aimed not only for the acquisition of knowledge for life beyond schooling, but also for the complete realization and liberation of the self. IKS, with its ancient roots and contemporary relevance, offers a wealth of wisdom encompassing fields such as Ayurveda, Yoga, Mathematics, and Philosophy. The Indian education system produced great scholars such as Charaka, Susruta, Aryabhata, Varahamihira, Bhaskaracharya, Brahmagupta, Chanakya, Chakrapani Datta, Madhava, Panini, Patanjali, Nagarjuna, Gautama, Pingala, Sankardev, Maitreyi, Gargi and Thiruvalluvar, among numerous others, who made seminal contributions to world knowledge in diverse fields such as mathematics, astronomy, metallurgy, medical science and surgery, civil engineering, architecture, shipbuilding and navigation, yoga, fine arts, chess, and more. The rich legacies of Indian culture and philosophy always had a strong influence on the world and hence must not only be nurtured and preserved for posterity but also researched and enhanced to make it more beneficial through our education system. This research paper will provide deep insight to readers about the Indian Knowledge System and its importance in today's world to protect and preserve Indian art and culture.

Methodology: The methodology for this research paper consists of a conceptual discussion on highlighting the main points of the national educational policy framework, highlighting various sections of the policy of NEP 2020 and comparing it with prevalent education policy and acts like RTE. Analyzing, judging the innovations made in NEP 2020 for the preservation of Indian art & culture by the way of integrating it into the curriculum by Group Discussion, brainstorming and searching the other policies and acts on websites. The implications of the policy are analyzed using the predictive analysis technique.

The researcher has gone through the report of the previous education policies, committees and studied related literature closely which are desirable for this study.

Objectives:

1. To know the importance of a holistic approach to the 'all-round development' of the child.
2. To highlight the importance of integrating IKS in education to solve current and emerging challenges of India.
3. To establish a meaningful connection between students and their ancient roots.
4. To analyse the role of the ancient education system in the modern education system.

Understanding Traditional Indian Knowledge Systems

The integration of Traditional Indian Knowledge Systems (IKS) into the educational landscape not only serves as a means of cultural preservation but also holds the potential to redefine the learning paradigm in India. By incorporating IKS into the mainstream curriculum, educators are presented with a unique opportunity to cultivate a more profound understanding of

India's heritage among students. This shift in educational focus aims to instill not only academic knowledge but also a sense of cultural pride and identity, fostering a generation that is deeply connected to its roots. Furthermore, the infusion of IKS into the education system promotes a holistic approach to learning, transcending the conventional boundaries of academic disciplines. This interdisciplinary integration allows students to explore the intersections between traditional knowledge and contemporary subjects such as science, arts, and humanities. The synthesis of diverse knowledge fields not only enriches the learning experience but also equips students with a well-rounded perspective that is essential for addressing complex challenges in today's world. In the realm of sustainable development, the emphasis on traditional ecological practices embedded in IKS becomes particularly significant. By encouraging environmentally friendly and resource-efficient approaches, the education system contributes to the cultivation of a sustainable mindset among students.

Multidisciplinary Education in the Context of Ancient India

In India, holistic and multidisciplinary education is not a new notion, it was followed in ancient India also. In ancient India, education (Vidhya) was imparted to the students by the 'gurus' or 'Acharya' (teachers) in the 'gurukuls' (schools). Those gurukuls were purely operated on the basis of a multidisciplinary approach. In that time, the curriculum included life skills, martial arts and knowledge of Vedas. In ancient times, it was considered that education means attainment of 64 kalas (skills or arts) by the individual. Those 64 kalas enabled an individual to live a prosperous life. Multidisciplinary education is not only peculiar in the ancient times but it has its relevance in the present times also. The current educational system emerged during the British rule in India. The main focus of British education was just to prepare English speaking clerks so that the tasks of British government administration were easily executed. But that type of education did not fulfill the needs of Indian society. That is why in this twenty-first century, India again brings back its traditional system of education because it is the need of the hour in the present times.

Indian knowledge system in Education:

The IKS will be introduced in a scientific way in school and higher education curricula. The IKS will include tribal knowledge as well as indigenous and traditional learning methods which will cover and include mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, as well as governance, polity and conservation. Specific courses in tribal ethno-medicinal practices, forest management, traditional (organic) crop cultivation, natural farming, etc. will also be made available. An engaging course on Indian Knowledge Systems will also be available to students in secondary school as an elective. The Indian Knowledge system is passed from generation to generation, it is Dharma, Philosophical, Cultural, Holistic, Spiritual and relationship with nature as well as, language, teachings from epics, Puranas, kalas, and vidyas and it is a legacy from Vedic, Buddhist, Jain to

create well being of all and to create human potential. The contribution to IKS Ramayana, Mahabharata, Yoga-sutras by Patanjali, Panini's Ashtadhyayi on Sanskrit Grammar, Gautama's Nyaya Sutras on Logic, Kanada's Vaisesika Sutras on Ontology, Narada's Shilpa sastra on Architecture and Civil engineering, Kshemasarma's Kshema Kutuhalam on Dietetics and Well-being, Sushruta's Sushruta Samhita on Medicine and Surgery, Kautilya's Arthasastra on Economics, Vishnu Sharma's PanchaTantra Stories, Bharata's Natyasastra on Dance, Mahaviracarya Ganita-Sara sangraha, it gives a complete picture of the system. The National Education Policy 2020 lays special emphasis on the promotion of Indian Languages, Arts and Culture and "The objective of the policy is to provide a multidisciplinary and interdisciplinary education."

Methods of Teaching in Ancient Indian Knowledge System

Vidhya traditionally means knowledge, comprises of 18 branches (known as 18 vidhyasthanams). In ancient India, there were great scholars who mastered all the 18 vidhyasthanams. The various vidhyasthanams are as follows:

Veda-angi (the main body, all upanishads are included in vedas)

- 01) Rig Veda – contains mantras to praise and invoke various deities.
- 02) Sama Veda – contains mantras of Rig veda sung in musical rendition.
- 03) Yajur Veda – contains procedures which adds to Rig veda to perform worships and sacrifices.
- 04) Atharva Veda – contains mantras used in sacrifices to ward off evil calamities.

Veda-angas (branches of vedas)

- 05) Shiksha – the science of pronunciation.
- 06) Kalpa – procedures to perform vedic rituals.
- 07) Vyakarana – the science of linguistics.
- 08) Nirukta – meaning of words together with etymology.
- 09) Chandas – the science of both vedic and non-vedic meters.
- 10) Jyothisha – the science of astronomy and astrology.

Upa-angas (sub-subsidiary aspects)

- 11) Mimamsa – the science of deep understanding and inquiry.
- 12) Nyaya-vistara – detailed study about the means of knowledge.
- 13) Purana – contains moral education from vedas through stories.
- 14) Dharmashastra – comprises code of conduct, religious and legal duties.

Upa-vedas (applied knowledge)

- 15) Ayurveda – the science of life.
- 16) Dhanurveda – the science of weapons and wars.
- 17) Gandharva-veda – the study of fine arts encompassing drama, music, dance.

18) Arthashastra – treatise on wealth, public governance, military strategies.

Kala means performing art in Sanskrit. The mastery of as many of the 64 traditional arts known as the Chausath Kalas or Chatusashti Kalas, formed an important basis in the development of a cultured individual in many parts of ancient India.

Chausath Kalas (64 forms of art)

1. Geet vidya: art of singing.
2. Vadya vidya: art of playing on musical instruments.
3. Nritya vidya: art of dancing.
4. Natya vidya: art of theatricals.
5. Alekhya vidya: art of painting.
6. Viseshakacchedya vidya: art of painting the face and body with colour
7. Tandula-kusuma-bali-vikara: art of preparing offerings from rice and flowers.
8. Pushpastarana: art of making a covering of flowers for a bed.
9. Dasana-vasananga-raga: art of applying preparations for cleansing the teeth, cloths and painting the body.
10. Mani-bhumika-karma: art of making the groundwork of jewels.
11. Aayya-racana: art of covering the bed.
12. Udaka-vadya: art of playing on music in water.
13. Udaka-ghata: art of splashing with water.
14. Citra-yoga: art of practically applying an admixture of colours.
15. Malya-grathana-vikalpa: art of designing a preparation of wreaths.
16. Sekharapida-yojana: art of practically setting the coronet on the head.
17. Nepathya-yoga: art of practically dressing in the tiring room.
18. Karnapatra-bhanga: art of decorating the tragus of the ear.
19. Sugandha-yukti: art of practical application of aromatics.
20. Bhushana-yojana: art of applying or setting ornaments.
21. Aindra-jala: art of juggling.
22. Kaucumara: a kind of art.
23. Hasta-laghava: art of sleight of hand.
24. Citra-sakapupa-bhakshya-vikara-kriya: art of preparing varieties of delicious food.
25. Panaka-rasa-ragasava-yojana: art of practically preparing palatable drinks and tinging draughts with red colour.
26. Suci-vaya-karma: art of needle works and weaving.
27. Sutra-krida: art of playing with thread.
28. Vina-damuraka-vadya: art of playing on lute and small drum.

29. Prahelika: art of making and solving riddles.
30. Durvacaka-yoga: art of practicing language difficult to be answered by others.
31. Pustaka-vacana: art of reciting books.
32. Natikakhyayika-darsana: art of enacting short plays and anecdotes.
33. Kavya-samasya-purana: art of solving enigmatic verses.
34. Pattika-vetra-bana-vikalpa: art of designing preparation of shield, cane and arrows.
35. Tarku-karma: art of spinning by spindle.
36. Takshana: art of carpentry.
37. Vastu-vidya: art of engineering.
38. Raupya-ratna-pariksha: art of testing silver and jewels.
39. Dhatu-vada: art of metallurgy.
40. Mani-raga jnana: art of tinging jewels.
41. Akara jnana: art of mineralogy.
42. Vrikshayur-veda-yoga: art of practicing medicine or medical treatment, by herbs.
43. Mesha-kukkuta-lavaka-yuddha-vidhi: art of knowing the mode of fighting of lambs, cocks and birds.
44. Suka-sarika-pralapana: art of maintaining or knowing conversation between male and female cockatoos.
45. Utsadana: art of healing or cleaning a person with perfumes.
46. Kesa-marjana-kausala: art of combing hair.
47. Akshara-mushtika-kathana: art of talking with fingers.
48. Dharana-matrika: art of the use of amulets.
49. Desa-bhasha-jnana: art of knowing provincial dialects.
50. Nirmiti-jnana: art of knowing prediction by heavenly voice.
51. Yantra-matrika: art of mechanics.
52. Mlecchita-kutarka-vikalpa: art of fabricating barbarous or foreign sophistry.
53. Samvacya: art of conversation.
54. Manasi kavya-kriya: art of composing verse
55. Kriya-vikalpa: art of designing a literary work or a medical remedy.
56. Chalitaka-yoga: art of practicing as a builder of shrines called after him.
57. Abhidhana-kosha-cchando-jnana: art of the use of lexicography and meters.
58. Vastra-gopana: art of concealment of cloths.
59. Dyuta-visesha: art of knowing specific gambling.
60. Akarsha-krida: art of playing with dice or magnet.
61. Balaka-kridanaka: art of using children's toys.
62. Vainayiki vidya: art of enforcing discipline.

63. Vaijayiki vidya: art of gaining victory.

64. Vaitaliki vidya: art of awakening master with music at dawn.

A Step towards preserving Indian Art and Culture through NEP 2020

The preservation and promotion of India's cultural wealth must be considered a high priority for the country, as it is truly important for the nation's identity as well as for its economy. Cultural awareness and expression are two of the most important skills to enshrine in children in order to give them a sense of identity, belonging, and appreciation for other cultures and identities. It is through the development of a strong sense and knowledge of their own cultural history, arts, languages, and traditions that children can build a positive cultural identity and self-esteem. In IKS the emphasis on different regional languages should be there as languages influence the way people of a given culture speak with others, including with family members, authority figures, peers, and strangers, and influence the tone of conversation. Language is inextricably linked to art and culture, in particular, efforts should be made to preserve and promote all Indian languages including classical, tribal and endangered languages should be taken on with new vigour.

A common programme should be implemented so that IKS can be integrated into the domain of school education. IKS should not be separated from the syllabi in classes 1-3, but should be integrated into the curriculum and programme. Short stories about chivalry, bravery, manifesting the theme of Indian culture and traditions should be narrated in these classes. There should be cross-referencing of research material. IKT should permeate the student's mind and heart. For classes 4 –7, one course or portion of EVS that is embedded or rooted in our Indianness should be included in the school curriculum. IKT and vernacular language should be introduced in classes 9-10 and one chapter should be devoted to vernacular language and the history of languages. Visits to historical sites, source libraries, and Indian museums should be used to incorporate Indian Knowledge Traditions into the curriculum. Indian Knowledge Traditions should be introduced as a course for classes 11 and 12 where the focus should be on Sanskrit-based upanishads and Indian ethos. These classes should follow a structured curriculum on IKS that imparts knowledge. Innovative approaches to introducing and infusing IKT through pictorial representation, vernacular language, and culture are required. Cultural awareness and expression are among the major competencies considered important to develop in children, in order to provide them with a sense of identity, belonging, as well as an appreciation of other cultures and identities. It is through the development of a strong sense and knowledge of their own cultural history, arts, languages, and traditions that children can build a positive cultural identity and self-esteem.

Challenges in integrating IKS:

Resistance to Change: Traditional Pedagogical Practices: HEIs often adhere to established pedagogical practices, and there may be resistance to incorporating the holistic and

interdisciplinary approaches inherent in the Indian knowledge system.

Institutional Culture: Institutional inertia and resistance to change can pose significant challenges, especially if there is a long-standing tradition of a particular educational model.

Resource Constraints Financial Limitations: Implementation of the Indian knowledge system may require investments in curriculum development, infrastructure, and faculty training. Financial constraints within institutions can hinder the seamless integration of these changes.

Lack of Learning Resources: Adequate resources, including textbooks, digital materials, and learning aids that align with the principles of the Indian knowledge system, may be limited, affecting the effectiveness of the implementation.

Faculty Training: Skill and Knowledge Gap: Faculty members may lack the requisite knowledge and skills to effectively incorporate Indian knowledge system principles into their teaching methods.

Resistance from Faculty: Some faculty members may resist the additional workload and changes in teaching methods, creating a barrier to the successful integration of the Indian knowledge system.

Opportunities

Diversity and Inclusivity: Cultural Sensitivity Training: Providing faculty with training in cultural sensitivity can enhance their ability to integrate the Indian knowledge system in a way that respects and embraces diverse perspectives.

Inclusive Curriculum Design: Adapting the curriculum to be more inclusive, incorporating diverse perspectives and recognizing the value of different knowledge systems can create a learning environment that fosters cultural richness.

Exchange Programmes: Implementing student and faculty exchange programmes with institutions globally can promote cross-cultural understanding and enrich the educational experience. The students are engaged in the cultural immersion of another country which provides challenges of navigating a new country. The course work will also include internships and service-learning experiences.

Technology Integration: Online Platforms: Leveraging technology can help overcome resource constraints by providing online platforms for learning materials, virtual collaborations, and remote training for faculty.

Digital Resources: Developing digital resources aligned with the Indian knowledge system can enhance accessibility and support self-paced learning.

Partnerships with Indigenous Knowledge Holders: Collaborating with indigenous communities and knowledge holders can provide a valuable source of Traditional Ecological Knowledge and cultural insights.

Government Support and Policy Advocacy: Policy Initiatives: Government support through

policy initiatives that recognize and encourage the integration of the Indian knowledge system can provide a conducive environment for change.

Various strategies can be employed to seamlessly integrate Indian knowledge systems into education:

- Infusing traditional Indian values and teachings into the curriculum.
- Establishing universities and institutions dedicated to studying and promoting ancient Indian wisdom.
- Promoting interdisciplinary learning that harmonizes modern and traditional knowledge systems.
- Offering courses on Indian history, philosophy, arts, and literature.
- Encouraging the study of regional languages.
- Organizing cultural events and activities that celebrate Indian traditions.
- Encouraging interdisciplinary research that blends traditional knowledge with modern scientific approaches.
- Establishing research centres dedicated to studying ancient Indian knowledge systems.
- Providing funding and support for projects exploring the practical applications of traditional Indian wisdom across various fields.

Conclusion

IKS includes knowledge from ancient India, its successes and challenges, and a sense of India's future aspirations specific to education, health, environment and indeed all aspects of life. The IKS aims to support and facilitate further research to solve contemporary societal issues in several fields such as Holistic health, Psychology, Neuroscience, Nature, Environment & Sustainable development. IKS is an innovative cell established to promote interdisciplinary research on all aspects of IKS, preserve and disseminate IKS for further research and societal applications through NEP 2020. It will actively engage in spreading the rich heritage of our country and traditional knowledge. The IKS will include tribal knowledge as well as indigenous and traditional learning methods which will cover and include mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, as well as governance, polity and conservation.

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Karanwal, B., & Singh, M. B. EMBEDDING INDIAN KNOWLEDGE TRADITIONS IN SCHOOL EDUCATION

GOEIIRJ

Sustainable Development and Indian Knowledge System

Laxmi Sharma

Abstract

‘A nation without education is little more than a gathering of apes and monkeys.’ It is not at all possible for any civilization to survive more than a generation without education. Education builds every nation since it fosters a certain degree of knowledge, morals and awareness and is also essential for the advancement of technology.

Education system of any country should always be for sustainable development that gives learners of all ages knowledge, skills, values and agency to address interconnected global challenges. In this sense, Indian Knowledge Systems comprise of Jyan, Vigyan and Jeevan Darshan that have evolved out of experience, observation, experimentation and are sustainable and strive for the welfare of all.

It is important to regain the comprehensive knowledge system of our heritage and demonstrate the ‘Bhartiya Way’ of doing things to the world.

When we talk about sustainability, we are talking about a development model that can meet the needs of the present without compromising the ability of future generations to meet their own. It’s a holistic approach that considers the social, environmental and economic impact of actions and decisions taken today. From the historical perspective, the concept of sustainability was formulated at the first United Nations conference on the Environment in 1972, but it has only really taken shape since 1987, when the publication of the so-called Brundtland Report clarified the goals of sustainable development. The report introduced the three pillars or principles of environmental, social and economic sustainability.

All the above-mentioned principles can be achieved only through proper planning and timely implementation of the same. Indian Knowledge System can play a foundation or platform role for erecting these three pillars.

Many researches done in this area have stressed that the Indigenous knowledge provides framework, ideas, guiding principles, practices and measures that can serve as the foundation for the effective development process for restoring social, economic and environmental resilience of the world at large.

Boons and Hens (2007) stressed that Indigenous knowledge systems can encompass years of analytical and experimental approaches to sustainable development and aids in re-shaping developmental methods in sectors like politics, governance, agriculture, health, natural resource management, commerce and industry etc.

Keywords: Education, Development, learner, values, Jyan, Vigyan, Jeevan Darshan, experience, observation, experimentation.

Introduction

When we focus on the word Sustainable Development the immediate definition that comes in our mind is **Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.**

Sustainability is the foundation for today's leading global framework for international cooperation—the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). In June 2022, environmental leaders from around the world met to take stock of where we've been and where we are heading, with the goal of galvanizing momentum for the UN Decade of Action for achieving the SDGs. These conferences are major milestones in sustainable development governance. But their real test comes from the work that happens every day, from individuals and local communities to international organizations and beyond.

Nikola Tesla : The Father of Sustainable Development

Much before World Commission on Environment and Development (WCED), the Brundtland Commission's, The Centre for Our Common Future and Rio Declaration on Environment and Development – before 1900, Nikola Tesla revolutionarily saw that definitions of sustainable development required that we observe the world as a system that connects space and as a system that connects time. Tesla fought for development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Moreover, in his amazing article "The Problem of Increasing Human Energy" published in Century Illustrated Magazine in June 1900, Tesla opens a new chapter in humankind: the Energy. Originality and prophetic role of Tesla could also be analyzed through the concept of the article "The Power of the Future" written around 1920.

Features of Sustainable Development

Sustainable Development is a well-planned and well-organized development effort. Its major characteristics are listed below.

- It helps make best utilization of means and resources.
- It helps control utilitarian culture.
- It helps in achieving broad and high economic growth.
- It helps in fair distribution of means and resources.
- It helps fulfill the needs of the current generation, respecting the needs of the future.
- It causes the least possible damage to the environment.
- It maintains harmony between population and environment.
- It integrates conservation programs with development programs. Focus on 3R's: reduce, reuse and recycle.

The Three Core Elements of Sustainable Development are briefly discussed below:

- Environmental Conservation: The primary focus of Sustainable Development is to protect

the environment so that the resources provided by it do not get destroyed.

- Social Development: It aims to attain the well-being of an individual and society at large. It entails the availability of necessary resources, proper health care and good quality of life for people.
- Economic Progress: It encourages people to invest in sustainable efforts by persuading them through its long term benefits and supporting both the environmental and social elements of the cause.

The Global Goals and the 2030 Agenda for Sustainable Development.

The Global Goals and the 2030 Agenda for Sustainable Development seek to end poverty and hunger, realize the human rights of all, achieve gender equality and the empowerment of all women and girls, and ensure the lasting protection of the planet and its natural resources. The Global Goals are integrated and indivisible and balance the three dimensions of Sustainable Development: the Economic, Social And Environmental.

Sustainable Development Goals:

At the UN summit on 25th September, 2015, the world's heads of state and government adopted 17 Global Goals. The countries of the world have committed themselves to leading the world towards a sustainable and equitable future.

- No Poverty: Goal 1 is to end poverty in all its forms everywhere.
- Zero Hunger: Goal 2 is to end hunger, achieve food security and improved nutrition and promote sustainable agriculture.
- Good Health and Well-being: Goal 3 is to ensure healthy lives and promote well-being for all.
- Quality Education: Goal 4 is to ensure inclusive and equitable quality Education and promote lifelong learning opportunities for all
- Gender Equality: Goal 5 is to achieve gender equality and empower all women and girls.
- Clean water and Sanitation: Goal 6 is to ensure availability and sustainable management of water and Sanitation for all.
- Affordable and Clean Energy: Goal 7 is to ensure access to affordable, reliable sustainable and modern energy for all .
- Decent Work and Economic Growth: Goal 8 is to promote sustained, inclusive and sustainable economic growth, full productive employment and decent work for all.
- Industry, Innovation and Infrastructure: Goal 9 is to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- Reduced Inequalities: Goal 10 is to reduce inequalities within and among countries.
- Sustainable Cities and Communities:- Goal 11 is to make cities and human settlements inclusive safe, resilient and sustainable.

- Responsible Consumption and Production: Goal 12 is to ensure sustainable consumption and production pattern.
- Climate Action: Goal 13 is to take urgent action to combat climate change and its impact.
- Life Below Water : Goal 14 is to conserve and sustainably use the oceans, seas and marine resources for sustainable development.
- Life on Land: Goal 15 is to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss.
- Peace, Justice and Strong Institutions: Goal 16 is to promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
- Partnerships for the Goals: Goal 17 is to strengthen the means of implementation and revitalize the global partnership for sustainable development.

All the above mentioned principles and goals can be achieved only through proper planning and implementation of the suggested program by every nation. The three pillars or core elements of sustainable development can be erected only through the education system of that particular country.

For erecting these pillars Indian Knowledge System can play foundation or platform role.

Indian Knowledge System

Indian Knowledge System or Traditional knowledge or Indigenous knowledge refers to the combined traditional and scientific knowledge. It is known that traditional knowledge is sustainable as it has evolved after thousands of years of experience and observation. This form of knowledge interlinks and establishes a holistic relationship between man and nature. Research says that Indigenous knowledge can be the best provider for useful information, ideas, principles and measures that can lay a foundation for an effective development process of getting and restoring social, economic and environmental resilience of the world at large.

The contemporary times witness ecological crises and concerns at the expense of incoming growth and developmental programs that have reached even the remote corner of the world at large. Despite the significant improvement in development indicators in terms of health status, education, reduction of poverty, technology etc. the world is threatened with ecological debt with increased pressure on natural resources globally to meet the demand of the development forces and agents (Aggrawal, 2008).

The question of sustainability haunts developing countries of the world like India, which faces constant negotiation and struggle in confronting the growing complexities of the world by way of rampant exploitation of the rich natural resources it offers. In this light, it is pertinent to acknowledge the role of indigenous knowledge of local communities which has been the base of

sustaining the fragile ecosystem without much recognition and appreciation given the fact that it is not rooted in formal institutions.

It is well established that India has a strong and vibrant cultural diversity and each cultural group or community have developed their own knowledge system over the years which was originally passed down through oral tradition. A home to about 744 approx (census 2011) tribal communities, ethnic groups and diverse cultural background, India acts as a storehouse of Indigenous knowledge thereby depicting a rich yet curious intermixing of knowledge systems.

Indigenous knowledge is rich and extensive with special references to indigenous communities of India wherein the given environment and natural resources are viewed not only as means of sustenance/ livelihood but they construct their world view and cosmology around it.

It is noteworthy that the world and the indigenous communities in it have a rich accumulation of knowledge based on their cultures, environments, social, political and economic institutions, natural resources, which may be according to Boon & Hens (2007) the 'key drivers' for poverty reduction, livelihood improvement and attaining sustainability of the given environment.

It was only through United Nations conference on environment and education in 1992, World Conservation Strategy of International Union and Conservation of Natural Resources in 1980, Brundtland Commission and World Commission on Environment and Development, 1987, the concept of Indigenous knowledge gained its world wide recognition and its efficacy was realized (Mahalik & Mahapatra, 2010). These events brought forth the importance of indigenous knowledge in environmental sustainability and confirmed its existence in every country, community and the society at large, in contrast to the existing misconception that such a knowledge system is confined only to tribal groups or the marginalized sections of the world.

In that sense, it can be said that the Indian Knowledge System encompasses years of analytical and experimental approaches to sustainable development. The Indian Knowledge System is resource efficient and effective and they have been able to conserve and manage the resources much better than externally imposed, technocratic and resource intensive management systems, which the global offers today.

Research conducted by Parajuli and Das (2013) confirms the significant role of indigenous knowledge in environment sustainability where in the indigenous communities across the globe are conserving biodiversity in order to sustain themselves which eventually conserve the whole environment. However when it comes to policy making and developmental planning of the natural resources, the most important voices are often left unheard – the voice of local communities who are the bearers of extensive ecological knowledge of the ecosystem (Kumar, 2010).

Application of Indigenous Knowledge in Indian Context

With a major bulk of population belonging to agricultural sector in India, it is not doubt that much of the country's land is occupied by small scale farmers, subsistence cultivators,

herbalist, hunters and gatherer etc who depend on forest and numerous forest products available in the given environment relying on their locally relevant knowledge systems.

According to 2011 Census, it has been stressed that almost half of the total employment in the country's economy is generated in the agricultural sector providing sustenance and livelihood to more than 70% of the people living in the rural location.

This confirms that the forest and the natural resources available in it is not only source food, fuel, fodder, medicine, meat, and so on but it is home to millions of rural poor upon which their daily narratives and cosmology is constructed.

Indian Knowledge is multifaceted and so one may come across a wide array of knowledge systems in agriculture, forest cover, medicine and human health, plant and animal life , land pattern, water conservation, food security and so on.

Conclusion

In this light, there is dire urgency to acknowledge and recognise Indigenous knowledge of tribal groups and indigenous communities keeping in mind its ecological significance and efficacy in conservation measures. It is further recommended that the developmental platform, policy makers, environmentalists, conservationists, natural resource management committee etc. should incorporate local communities in planning and development of the natural resources besides utilizing their ecological knowledge and resource management method for conserving the resources at large. In addition, many emerging studies have put forth the urgency to give a formal platform to indigenous knowledge systems by way of adopting, redefining and integrating it into mainstream policy and programs for the world to achieve greater, if not complete sustainability development.

Indian Knowledge System a vast and ancient repository of wisdom that encompasses various fields such as philosophy, science, medicine, arts and management. Rooted in the cultural and spiritual heritage of India, Indian Knowledge System has significantly influenced the sustainable development of thoughts and practices across the centuries. The Indian Knowledge System is an essential tool for improving the overall quality of education. The Education that will be a great opportunity for improving data management, better decision making, for increasing learning outcomes and communication within and among countries in order to achieve greater if not complete sustainability development.

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भारतीय ज्ञान प्रणालीचा विद्यार्थ्यांना होणारा फायदा

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गोषवारा :

भारतीय ज्ञान प्रणालीमध्ये ज्ञान, विज्ञान आणि जीवन दर्शन यांचा समावेश होतो जे अनुभव, निरीक्षण, प्रयोग आणि कठोर विश्लेषणातून विकसित झाले आहेत. प्रमाणीकरण आणि आचरणात आणण्याच्या या परंपरेने आपल्या शिक्षण, कला, प्रशासन, कायदा, न्याय, आरोग्य, उत्पादन आणि वाणिज्य यावर परिणाम केला आहे. याचा प्रभाव भारतातील अभिजात आणि इतर भाषांवर झाला आहे, ज्यांचा प्रसार शाब्दिक, मौखिक आणि कलात्मक परंपरांद्वारे झाला होता. या अर्थाने "भारताचे ज्ञान" मध्ये प्राचीन भारतातील ज्ञान आणि त्याचे यश आणि आव्हाने आणि भारताच्या भविष्यातील आकांक्षा, शिक्षण, आरोग्य, पर्यावरण आणि जीवनाच्या सर्व पैलूंबद्दलचे ज्ञान समाविष्ट आहे.

संस्कृती, इतिहास आणि विविधतेच्या समृद्धी सह भारताने नेहमीच शिक्षण क्षेत्रात सखोल व अढळ स्थान निर्माण केले आहे. भारत सरकारने, देशाचे भविष्य घडवण्यात शिक्षणाची महत्वाची भूमिका ओळखून, भारतीय ज्ञान प्रणाली म्हणून ओळखल्या जाणाऱ्या सर्वसमावेशक फ्रेमवर्कची अंमलबजावणी केली आहे . ही प्रणाली समकालीन ज्ञान आणि जागतिक परिप्रेक्ष्यांचा समावेश करून देशाच्या प्राचीन गोष्टी पासून प्रेरणा घेऊन शिक्षणासाठी चा सर्वांगीण दृष्टिकोन दर्शवते.

सर्वसमावेशकता आणि सांस्कृतिक वारशात रुजलेली, भारतीय ज्ञान प्रणाली समाजासाठी अर्थपूर्ण योगदान देण्यास सक्षम असलेल्या चांगल्या व्यक्तींचे पालनपोषण करण्याच्या वचनबद्धतेचे स्मरण करते. या प्रणालीच्या गुंतागुंतीचा शोध घेत असताना, आम्ही पारंपारिक मूल्ये, अत्याधुनिक तंत्रज्ञान आणि दूरगामी मानसिकता पाहतो. ही प्रस्तावना भारत सरकारचे शैक्षणिक प्रयत्न देशाच्या पुढच्या पुढच्या पिढीतील शिकणाऱ्या आणि पुढाऱ्यांना कसे घडवतात याचे जवळून परीक्षण करण्याचा टप्पा निर्माण करते.

भारतीय ज्ञान प्रणाली, शिक्षणासाठी सर्वांगीण आणि सांस्कृतिकदृष्ट्या रुजलेली दृष्टीकोन मूर्त स्वरूप देते. भारताच्या प्राचीन शहाणपणापासून ते पारंपारिक मूल्यांना समकालीन ज्ञानासह एकत्रित करते, जगाची व्यापक समज वाढवते. या प्रणालीमध्ये, शिक्षण हे पाठ्यपुस्तकांच्या पलीकडे जाते, कला, क्रीडा आणि अतिरिक्त क्रियाकलापांद्वारे सर्वांगीण विकासावर भर देते.

सांस्कृतिक एकात्मता हा एक कोनशिला आहे, जो अभिमान जागृत करतो आणि वारसाशी जोडतो. प्रादेशिक भाषांना प्रोत्साहन दिले जाते, सर्वसमावेशकता सुनिश्चित करून आणि भाषिक विविधता जपली जाते. विद्यार्थ्यांना वास्तविक-जगातील आव्हानांसाठी तयार करून ज्ञानाचा व्यावहारिक उपयोग प्राधान्याने केला जातो. आधुनिक युगात तंत्रज्ञानाचे महत्त्व मान्य करून डिजिटल साक्षरता हा केंद्रबिंदू आहे.

१] सांस्कृतिक समृद्धी:

भारतीय ज्ञान प्रणाली, सांस्कृतिक समृद्धीवर भर देऊन, विद्यार्थ्यांना भारताच्या समृद्ध वारशाची ओळख करून देऊन त्यांच्यावर खोलवर प्रभाव टाकते. हे एक्सपोजर ओळख आणि अभिमानाची खोल

भावना विकसित करते, विद्यार्थ्यांमध्ये त्यांच्या मुळांशी जोडलेले असते. अभ्यासक्रमातील प्राचीन ग्रंथ आणि तत्त्वज्ञानाचा शोध घेणे एक अद्वितीय लेन्स देते ज्याद्वारे विद्यार्थी गहन मूल्ये आणि नैतिक तत्त्वे शोधू शकतात. देशाच्या सांस्कृतिक टेपेस्ट्रीमध्ये गुंतून राहून, विद्यार्थी शैक्षणिक अंतर्दृष्टी प्राप्त करतात आणि त्यांच्या समाजाला आकार देणाऱ्या ऐतिहासिक आणि तात्विक आधारांची व्यापक समज विकसित करतात. हे सांस्कृतिक संवर्धन वैयक्तिक वाढीसाठी एक पाया बनते, एक चांगले गोलाकार जागतिक दृष्टीकोन वाढवते आणि केवळ शैक्षणिकदृष्ट्या पारंगत नाही तर सांस्कृतिकदृष्ट्या जागरूक आणि सामाजिकदृष्ट्या जागरूक व्यक्तींच्या विकासात योगदान देते.

२] सर्वांगीण विकास :

भारतीय ज्ञान प्रणाली सर्वांगीण विकासावर जोर देते, कला, क्रीडा आणि अभ्यासक्रमेतर क्रियांचा शैक्षणिक फॅब्रिकमध्ये समावेश करते. हे एकीकरण विद्यार्थ्यांनी शैक्षणिक उत्कृष्टतेच्या पलीकडे एक उत्तम कौशल्य विकसित करण्याची खात्री देते. सर्जनशीलता आणि गंभीर विचारांवर प्रणालीचे लक्ष विद्यार्थ्यांना विविध आव्हानांना नेव्हिगेट करण्यासाठी साधनांसह सुसज्ज करते, रॉट लर्निंगच्या पलीकडे मानसिकता वाढवते. या पैलूंचे पालनपोषण करून, विद्यार्थी शैक्षणिकदृष्ट्या निपुण असतात आणि सतत विकसित होत असलेल्या जगात यशासाठी आवश्यक सर्जनशीलता आणि विश्लेषणात्मक कौशल्ये त्यांच्याकडे असतात.

३] व्यवहारीक उपयोग:

भारतीय नॉलेज सिस्टीम व्यावहारिक अनुप्रयोगावर प्रीमियम ठेवते, हाताने शिकण्यावर आणि समस्या सोडवण्याच्या कौशल्यांचा सन्मान करते. ज्ञानाच्या वास्तविक-जगातील वापरास प्राधान्य देऊन, विद्यार्थी सैद्धांतिक समजाने सुसज्ज होतात आणि अनुकूलनक्षमता आणि नाविन्यपूर्ण कौशल्ये मिळवतात. हा सराव सिद्धांत आणि सराव यांच्यातील अंतर कमी करतो, विद्यार्थ्यांना व्यावसायिक लँडस्केपच्या गतिशील आव्हानांसाठी तयार करतो. हे एक मानसिकता निर्माण करते जिथे सैद्धांतिक संकल्पनांना मूर्त अभिव्यक्ती सापडते, सर्जनशीलता आणि व्यावहारिक अंतर्दृष्टीसह वास्तविक-जगातील समस्यांचे निराकरण करण्यास सक्षम शिकणाऱ्यांच्या पिढीला प्रोत्साहन देते.

४] भाषा प्राविण्य:

भारतीय ज्ञान प्रणाली प्रादेशिक भाषांना प्रोत्साहन देऊन, भाषिक वैविध्य जतन करून आणि विद्यार्थ्यांना त्यांच्या सांस्कृतिक वारशाची सखोल प्रशंसा करून समृद्ध करून भाषेच्या प्राविण्याला प्राधान्य देते. द्विभाषिक शिक्षण जागतिक संदर्भात त्यांची महत्त्वपूर्ण भूमिका ओळखून संवाद कौशल्ये वाढवते. हा दृष्टिकोन प्रभावी क्रॉस-सांस्कृतिक संप्रेषण सुलभ करतो आणि विद्यार्थ्यांना परस्पर जोडलेल्या जगात मौल्यवान संपत्तीसह सुसज्ज करतो. भाषेच्या प्रवीणतेवर भर दिल्याने विद्यार्थी केवळ शैक्षणिकदृष्ट्या पारंगत नसून कुशल संभाषण करणारे देखील आहेत, जे विविध भाषिक भूदृश्यांवर आत्मविश्वासाने आणि समजुतीने नेव्हिगेट करण्यास सक्षम आहेत.

५] समावेशकता आणि प्रवेशयोग्यता:

भारतीय ज्ञान प्रणाली सर्वसमावेशकता आणि सुलभतेला प्राधान्य देते, हे सुनिश्चित करते की शिक्षण सामाजिक-आर्थिक अडथळ्यांना पार करते. प्रत्येक विद्यार्थ्याला, त्याची पार्श्वभूमी काहीही असो, त्याला दर्जेदार शिक्षण मिळेल याची हमी देण्यासाठी विशेष तरतुदी आहेत. याव्यतिरिक्त, प्रणाली सर्वसमावेशक

पद्धतींचा स्वीकार करते, विद्यार्थ्यांच्या विविध शिक्षण गरजा पूर्ण करण्यासाठी आधार प्रदान करते. सामाजिक-आर्थिक विषमतेकडे दुर्लक्ष करून, शिक्षण सर्वांसाठी उपलब्ध आहे अशा वातावरणाला प्रोत्साहन देऊन, भारतीय ज्ञान प्रणाली अधिक न्याय्य आणि सर्वसमावेशक समाज निर्माण करण्यासाठी, विविध पार्श्वभूमीतील विद्यार्थ्यांना त्यांच्या शैक्षणिक प्रयत्नांमध्ये पुढे जाण्यासाठी आणि उत्कृष्ट होण्यासाठी सक्षम बनविण्यात महत्त्वपूर्ण भूमिका बजावते.

६] डिजिटल साक्षरता:

भारतीय ज्ञान प्रणाली डिजिटल साक्षरतेवर लक्षणीय भर देते, डिजिटल युगासाठी विद्यार्थ्यांना आवश्यक कौशल्यांसह सुसज्ज करते. हा फोकस विद्यार्थ्यांना तांत्रिक प्रवीणता मिळवून देतो, ज्यामुळे त्यांना नेटवर्क करता येते आणि डिजिटली चालविलेल्या जगात प्रभावीपणे योगदान देता येते. अभ्यासक्रमात डिजिटल साक्षरतेचा समावेश करून, शिक्षण प्रणाली विद्यार्थ्यांना संवाद, समस्या सोडवणे आणि नवनिर्मितीसाठी तंत्रज्ञानाच्या सामर्थ्याचा उपयोग करण्यास तयार करते. डिजिटल कौशल्यांवर भर दिल्याने त्यांचा शैक्षणिक प्रवास वाढतो आणि त्यांना तंत्रज्ञानाच्या दृष्टीने विकसित होत असलेल्या जागतिक लँडस्केपमध्ये उत्कृष्टतेसाठी स्थान दिले जाते, यशासाठी डिजिटल साधनांचा लाभ घेण्यामध्ये पारंगत असलेल्या पिढीला प्रोत्साहन देते.

७] जागतिक क्षमता:

भारतीय ज्ञान प्रणाली विद्यार्थ्यांमध्ये जागतिक सक्षमतेला सक्रियपणे प्रोत्साहन देते. अभ्यासक्रमातील आंतरराष्ट्रीय परिप्रेक्ष्यांचे एक्सपोजर हे सुनिश्चित करते की ते जागतिकीकृत नोकरी बाजारासाठी चांगल्या प्रकारे तयार आहेत. हे प्रदर्शन त्यांची क्षितिजे विस्तृत करते आणि क्रॉस-सांस्कृतिक समज वाढवते, अनुकूलता आणि सहयोग कौशल्ये विकसित करते. जागतिक दृष्टीकोन वाढवून, प्रणाली विद्यार्थ्यांना विविध व्यावसायिक वातावरणात नेटवर्क करण्यासाठी आणि आंतरराष्ट्रीय स्तरावर अर्थपूर्ण योगदान देण्यासाठी सुसज्ज करते. आंतरराष्ट्रीय सक्षमतेवर हा भर विद्यार्थ्यांना परस्पर जोडलेल्या जगात भरभराटीस आणतो जिथे सांस्कृतिक प्रवाह आणि सहयोग यशाचा अविभाज्य घटक आहेत.

८] उद्योजकीय मानसिकता:

भारतीय नॉलेज सिस्टीम विद्यार्थ्यांना जोखीम पत्करण्यास आणि नवकल्पना स्वीकारण्यास प्रोत्साहित करून एक उद्योजकीय मानसिकता निर्माण करते. हा दृष्टिकोन उद्योजकता जोपासतो, विद्यार्थ्यांना नोकरी शोधण्याऐवजी निर्माते बनण्यासाठी प्रेरणा देतो. ही प्रणाली विद्यार्थ्यांना नवकल्पना आणि जोखमीला महत्त्व देणारे वातावरण तयार करून आर्थिक वाढीसाठी सक्रियपणे योगदान देण्यास सक्षम करते. ही उद्योजकीय मानसिकता विद्यार्थ्यांना गतिमान करिअरच्या मार्गासाठी तयार करते. हे आत्मनिर्भरता, सर्जनशीलता आणि समस्या सोडवण्याच्या संस्कृतीचे पालनपोषण करते, जे वेगाने विकसित होत असलेल्या जागतिक अर्थव्यवस्थेच्या आव्हानांना नेटवर्क करण्यासाठी आवश्यक आहे.

९] पर्यावरण जागरूकता :

भारतीय ज्ञान प्रणाली पर्यावरणीय चेतना अधोरेखित करते, शाश्वत पद्धतींना प्रोत्साहन देणारे शिक्षण एकत्रित करते. हा दृष्टीकोन विद्यार्थ्यांना पर्यावरणीय समस्यांबद्दल जागरूकतेने सुसज्ज करतो आणि इकोसिस्टमबद्दल जबाबदारीची भावना निर्माण करतो. अभ्यासक्रमात पर्यावरणीय विचारांचा समावेश करून,

विद्यार्थ्यांना पर्यावरणीय आव्हानांची सैद्धांतिक समज मिळते आणि पर्यावरणपूरक वर्तन स्वीकारण्यास प्रवृत्त केले जाते. पर्यावरणीय जाणीवेवरचा हा भर हे सुनिश्चित करतो की विद्यार्थी त्यांच्या ग्राहवरील प्रभावाविषयी उच्च जागरूकतेसह पदवीधर होतात, पर्यावरणास जबाबदार पिढीसाठी योगदान देतात आणि शाश्वत भविष्य घडवण्यात सक्रियपणे गुंतलेले असतात.

१०] सतत शिकणे:

सतत शिकण्याची संस्कृती समाविष्ट करून, भारतीय ज्ञान प्रणाली विद्यार्थ्यांना आयुष्यभर शिक्षणासाठी सुसज्ज करते. एक मुख्य कौशल्य म्हणून अनुकूलतेवर जोर देऊन, ते सतत विकसित होत असलेल्या व्यावसायिक लँडस्केपमध्ये नेव्हिगेट करण्याचे महत्त्व ओळखते. शाश्वत वाढ आणि शिकण्याची मानसिकता तयार करून, विद्यार्थी शैक्षणिकदृष्ट्या तयार होतात आणि गतिमान आणि आव्हानात्मक वातावरणात भरभराट होण्यासाठी आवश्यक लवचिकता विकसित करतात. सतत शिकण्याची ही वचनबद्धता हे सुनिश्चित करते की पदवीधर नवीन संधी स्वीकारण्यासाठी, त्यांच्या करिअरमध्ये संबंधित राहण्यासाठी आणि समाजाच्या प्रगतीमध्ये अर्थपूर्ण योगदान देण्यासाठी योग्य स्थितीत आहेत.

समाजात व्यापक प्रमाणात या संपन्न ज्ञान प्रणालीच्या माध्यमातून कला, साहित्य, कृषी, मूलभूत विज्ञान, अभियांत्रिकी, तंत्रज्ञान, व्यवस्थापन, अर्थशास्त्र अशा विविध क्षेत्रात आपल्या देशाच्या समृद्ध वारसा आणि पारंपारिक ज्ञानाचा प्रसार हा सक्रियरित्या होणेही तेवढेच गरजेचे आहे .

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Indian Knowledge System and NEP 2020**Mrs. Samruddhi Chepe***Assistant Professor**Ashoka International Centre for Educational Studies and Research, Nashik***And****Dr. Sarita Verma***In charge Principal**Ashoka International Centre for Educational Studies and Research, Nashik.*

Abstract:

The main objective of integrating IKS into the education system is to ensure that India's knowledge system such as Ayurveda, Yoga and traditional preserved and promoted for future generations. It emphasizes on the promotion of Indian Languages, Arts and Culture, and tries to remove the discontinuity in the flow of Indian Knowledge System (IKS) by integrating IKS into curriculums at all levels of education. Indian art comprises various art forms like paintings like pattachitra, madhubani, ceramics, and sculpture and textile arts such as woven silk. Indian art is acknowledged for its immense sense of design, which can be seen in both modern and traditional forms. The Indian Knowledge System, through its emphasis on cultural enrichment, profoundly influences students by exposing them to India's rich Heritage. This exposure cultivates a deep sense of identity and pride, instilling in students a connection to their roots.

Key words: The National Education Policy 2020 (NEP 2020), National Curriculum Framework for School Education (2023) (NCF-SE 2023), Integration of IKS for experiential learning

Introduction:

Our history as an independent modern nation is 75 years young but our civilization is more than 5,000+ years old. Needless to say, the contribution of India to human knowledge is plenty and what better a time, then the occasion of Azadi Ka Amrit Mahotsav, memorising seventy-five years of independence, to initiate a concentrated and focused effort in this direction.

Indian Knowledge systems were organised, we can claim. The list was expanded later to include the knowledge (Veda) of music (Gandharv) war (Dhanur) healing (Ayur) and architecture (Stapahya) Another set of ideas emerged around 1,500 years ago. These were called the shastra (organised knowledge). The Indian Knowledge System, through its emphasis on cultural enrichment, profoundly influences students by exposing them to India's rich heritage. Exposure cultivates a deep sense of identity and pride, instilling in students a connection to their roots. The Indian Knowledge Systems comprise of gyan, Nigyan and Jeevan Darshan that have evolved out of experience, observation, experimentation, and rigorous analysis. This tradition of validating and

putting into practice has impacted our education, arts, administration, law, justice, health, manufacturing, and The inclusion of Traditional Indian Knowledge Systems in higher education is paramount for the holistic development of the Nation. This approach not only revitalizes the education system but also contributes to the preservation and promotion of Indian languages, arts, and Various enumerations and classifications of systematic knowledge, or sciences, have been transmitted; perhaps the most common ones refer to fourteen or eighteen locations of knowledge (vidyāśhṭāna): the four Vedas and the six auxiliary sciences to the Vedic texts (the sciences of articulation or phonology. At the epicentre of this knowledge system, is the base, of the sacred text known as the Vedas. These ancient scriptures were not mere collections of words; they were considered revelations, handed down by divine forces to enlightened sages during periods of deep meditation. Indigenous knowledge systems and skills are crucial for social work because they can help partitions to understand and work effectively with divert communities., especially those that have been historically marginalized or oppressed. A knowledge management system is any kind of IT system that stories and revives knowledge to improve understanding collaboration and process alignment. Knowledge management systems can exist within organizations or teams, but they can also be used to centre your knowledge base for your users or customers.

Importance of Indian Knowledge System

The Indian Knowledge System actively promotes global competence among students. Exposure to international perspectives within the curriculum ensures they are well-prepared for a globalised job market.

Based on the report and recommendations of the Kothari Commission (1964–1966), the government headed by Prime Minister Indira Gandhi announced the first National Policy on Education in 1968, which called for a ‘radical restructuring’ and proposed equal educational opportunities in order to achieve national integration ... culture. The BhāratīyaJñānaParamparāVibhāga or Indian Knowledge Systems (IKS) is a division of the Government of India’s Ministry of Education which purposes to promotes to indigenous Indian System Knowledge. located in the AICTE Headquarters was established in Oct. 2020. Indian Knowledge System (IKS)

One is compelled at this point to compare this Indian culture of knowledge preservation with the cultures of other parts of the world. It is said that the Bible was compiled some 400 years after the alleged crucifixion of Jesus Christ at a council headed by Emperor Constantine, where certain gospels were added to the Bible whereas certain other “inconvenient” gospels were omitted. Likewise, the Quran was compiled by the Abbasids about 300 years after the death of Prophet Muhammad; and whenever there was multiple conflicting versions, the version with the dialect of the Quraish tribe only was retained and the others destroyed in the Indian culture, people who were into knowledge production and preservation were exempted from military duties. Veda

and Vedāṅga: As mentioned earlier, the Vedas are a collection of poetic mantras pouring out of the Rīṣhi's experiences. Since these experiences of these Rishis varied from an observation of the visible sky (with the Sun, the Moon, the stars, planets, comets, etc.), to flora and fauna around, to the forests, deserts, rivers, seas and oceans, to the people around, to their own physical body, to their breath, to their mind, intellect and ego and the inner Self witnessing this whole thing; the subject matter spoken in the Vedas is vast and its meaning cannot be easily deciphered. This problem is exacerbated in the face of natural calamity, famine, floods, mass migration etc., due to which there will be breaks in the knowledge tradition. Notice that the experiences of the Rishis listed above all are an integral part of nature, as how things ARE and not created by human beings. Therefore, as the subject matter of the Vedas deal with those which are not man-made, the Vedas are said to be *apauruṣeya*; or in other words, the Vedas are *vastu-niṣṭha* (in tune with reality/existence) and not *vyakti-niṣṭha* (one's emotions, likes and dislikes, orientations). Since the tradition holds the view that the Vedas are 'revelations' and for the reason that they have been transmitted orally, the Vedas came to be called 'śruti' (literally, heard). The allied literature which does not form a part of the śruti came to be known as 'smṛti' (literally, remembered). The śruti represents timeless and eternal values which hold good for all times, while the smṛti codifies these eternal values into codes or rules based on the needs of the time and place for the society at hand. For example, respecting the opposite gender as thinking and feeling beings, and not exploiting them is an eternal value; while the exact number of wives or husbands one can have can vary with time, place and one's standing in society. Thanks to this śruti-smṛti demarcation, Indian society has been able to preserve its core values, yet adapting to the ever-changing situations. An indication of the breadth of topics covered in the Vedas can be obtained from the Chāndogya Upaniṣad of the Sāmaveda, where Nārada-ṛṣi approaches Sanat-kumāra says that he knows the four Vedas, itihāsa, purāṇa, vyākaraṇa, kalpa, gaṇita, daiva, nidhi, tarka-śāstra, nītiśāstra, nirukta, dhanurveda, jyotiṣa, sarpa-vidyā, gandharva-vidyā; but is still not free from sorrow. Hence, Nārada seeks ātmavidyā from Sanat-kumāra so that he be free from sorrow. Since the Vedas are a repository of knowledge in such varied disciplines; one must take support of the six Vedāṅgas, namely śikṣā (phonetics), vyākaraṇa (grammar), jyotiṣa (astronomy), kalpa, niruktam (etymology) and chhandas (prosody) in order to make an attempt to decipher the meaning of the Vedic mantras. These branches of knowledge too grew over time thanks to contributions from various thinkers, and here we will briefly mention the big names in each field

Great value has always been attached to knowledge and tremendous intellectual effort has gone into maintaining the texts of knowledge. As we have noted elsewhere⁸ even though the Hindu culture is not bibliolatrous, it has accorded a special status to certain texts, the texts of knowledge, and made them perennial objects of study. The difference, however, is that there has been a complete freedom to interpret and come up with competing interpretations, a freedom that

is not always present in other cultures. Cultural Heritage: Understanding IKS is vital for preserving and promoting India's rich cultural heritage. It provides a foundation for appreciating the depth of indigenous knowledge

Indian Government, cognizant of this challenge, has launched various initiatives to secure these invaluable resources while promoting their beneficial use. Body: Traditional Knowledge Digital Library (TKDL): The TKDL, a compendium of over 200,000 medicinal formulations, deters unjust patent claims. The integration of IKS with NEP will help to understand the underlying contemporary societal issues and to carry out further research on these issues.

Benefits of Indian Knowledge System:

Seen from this perspective, IKS has the potential of not only transforming knowledge-generating institutions but also democratising knowledge formation processes. For sociologist Herbert Vilakazi the validation of IKS is crucial for the economic and cultural empowerment of the majority. The New Education Policy 2024 is a detailed framework for transforming education in India, focusing on critical thinking, holistic development and global perspectives.

The policy is "rooted in Indianness and emphasises on learning in the mother tongue", The National Education Policy 2020 announced by the Centre lays great emphasis on Indian languages and Indian knowledge systems The National Education Policy (NEP) 2020 speaks of teaching the "rich heritage of ancient and eternal Indian knowledge and thought" as a guiding principle. The government has taken several steps to incorporate IKS in the education system in the last three years including introduction of IKS courses in higher education institutions, and promoting research in IKS by starting a full-fledged division under the union ministry of education.

Including the Indian Knowledge System in school curriculum is crucial. It helps students connect with their cultural roots, provides a well-rounded education, and encourages them to think across subjects. It also teaches sustainable practices, which are important for today's world. By adding the Indian Knowledge System, we keep our traditions alive and prepare students for a balanced education. This way, they can become more knowledgeable and responsible individuals, making a positive impact on society and the world."

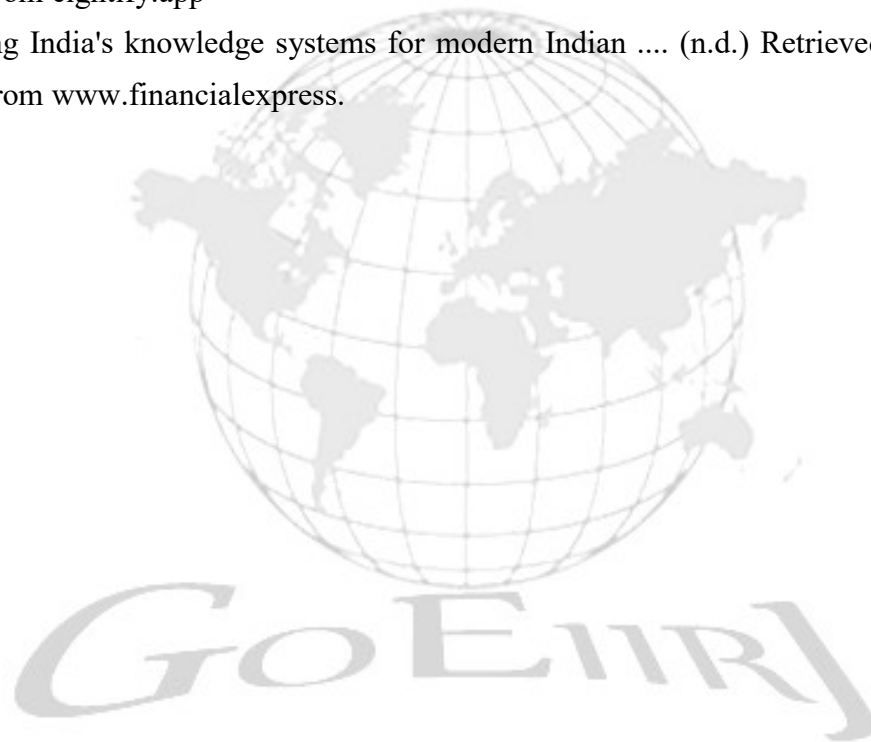
Conclusion:

The educational landscape in India has witnessed considerable transformations throughout its history, particularly marked by a notable shift during the period of British colonial rule. Despite these changes, there exists a compelling need for an in-depth exploration anchored in Indian Knowledge Systems to rejuvenate the education system and formulate a novel framework for the state, economic philosophy, and societal structures. Conducting a comparative analysis between the Indian education system and those of other nations, such as the United States, can yield valuable insights into their distinctive features and shared aspects. This comparative scrutiny serves as a foundation for discerning the strengths and weaknesses inherent in the Indian education

system, thereby facilitating the development of strategies to bridge gaps between the Indian and international paradigm.

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Indian Knowledge System in Present Scenario**Patel Nalini Dhirubhai***Research Scholar Department of Education & Extension,**Savitribai Phule Pune University, Pune***And****Dr. Nisha Valvi***Assistant Professor, Department of Education and Extension,**Savitribai Phule Pune University, Pune*

Abstract

The Indian Knowledge System (IKS) is a systematized transmission of knowledge from one generation to the coming. The Indian Knowledge System aims to integrate the ancient traditional knowledge of India with the contemporary knowledge system. It also seeks to promote openings for scholars and educational institutes for interdisciplinary exploration in the area. IKS is an innovative cell established to promote, save and circulate IKS for further exploration and societal operations. It'll laboriously engage for spreading the rich heritage of our country and traditional knowledge. The IKS underlines moral values, ethics, and principles for leading a righteous life. By integrating these ethical training available in IKS into present education system, institutions can prop scholars in developing a sense of social responsibility, compassion, and ethical decision-making vital for balanced living.

Keywords: Indian Knowledge System, Yoga, Veda, Reconfiguring Education

The Indian Knowledge System (IKS) is a systematized transmission of knowledge from one generation to the coming. It's a well-organised system and process of knowledge transfer, rather than just a tradition. The Vedic literature – Upanishads, Vedas, and Upvedas are all part of the Indian Knowledge System (Centre of policy exploration & governance, 2023). India's Knowledge System started from Vedic culture. Vedic culture is comprised of four Vedas Rig, Yajur, Sama and Atharva still, in recent decades, the idea of Indian Knowledge System has gained attention, egging leading educationists and scientists to explore its eventuality. The Indian government, admitting the significance of reviving indigenous knowledge, formulated the National Education Policy. The rich heritage of ancient and eternal Indian knowledge and study has been a guiding light for this Policy (Mandavkar, P. 2023). The pursuit of knowledge (Jnan), wisdom (Pragyaa), and verity (Satya) was always considered in Indian study and gospel as the loftiest mortal thing. The end of education in ancient India wasn't just the accession of knowledge as medication for life in this world, or life beyond training, but for the complete consummation and emancipation of the tone.

Education Policy NEP2020 envisions a monumental revolution in India's education sector, sustained by Indian Knowledge System. India possesses an immense wealth of knowledge, with multitudinous calligraphies yet to be explored. The Indian knowledge tradition, described as the 14 Vidya and 64 Kala, encompasses gospel, practical education, trades, chops, artifice, husbandry, health, and wisdom. These traditions will be studied, acclimated, and integrated into ultramodern life, heralding transformative changes in every sphere.

Indian Knowledge System (IKS) is an innovative cell under Ministry of Education (MoE) at AICTE, New Delhi. It's established to promote interdisciplinary exploration on all aspects of IKS, save and circulate IKS for further exploration and societal operations. It'll laboriously engage for spreading the rich heritage of our country and traditional knowledge in the field of trades and literature, Agriculture, Basic lores, Engineering & Technology, Architecture, Management, Economics, etc. The main function of IKS division is to grease and coordinate IKS grounded/ affiliated inter and transdisciplinary work done by colourful institutions in India and abroad including universities, institutions of public significance, R&D laboratories and different ministries and inspire private sector associations to engage with it. Other one is to establish, guide and cover subject-wise interdisciplinary exploration groups comprising of experimenters from institutes, centres and individualities. Also, to produce and promote popularization schemes, to grease backing of colourful systems and develop mechanisms to take over exploration and to make policy recommendations wherever needed for the creation of IKS (IKS INDIA, 2023).

IKS is a vast depository of knowledge available not only in Sanskrit but also in all native Indian languages which has been unexplored for the last several decades. Indian Knowledge encompasses the Foundational knowledge, Science, Engineering & Technology, Humanities and Social lore's through a structured bracket. IKS (Indian Knowledge System) has evolved over heydays. IKS benefactions to the colourful fields include understanding planetary movements, solar- centric world, shape and periphery of the Earth; nature of shops & sauces, chops of surgical procedures; discovery of zero, decimal system of numbers, etc. moment this Knowledge base is important demanded for Knowledge tactfulness which is going to rule the transnational relations in unborn world. This is what brings the power to any country. India has such a treasure of knowledge that amended the Indian civilisation for glories. Indian knowledge systems have been being since periods but have been overshadowed by western ways of thinking. There's a need to bring a change in the being public mindset and produce public mindfulness regarding IKS. The Indian Knowledge System aims to integrate the ancient traditional knowledge of India with the contemporary knowledge system. It also seeks to promote openings for scholars and educational institutes for interdisciplinary exploration in the area. This will crown towards the idea of 'Ek Bharat Shreshtha Bharat'. (ABSS Report, 2023).

Integration of Indian Knowledge System is still applicable in moment's script, which gives practical suggestions for dealing with issues analogous like stress operation, sustainability, Spiritual Growth etc. The IKS results from critical thinking, logical logic, and reflective inquiry. scholars studying IKS can develop logical chops and learn to approach problems from different perspectives. It fosters interdisciplinary exploration performing in a harmonious mix of colourful knowledge systems and underlines moral values, ethics, and principles for leading a righteous life. By integrating these ethical training available in IKS into our education, institutions can prop scholars in developing a sense of social responsibility, compassion, and ethical decision-making vital for balanced living.

The NEP2020 underlines the significance of mindfulness and perceptivity toward sustainable development. The IKS promotes the view that mortal well- being is intertwined with the health and sustainability of the terrain. Our scholars must be conscious of ethical living to minimize environmental deterioration, employ agrarian styles that promote soil fertility, save water, and lessen the dependence on diseases, leading to sustainable husbandry practices (Kumar, M.J. 2023).

Pascoe et al., (2021) highlights that the ongoing stress relating to education has demonstrated negative impact on scholars' learning capacity, academic performance, education and employment attainment, sleep quality and volume, physical health, internal health and substance use issues.

Some ways in which Indian knowledge system can contribute to managing work stress among youths include Yoga and Contemplation are the comprehensive approach to internal, physical, and spiritual well- being that has its roots in ancient India. It comprises ways like asanas (postures), pranayama (breath control), and contemplation that have been shown to lower stress, promote internal health, and increase general wholesomeness. These practices can help youths develop better emotional regulation, reduce anxiety, and ameliorate their capability to manage with work- related stress.

Incorporating Ayurvedic principles (the traditional Indian system of drug) can help youths maintain a balanced and healthy life, which can prop in stress operation. Indian knowledge system is rich in spiritual and philosophical perceptivity that can offer a broader perspective on life's challenges. These training can help youths develop adaptability and find meaning and purpose in their work and particular lives. Spiritual Growth perceptivity into the nature of reality, awareness, and the tone are handed by Indian knowledge systems like Vedanta, a philosophical frame predicated on the ancient books known as the Vedas (Rishi,S.V., 2023)

The emulsion of the IKS with contemporary education marks a pivotal stride toward promoting a harmonious and encyclopedically applicable education system that celebrates the dateless wisdom of India's artistic heritage. The addition of the IKS allows scholars to

appreciate that knowledge is connected and interdependent, egging scholars to view subjects in a broader environment. Integration process will involve the introductory preface to IKS, it's nature and structure, compass & History, admixture of abecedarian IKS generalities into the ultramodern handbooks, and eventually developing Indian Thought Models grounded on available IKS literature, and their operation into colourful contemporary problems working styles.

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A Study on Awareness of NEP-2020 among Secondary School Teachers**Prof. Vikram Dinkar Ghuge***Assistant Professor,**Shree Siddhivinayak College of Education,**Nandgaon, Dist. Nashik (Maharashtra)***Prof. Nandkishor Damodhar Bodkhe***Assistant Professor,**SSR College of Education,**Sayli Road, Silvassa (DNH)*

Abstract:-

The study conducted on awareness of NEP 2020 among secondary school teachers. The data collected from 90 different schools. The Google link is shared to the 250 teachers. The various pedagogy teachers included in the survey. The teachers from various Government/ Aided and private schools were included in the survey. The National Education Policy (NEP) 2020 marks a significant milestone in India's educational landscape, aiming to transform the sector by 2040. Given the critical role teachers play in implementing NEP-2020, it is essential to assess their awareness and understanding of the policy. Survey method used to investigate. Questionnaire consist of 15 Questions was given to the teachers. Only 35% teachers have read the draft of NEP2020. The other 65% teachers have got information from various sources like social media, newspaper, news channels and conferences/ seminars/ workshops. 56% teachers said that NEP 2020 can bring positive changes in Indian Education system. The government and the management of the institutions need to take initiative to create awareness about NEP 2020 among teachers. The awareness can be created through various training programs, orientation programs, conferences, seminars and workshops.

Keywords:- NEP2020, awareness , Secondary Teachers

Introduction:

The National Education Policy (NEP) 2020 marks a significant milestone in India's educational landscape, aiming to transform the sector by 2040. The policy envisions a comprehensive overhaul of the education system, focusing on inclusive and equitable education, pedagogical reforms, and digital empowerment. Effective implementation of NEP-2020 requires the active involvement and commitment of teachers, who play a pivotal role in shaping the future of Indian education.

In recent years, India has made significant strides in improving access to education, with a substantial increase in enrollment rates and a decline in dropout rates. However, challenges persist, including disparities in education quality, inadequate infrastructure, and a shortage of trained teachers. NEP-2020 addresses these concerns, emphasizing the need for a more inclusive and effective education system.

Given the critical role teachers play in implementing NEP-2020, it is essential to assess

their awareness and understanding of the policy. This study investigates the level of awareness and knowledge among secondary school teachers regarding NEP-2020, identifying areas of strength and improvement. The findings will provide valuable insights for policymakers, educators, and stakeholders, informing strategies to enhance teacher preparedness and effective implementation of NEP-2020.

Objectives:

1. To assess the level of awareness among secondary school teachers about NEP-2020.
2. To identify the areas of NEP-2020 that teachers are most familiar with and those that need more attention.
3. To examine the perceived challenges and suggestions of teachers regarding the implementation of NEP-2020.

Population:

The population for this study consists of all secondary school teachers (grades 9-12) in Nashik District, teaching various subjects.

Sample:

A sample of 250 secondary school teachers from various schools will be selected for this study.

Sampling Method:

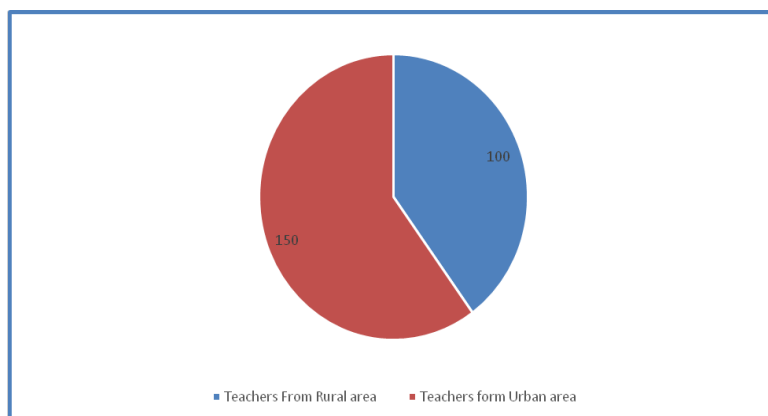
Stratified random sampling will be used to select the sample. The strata will be based on:

- Geographical location (urban/rural)
- School type (government/private)
- Subject taught (science/mathematics/language/social science)

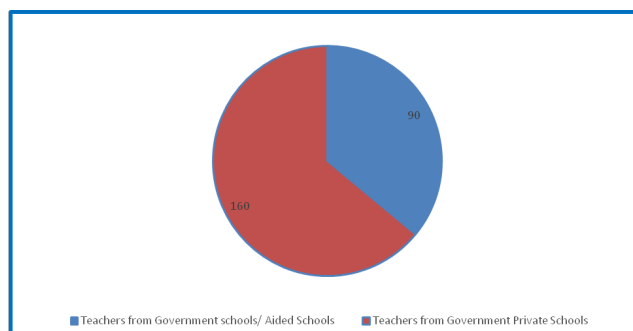
This sampling method will help ensure a representative sample of teachers from diverse backgrounds and regions.

Sampling Distribution:

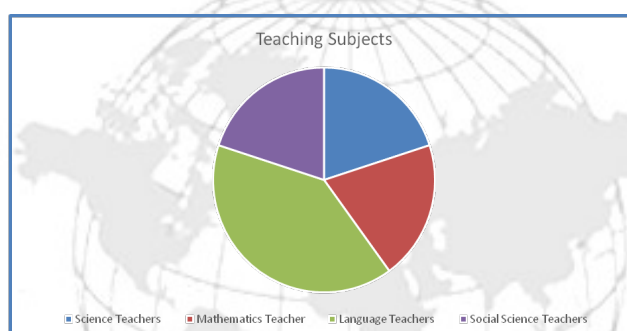
1. Teachers from Rural and Urban areas



2. Distribution of Data from Government / Aided Schools and Private schools



3.Data Distribution of Teachers on the basis of Teaching Subjects



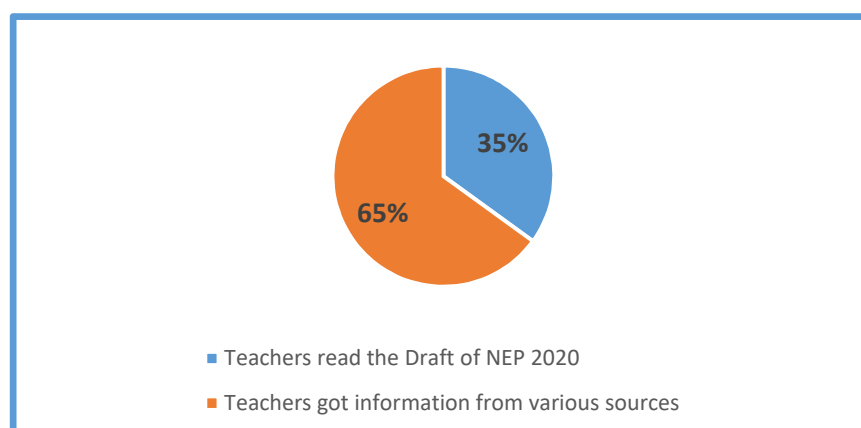
Methodology:

A survey questionnaire was administered to a sample of 250 secondary school teachers. The questionnaire consisted of questions related to their awareness of NEP 2020, its provisions, and their perceptions of its implementation. The google form is created and link is shared to the teachers.

Analysis of the Data: -

1. Understanding of NEP -2020 Draft

The question was asked on the draft that, the teachers read and understand the draft. The 35 % teachers read the draft and others have basic information about the draft. They have read the information from social media and other sources.



2. Got information from different medias –

The question was asked that, from where they got information about the NEP-2020 draft. The 60% teachers got information from social media, the 21% teachers got the information from News Papers and News channels and 19 % got the information from various workshops/ conferences/ Seminars.

3. Positive changes in Indian Education System: -

Question was asked that; can NEP 2020 bring positive changes in Indian Education system. 56% teachers said that the NEP 2020 can bring positive changes in Indian Education system. 24% teachers said that the NEP 2020 cannot bring positive changes in Indian Education system. 20 % teachers are not sure about it.

4. Holistic development of the students: -

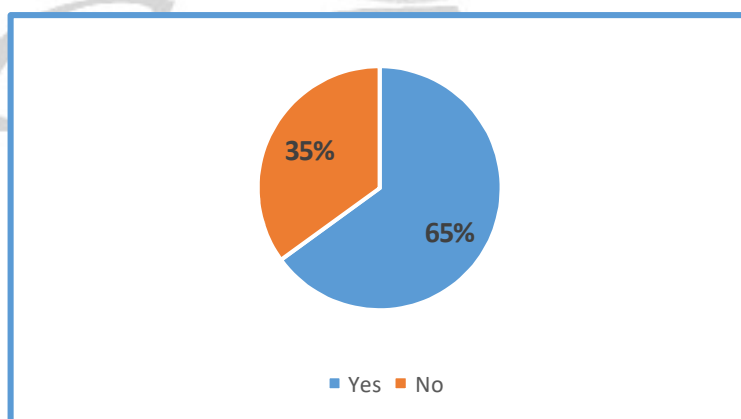
Question was asked that; do you think NEP 2020 encourages holistic development of the students. 67% teachers are agreed, 33% teachers are not agreed about it.

5. Vocational Training: -

Question was asked that; more focus should be given on vocational training to the students. The 72% teachers said yes and 28 % said No.

6. Gap between Rural and Urban: -

Question was asked that; whether the NEP 2020 can bridge the gap between Rural and urban education. The 65% teachers are given positive feedback and 35% teachers given negative feedback.

**7. Challenges: -**

Open ended question asked about the challenges to implement the NEP 2020. Funding is the major challenge in implementing NEP 2020. The others are related to Governance, Quality, Culture, gap between the rural and urban education system, and the capacity and infrastructure of the schools

Findings:

1. Only 35% teachers have read the draft of NEP2020.

2. The other 65% teachers have got information from various sources like social media, newspaper, news channels and conferences/ seminars/ workshops.
3. 56% teachers said that NEP 2020 can bring positive changes in Indian Education system.
4. There is a need to create awareness among teachers about NEP 2020. Special training programs and orientation programs should be conducted to create awareness.
5. There are so many challenges to implement NEP 2020. Funding is the major concern.

Key areas of awareness and concern include:

- Curriculum reforms and pedagogical shifts
- Assessment and evaluation reforms
- Inclusive education and diversity
- Teacher training and development
- Digital education and infrastructure

Conclusion:

While teachers demonstrate a positive attitude towards NEP 2020, there is a need for more comprehensive training and support to ensure successful implementation. The study recommends mandatory training programs for teachers, regular updates, and workshops to address the identified areas of concern.

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कवितेतील शब्द व अर्थाचे साहचर्य

डॉ. राजश्री पाटील

प्राध्यापक, मराठी विभाग

एस. एन. डी. टी. महिला विद्यापीठ, चर्चगेट.

प्राचीन संस्कृत काव्यशास्त्रीय ग्रंथांमध्ये साहित्याचा अर्थ काव्य असा सांगितला आहे. साहित्यशास्त्र हा भारतीय ज्ञानपद्धतीने निर्माण केलेला मोठा ठेवा आहे. शब्द आणि अर्थ हे साहित्याचे मूलभूत व गुणीभूत उपकरणद्रव्य असल्याची नोंद प्राचीन साहित्यशास्त्रात आढळते. 'शब्दार्थो सहितौ काव्यम्' ही भामहाने केलेली काव्याची व्याख्या सर्वश्रुत आहे.

शब्द हा काव्यनिर्मितीचा आधार असला तरी, शब्द व अर्थाचे साहचर्य, शब्दांचा क्रम काव्यात मोलाचा ठरतो. शब्दांचा समुच्चय म्हणजे काव्य नव्हे. काव्यामध्ये अभिव्यक्तिला असाधारण महत्त्व असते. शब्द हे भावनाविष्काराचे माध्यम असतात. साहित्यकृतीचा संबंध थेट लेखकाच्या भावनांशी, वृत्तीशी असतो. ते केवळ घटनांचे वर्णन नसते. कलाकृतीला अनुभूतीचे प्रकटीकरण असे म्हटले जाते. तिचे दोन प्रकार पडतात. आत्मानुभूती आणि बाह्य विश्वातील घटनांचे जे त्याच्या मनावर संस्कार होतात. दुसरी अनुभूती साहित्याशिवायच्या, शिल्प-चित्र-नृत्यादी कला ह्या दृश्य स्वरूपातील कला होत. या कलांद्वारे ज्या प्रकारची अभिव्यक्ती होते तशी साहित्यातून करता येत नाही. साहित्याचे प्राथमिक माध्यम हे अर्थयुक्त शब्द हे आहेत. शब्दाच्या शक्तीमुळे हे विशेषतः व्यंजकतेमुळे साहित्य ह्या कलेची व्यापकता अधिक वाढते आणि आविष्काराचे स्वरूपही सूक्ष्म असते. कलाकृतीतील भावनाविस्काराचा परिणाम वाचकाच्या मनावर कसा होते हे रससिद्धांताच्या, रसचर्चेच्या माध्यमातून समजून घेता येते

भाषा हे साहित्याचे माध्यम आहे. विचारांच्या प्रकटीकरणाचे साधन आहे. शब्द हे भाषेचे मूलभूत उपकरण आहे. शब्दाला अनेक प्रकारचे अर्थ असतात. साहित्यातील, अभिव्यक्तीचे सामर्थ्य या अर्थामधून निर्माण होत असते. शब्द हा एक प्रकारचा ध्वनी असतो हे ही साहित्यशास्त्राने सांगितलेले आहे. कानांवर पडणारा शब्द हा ध्वनी असतो. कागदावर छापलेला शब्द हा दृश्य रुपही असतो. प्रत्येक शब्दाला अर्थ असतोच! एका अर्थी शब्द हा प्रतीकात्मक (symbolic) असतो असे म्हणता येईल. "शब्दांचे मूळचे अर्थ स्वैर व मनःपूत (अर्थ व ध्वनी यांचे साहचर्य ज्यामध्ये आहे असे शब्द अपवादात्मक समजावेत; कारण अशा शब्दांत ध्वनीचा अंतर्भाव जाणूनबुजून केलेला असतो.)" अर्थ व्यक्त करणाऱ्या अक्षरांचा समूह म्हणजे शब्द असे साहित्यदर्पणकार विश्वनाथाने नोंदविले आहे.

अर्थ व्यक्त करणारी अक्षरे असे शब्दांबाबत म्हटले जाते याचाच अर्थ असा की अर्थाचा विचार, अभ्यास करावा लागतो. शब्दशक्तीचा अभ्यास करावा लागतो हे अर्थ वाच्य, लक्ष्य आणि व्यंग्य असे तीन प्रकारचे आहेत. अमिधा या शक्तीमुळे प्रतीत होणारा अर्थ 'वाच्य' लक्षणेमुळे 'लक्ष्य' आणि व्यंजनेमुळे प्रतीत होणारा अर्थ तो 'व्यंग्य' असा होय.

या तीन शब्दशक्तींमध्ये 'अमिधा' ही शक्ती सर्वात महत्त्वाची मानली जाते. शब्दांचा सांकेतिक अर्थ प्रकट करण्याचे सामर्थ्य या शक्तीमध्ये असते. या शब्दशक्तीने प्राप्त होणाऱ्या अर्थाला, वाच्यार्थ किंवा मुख्यार्थ म्हणतात. शब्द, वाच्यार्थाशिवायचा अर्थ म्हणजे लक्षणा ही शब्दशक्ती. 'कलिंगः साहसिकः' हे विश्वनाथाचे उदाहरण, लक्षणेबाबतीत महत्त्वाचे ठरते. अमिधा आणि लक्षणेचे कार्य संपल्यानंतर आणखी एक निराळा अर्थ व्यक्त करण्याचे जे शब्दाचे सामर्थ्य असते ते त्याला व्यंजना म्हणतात.

काव्यात ध्वनीला अधिक महत्त्व देणाऱ्या आनंदवर्धनाने व्यंग्यार्थातून प्रकट होणारे सौंदर्य अधिक मनोज्ञ असते असे म्हटले आहे. 'हरिततृणांच्या मखमालीचे' हे शब्द वाचताना स्पर्श आणि रंग यांचे संवेदन व्यंग्यार्थामुळे होते. असे असले तरी, शब्दांचे कलात्मक सौंदर्य मात्र वादातीत असते. या सौंदर्याचा, साहित्यात चातुर्याने आणि कौशल्याने उपयोग केलेला असतो.

शब्दांच्या सौंदर्याचे आणि अभिव्यक्तीचे सामर्थ्य वर्णिताना ज्ञानेश्वर म्हणतात, "तैसें शब्दांचे व्यापकपण। देखिजे असाधारण। पहातयां भावजां फावती गुण। चिंतामणीचे।।" शब्दांचे बाह्य सौंदर्य, काव्यातील रसास्वादाची प्रक्रिया सुलभ करतात. शब्दांच्या बाह्यसौंदर्याची मोहिनी, विलक्षण असते.

रसिकमनाला, शब्दांच्या बाह्यसौंदर्याची भुरळ पडते.

"परि तैसें दे नोहेचि देवा। देखिला अक्षरांचा मेळावा

आणि विस्मयाचिया जीवा।, विस्मयो झाला।।

शब्दांचा रुपसौंदर्य असते हे ज्ञानेश्वरांनी अनेकवेळा, सुंदर उपमा देऊन सांगितले आहे. कवितेतील अंतर्गत आशयाचे सौंदर्य कळण्यापूर्वी शब्दांचे देखील सौंदर्य रसिकाला अधिक मोहवित असावे.

"नवल बोलतीये रेखेची वाहणी।

देखता डोळ्यांही पुरो लागे धणी।

ते म्हणती उघडली खाणी

रुपाची हे ।।

शब्दांचा दिसण्याचे कौतुक जसे ज्ञानेश्वरांनी केलेले आहे तसे शब्दांच्या नादसौंदर्याचा गौरवही त्यांनी केला आहे. शब्दांतील नादाचे सौंदर्य म्हणजेच त्यांतील रसाळपणा असेही ते म्हणतात. साहित्याच्या श्रवणाचे सुख त्यांनी मोलाचे मानले आहे. असे असले तरी रसाळपणे तत्वबोध करून देणे, रस व भाव यांचा प्रकर्ष साधणे आवश्यक असल्याचे त्यांच्या कवितेतून दिसते. शब्दसौंदर्याचा आधार घेऊन, अगम्य तत्त्व विशद करून सांगणे हे त्यांचे ध्येय होते. शब्दांच्या उच्चारातील नादमाधुर्य आणि त्याच्या अर्थाशी असलेले नादाचे साहचर्य यांमुळे ज्ञानेश्वरांची कविता श्रेष्ठ ठरली. 'शब्द जैसे कल्लोळ। अमृताचे' किंवा 'निवालिया अमृताचा कल्लोळ। तैसा कोवळा आणि रसाळ' असे ज्ञानेश्वरांनी नादबंधाचे वर्णन केले आहे. मराठी कवितेच्या परंपरेमध्ये मुक्तछंदातील रचनेमध्ये सुद्धा नादमाधुर्य अवतीर्ण झाले, त्याचे कारण शब्द व अर्थ यांचे साहचर्य, उच्चार आणि आशयातील एकमेळ, हे असावे. 'हृदसंवादी' अर्थाचा भाव रसनिर्मिती करीत असतो याची नोंद, भारतीय ज्ञानपद्धतीमध्ये, साहित्यशास्त्रामध्ये केलेली आहे.

नादमाधुर्य या कवितेच्या गीतगुणाचा विचार करीत असताना शब्दांच्या उच्चारातील, श्रावणातील नादमयता आणि त्याचा अर्थ (आशय) यांच्यातील अद्वैताचा विचार करणे भाग पडते. नादमाधुर्याशिवाय कविता असू शकत नाही असे नाही. परंतु ह्या गुणामुळे कवितेची प्रत वाढते यात शंका नाही. कविता ही सेंद्रिय समग्रता (organic whole) असते हे पटते. "तिचा जिवंतपणा मान्य केल्यानंतर तीत म्हणजे तिच्या घाटांत अदलाबदल करणारे परिवर्तन होऊ शकत नाही. शिवाय तिची अद्वैती एकसंधता मानावी लागते."^२

"शब्दत्व आणि शब्दाचे अर्थत्व या दोन्ही गुणांचे एकरूपत्व नव्हे तर परस्परत्वही ध्यानात घ्यावे लागते. शब्दांच्या नादकृतींना महत्त्व असते. वेदांतील ऋचा, उपनिषदांतील मंत्र, सूक्ते लोकगीते यांतून शब्दगुणांचा प्रत्यय येतो. कवितेचे अंतःसंगीत ध्वनींना जो एक मौलिक अर्थ प्राप्त करून देत असते. त्याचे अनुसंधान केवळ काव्यात साधलेले आढळते. 'घनु वाजे घुणघुणा' सारख्या गौळणीतून ही नादव्यंजकता प्रत्ययाला येते"^३ असे, नाद या गुणाचे विवेचन, निशिकांत ठकार यांनी केलेले आहे.

ही नादमयता म्हणजे शब्दांतील अंतःसंगीत. आत्मपरता म्हणजेच भावनांतर्गत संगीत आणि शब्दांच्या उच्चारातील नाद यांच्या एकसंधतेने काव्यात नादमाधुर्य उत्पन्न होते. अशी नादमाधुर कविता ही गीतकाव्य असते असे सांगून डॉ. शिरीष गोपाळ देशपांडे म्हणतात, “लिरिकमध्ये Musicality असावी, म्हणजे भावनांतर्गत संगीत (सूचित संगीतात्मकता) आणि बाह्यसंगीत त्यांची सरूपता निर्माण व्हावी. अंतर्गत संगीत आणि बाह्यसंगीत त्यांच्या सरूपतेने संगीतत्व निर्माण होईल.” नादमाधुर्याचा संबंध थेट भावनांतर्गत नादाशी आहे. कविता गेय असणे पुरेसे नाही तर ती गीतगुणाची असावी लागते तरच नादमाधुर्य हा गुण तिच्यात आहे असे म्हणता येते.

ज्ञानेश्वरांच्या पदांमध्ये भक्त आणि देव यांच्यातील अद्वैताच्या या नादमधुर रचना ही उच्चार आणि अर्थ यांमधील अद्वैताचाही साक्षात्कार घडवतात. दोनपणा देवाच्या पायांवर विसर्जित होणे हा एकपणा म्हणजेच अद्वैत होय। या रचनांमधील शब्द, हलवता येत नाही त्यामुळेच ही पदे म्हणजे ऑरगॅनिक होल (सेंद्रिय समग्रता) असे ज्या रचनेला म्हणता येईल अशी कविता होय! शब्दांमधून वाच्यार्थ कळतो परंतु सेंद्रिय समग्रतेसाठी आवश्यक असणारा हा शब्दक्रमांमुळे कळतो. माणसाच्या अवयवांचा एकमेकांशी असलेला संबंध जसा आणि जितका महत्त्वाचा असतो तसेच कवितेतील शब्दांचे आहे. शब्दांची निवड आणि त्यांचा क्रम यांमुळे एका शब्दाचे दुसऱ्या शब्दाशी नाते प्रस्थापित होते. हे नाते आणि शब्दांचा नाद व शब्दांचा अर्थ यांचे साहचर्य यांमुळे नादमाधुर्य निर्माण होते. एकाच शब्दाचा नाद असे नाही तर शब्दानंतर आलेला शब्द यांचा उच्चार व अर्थ यांचा एकमेळ होतो तेथे नादमाधुर्य असते.

ज्ञानेश्वरांच्या प्रतिभेची उत्तुंग झेप नादमाधुर्याची निर्मिती सहज करते. आपण नादमाधुर्य निर्माण करीत आहोत याचे भान त्यांना असावे असे वाटत नाही. तथापि, ज्ञानदेव शब्दांना नादाचे रुपडे म्हणतात हे ही येथे लक्षात घ्यावे लागेल.

“हरि आला रे हरि आला रे। संतसंगे ब्रम्हानंदु जाला रे ॥ १॥

हरि येथे रे हरि तेथे रे। हरिवांचूनि न दिसे रिते रे ॥ २॥

हरि पाही रे हरि ध्याई रे। हरिवांचूनि दुजें नाही रे ॥ ३॥

हरि वाचे रे हरि नाचे रे। हरि पाहतां आनंदु साचे रे ॥ ४॥

हरि आदि रे हरि अंती रे। हरि व्यापकु सर्वाभूती रे ॥ ५॥

येथे रे ची पुनरावृत्ती दिसते. ती कानाला गोड वाटते. सर्वव्यापक हरिच्या नामोच्चारामध्ये दंग होणे, त्यातून निर्माण झालेला आनंद, त्याची सगळीकडे असणारी वस्ती, आदिस्थितिअंताला आहेरी आहे याचा आनंद इथे वर्णिला आहे. डॉ. देशपांडे म्हणतात तो भावनात्मक आनंद आणि शाब्दिक नाद यांचा एकमेळ येथे दिसतो. त्यांतूनही नादमधुर रचना निर्माण झाली आहे.

श्री ज्ञानेश्वर महाराज सार्थ गाथेतील ४३वा अभाग काव्यधर्माचा तसेच नादमाधुर्याचा अतोनात आनंद देणारा आहे.

“ज्ञानविज्ञान हरि नांदे आमुच्या घरी। बाह्यजु अभ्यंतरी जाला देव ॥१॥

काय सांगू माय त्रिभुवन धाय पाहता न समाय नाना रुपी ॥२॥

चढत्या वाढत्या गोष्टी प्रगट दिस घरी। नानारुपे वैकुंठी नेऊनि घाली रया ॥३॥

ज्ञानदेवा गोडी हरिपदी आवडी। प्रवृत्तीची घडी उलंडिली ॥४॥”

गोष्टी, आवडी, घडी यांत अंतर्गत नाद आहे. प्रास किंवा अंतर्गत यमकांची येथील भूमिका ही गौण आहे. शब्दांचा उच्चार आणि त्यांचा अर्थ यांचे नाते माय, धाय आणि समाय या शब्दांमध्येही दिसते. प्रवृत्तीची घडी ओलांडून जाणे जमले ते हरिनामाच्या आवडीमुळे असे ज्ञानदेव म्हणतात.

“म्हणोनि माझे नीच नवे
 स्वासोच्छवासही प्रबंध होआवे।
 श्रीगुरुकृपा काय नोहे
 ज्ञानदे”म्हणे।।38।।”

ज्ञानेश्वरी अ. १८

गुरु-शिष्यांतील अद्वैताचे वर्णन ज्ञानेश्वरांनी १८ व्या अध्यायातील या ओवीमध्ये केले आहे. प्रबंध म्हणजे प्रकर्षाने बांधणे. ज्ञानोत्तर भक्तीचे हे वर्णन आहे. प्रेमाचा उत्कट उत्कर्ष म्हणजे भक्ती. ज्ञानपूर्व भक्ती मध्ये दोनपण असते. ज्ञानोत्तर भक्ती म्हणजे अद्वैत. स्वासोच्छवासही प्रबंध होआवे। या ओळीमध्ये कर्णमधुर व्यंजनांचे उपयोजन दिसत नाही तरीही ही रचना नादमधुर आहे ते शब्द व अर्थाच्या साहचर्यामुळे.

“चंदनाची चोळी माझे सर्व अंग पोळी
 कान्हो वनमाळी वेगी भेटवा का
 सुमनाची सेज सितळ वो निकी
 पोळे आगीसारखी वेगी विझवा का ”

“एक परमेश्वराचे पद बाजूला सारले तर श्रेष्ठ दर्जाच्या प्रेमगीतांशिवाय दुसरे काहीच शिल्लक उरत नाही. स्वतःला स्त्री व श्रीकृष्णाला प्रियकर समजूनच ही गाणी लिहिली गेली” असे डॉ. शिरीष गोपाळ देशपांडे यांनी आपल्या प्रबंधामध्ये नमूद केले आहे.

ज्ञानदेवानंतर आणि ना. घ. देशपांडे यांच्यापूर्वी नादमधुर गीतकाव्याची निर्मिती कोणी केली असेल तर ती होनाजी या शाहिराने! लावणीतील स्त्री –पुरुष प्रेमाचा अत्युत्कट आविष्कार अंगभूत नादमाधुर्याच्या साहाय्याने झाला आहे. लावणीतील भाषेचा डौल सांभाळत, रचनेतील खटक्यांचे सौंदर्य शाबूत ठेवून अभिव्यक्त होणारे संयत प्रेम केवळ विलक्षण आहे. अर्थात डॉ. शिरीष देशपांडे यांनी म्हटल्याप्रमाणे “शाहिरी लावणीतील मोकळ्या, उघड शृंगाराची धिटाई बादशाही रंगेल रात्रीतून आली असावी हे मान्य करायला पुष्कळ जागा आहे. असे दिसते. हे ही इथे ध्यानात घ्यावे लागेल.

“तुझ्या प्रीतीचे दुःख मला दाऊं नको रे।
 वधुन जाई प्राण घेई जगीं ठेवूं नको रे।।धु.।।
 जगी सांगतात प्रीत पतंगाची खरी।
 झड घालुन प्राण देतो दीपकाचे वरी।
 हे मी सांगत असताना कां गे पडली भरी।
 रत्न टाकून पदरांत गार घेऊ नको रे तुझ्या।।३।।

याहोनाजींच्या रचनेतील आशय आणि अभिव्यक्तीमधील एकपणा काव्यधर्म वाढवितो. तसेच, शब्दांबाहेरचा नाद आणि आतला नाद यांमुळे नादमाधुर्यही निर्माण झाले आहे.

‘नूतन वय दोघांचे’ या लावणीतील आशयाची खुलावट मोहवून टाकणारी आहे. लावणीमध्ये असणारे अंतर्गत यमक येथे ठायी ठायी दिसते. परंतु नादमाधुर्यासाठी यमक, प्रास एवढेच पुरेसे नाही तर शब्दक्रम, त्यांच्यातील उच्चार व अर्थ यांचे नाते आवश्यक असते. हे नाते या रचनेत दिसून येते.

ज्ञानेश्वर, होनाजी यांच्या काव्यातील नादमाधुर्य अंगभूत आहे तसेच अंगभूत नादमाधुर्य ना. घ. देशपांडे यांच्या काव्यात आढळते. वृत्तबद्ध रचना, मुक्तछंदातील रचना, विरामचिन्हांचा जाणीवपूर्वक वापर, रचनेतील सोपेपणा ही ना. घ. देशपांडे यांच्या रचनेची महत्त्वाची वैशिष्ट्ये आहेत. नादमाधुर्य आणि चलच्चित्रमयता ह्या

गुणांमुळे त्यांच्या कवितेतील काव्यधर्म हा उच्च प्रतीचा ठरला. या अर्थाने ही कविता श्रीमंत आहे असे म्हणता येईल.

‘डाव मांडून भांडून मोडू नको!

आणले तू तुझे सर्व; मी आणले;

सर्व काही मनासारखे मांडले;

तूच सारे तुझं दूर ओढू नको;

डाव मांडून भांडून मोडू नको!’

(‘डाव’ ‘अभिसार’, पृ. १२६)

‘डाव मांडून भांडून मोडू नको’ यांत चार वेळा ‘ड’ आहे. वस्तुतः ड वर्गीय व्यंजने प्रलयंकारी कवितेला शोभून दिसतात. उदा. राजकवी तांबे यांची ‘डमडमत डमरू ये’ किंवा ना. घ. देशपांडे यांची ‘डं चिक डं’. तथापि, ‘डाव’ मध्ये हे व्यंजन नाजूक झाले आहे. ते कवितेतील नादमाधुर्यामुळे. मांडून, भांडून मोडून मोडू नको मुळे विशिष्ट लय आलेला आहे.

डाव मांडणे

डाव मोडणे

(डाव) मांडणे

यांतील भांडणे सुद्धा डावातले आहे. असे स्पेसिफाय होते. मांडणे आणि भांडणे हे संवादी लयीतून उच्चार आणि विरोधी लयीतून अर्थ असल्यामुळे यांत केवळ नादमाधुर्यच येत नाही उच्च प्रतीचा काव्यधर्मही राखला जातो. ‘मांडून मोडणे’ यांत विरोधीलय आणि ‘भांडून मोडणे’ यांत संवादी लय येते. ती दर्शनी गांभीर्याने येत नाही कारण तो डावच असतो. पण, हा डाव खेळण्यातला नसल्यामुळे – प्रत्यक्षातील असल्यामुळे – डार्कनेस निर्माण झाला आहे. हा डाव नसून पाडाव झाला आहे. (पण, ‘पाडाव’ हा शब्द कवितेत येत नाही. अन्यथा नादमाधुर्याची लज्जत आणखी वाढली असती.)

फुंकरीने फुगा हाय फोडू नको...’

हार हासून घालून तोडू नको...’

तूच वाचून लाजून खोडू नको...’

देशपांडे यांच्या आधी असलेले नादमधुर कवी ज्ञानेश्वर व होनाची यांनी अनुक्रमे अष्टाक्षरी तसेच षडाक्षरी छंद आणि लावणीच्या जाती यांतून रचना केली असल्यामुळे वृत्तवैविध्य हे केवळ नादमधुर ना. घ. देशपांडे च्याच कवितेत पाहावयास मिळते.”

“काय बाई तरी

चंद्र आला वरी!

चाल, सजणा, घरी!

एक, झाले सख्या, चंद्रमुख हासरे;

वाटते लाज रे! ”

किंवा

“पक्षी वेळून मान घेतील तान गगनगमनाची,

मुग्ध बघून दूर रेषा

साहित्यशास्त्रातील शब्दशक्ती, भारतीय तत्त्वज्ञान ते आधुनिक मराठी कवितेतील नादमाधुर्य असा प्रवास केल्यानंतर हे ध्यानात येते की, गीतगुण असणारी कविता ही श्रीमंत असते. काव्यधर्म तर कवितेत असणे आवश्यकच आहे परंतु शब्दांतील अंतःसंगीत आणि त्याचा आशय यांचा एकमेळ झाल्याने जे काव्य निर्माण होते ते श्रेष्ठ दर्जाचे असते.



Implementation of Right to Education Act 2009 in Uttar Pradesh: Multi Stakeholder Analysis

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Introduction

India is one of the fastest growing economies. Growth, however, is not the same as development, in the broad sense of improvements in the quality of life. Even if growth is an important tool of development, the extent of translation of growth into development depends both on the character of the growth process and on various forms of public action (Dreze, 2017).

It is well known that elementary education transforms way of life and significantly contributes to a variety of social goals, including economic progress, demographic change, social equity and democratic practice. Yet, basic education is one of the areas where India needs urgent attention. For the quality of basic education given in the classrooms and the infrastructure of those classrooms has been found to be of below average standard (Dreze & Sen, 2013).

To bring about lasting change and instill the idea of right of children to basic education, the Indian government brought Right to Education (RTE) Act 2009 to ensure each and every child receives free and compulsory education between the age group of 6 to 14 years. As a lot was expected from the Act, this study aimed to understand how Right to Education Act 2009 is being implemented, especially after over a decade, in the government schools of rural Uttar Pradesh.

Challenges of RTE Implementation

Review of the studies on impact of RTE Act 2009 and its provisions suggests that provisions such as “no-detention-policy” and “age-specific-admission”, stands to hinder the quality of teaching and learning. Similarly, delay in the allotment of funds, hamper the implementation stages of the various provisions. The provision of 25 % reservation for children from EWS in private-aided schools need financial assistance (Uma (2013), Muralidharan (2015), The KPMG (2016)). Review of the studies also pointed out lack of mass awareness amongst the primary stakeholders to be a major challenge. For their awareness is crucial in keeping the Act functioning. Studies also found that knowledge of RTE and its provisions to be same in both male and female teachers. It was also found that teachers considered “no-detention-policy” and “no-holding back” of students to be inappropriate (Ojha (2013), Mandal and Barman (2014), Barman & Mandal

(2015), Singh & Sagar (2019), Jugmaheer, Shrivastav, & Rajput (2020)). Shortage of trained teachers, lack of clear guidelines as regards to RTE's provisions, inadequate monitoring of SMCs and RTE's implementation by government officials, inadequate school mapping were also found to be often repeated challenges faced in the implementation stages of RTE Act 2009 (Zorinsangi 2012, Ghosh 2013, Sethi & Muddgal 2017, Saini & Ajmani 2017, Kapur 2017, Singh 2017, Pille & Sasikala 2018, Yadav & Kumar 2018, Almeida 2019, Islam 2020, Bandgar 2021).

Methodology

The study aimed to show the Knowledge and Attitude and Practice of primary stakeholders as regards to the several provisions of Right to Education Act 2009. It is a descriptive study. Mixed methods were employed to study the implementation of RTE Act 2009. The researcher employed tools of observation schedule and interview schedule to obtain data. The study was conducted in government schools of rural Uttar Pradesh. And houses of students were also visited in person to obtain respective information.

Objectives:

Thus, the objectives for the present research study are as follows:

- To study what changes RTE Act 2009 and provisions has brought in the schools of rural Uttar Pradesh.
- To understand implementation of RTE Act 2009 in Rural Uttar Pradesh.
- To know the degree of awareness about the RTE Act 2009 amongst parents, principals, teachers and schoolmanagements.
- To examine opinions concerning RTE Act 2009 implementation from primary stakeholders.
- To recommend effective implementations of RTE Act 2009.

Locale of the Study:

Jaunpur district from the state of Uttar Pradesh was selected on the basis of proximity and familiarity. Of the 21 blocks in the district of Jaunpur, one block (Sujangaj Block) was selected for this study. In Sujanganj block there are 11 clusters in which government schools are divided. And of these, Golhana Mau cluster was selected by keeping in mind the feasibility of traveling. There were 12 government primary schools in this cluster. In these 12 government primary schools, total number of sample size for principal obtained was 11 (as principal from one school was out to procure Aadhar forms for the students of his school). The total numbers of teachers were found to be 48, yet in the present study the total sample of teachers selected were 34 (as 14 teachers were absent on the day of visit to these schools). A total of 210 parents were approached on the basis of feasibility of reaching parents of students from respective schools.

Sampling:

Multi-stage sampling technique was incorporated that is to say for the selection of the state

of Uttar Pradesh, the researcher used purposive sampling. The district of Jaunpur, the block of Sujanganj and the cluster of Golhana Mau was selected on the basis of convenience sampling. Availability sampling was used while selecting schools, principals and teachers. And incidental sampling was used in case of parents.

The major provisions of RTE Act 2009 were incorporated in the preparation of interview schedule to assess knowledge about RTE Act amongst the primary stakeholders. For this study, collected data was coded and mechanical analysis was undertaken. Data was analyzed using SPSS – Statistical Package for Social Sciences. Apart from frequency and percentages, dispersion, Anova test have been employed to interpret the data. In order to draw sharper conclusions three KAP scales were constructed from the responses obtained from all stakeholders.

Results and Discussion

Profile of Schools

The schools were located in different villages of Golhana Mau cluster. All of the 12 schools were government primary schools.

1.1 Names Of The Schools, Standard And Number Of Students In Each School

Total School	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Overall Students
School A	30	20	15	45	20	130
School B	70	25	35	30	50	210
School C	10	13	10	15	15	63
School D	20	17	17	22	25	101
School E	22	27	25	29	38	141
School F	18	10	4	8	14	54
School G	36	38	39	49	35	197
School H	44	30	25	36	43	178
School I	11	9	7	16	10	53
School J	8	8	8	7	14	45
School K	18	10	4	8	14	54
School L	20	10	5	5	5	45

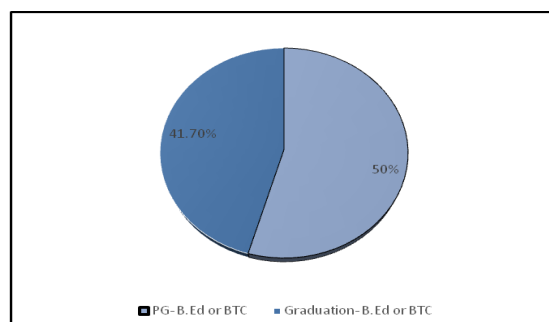
It was found that school B (S-B) with most students had only two teachers but had most classrooms. It was also found that S-J with 45 students had six classrooms. The total rooms across 12 schools were 61, making average of five rooms per school. All the visited 12 schools was of one floor.

Profile of Principals

11 principals from 12 schools were interviewed for the purpose of this study. All the 12 principals were male with the average age of 46 years. Five of the 11 principals belonged to

Scheduled caste. Whereas, six principals had the educational qualification of post-graduation along with either B.Ed. or BTC.

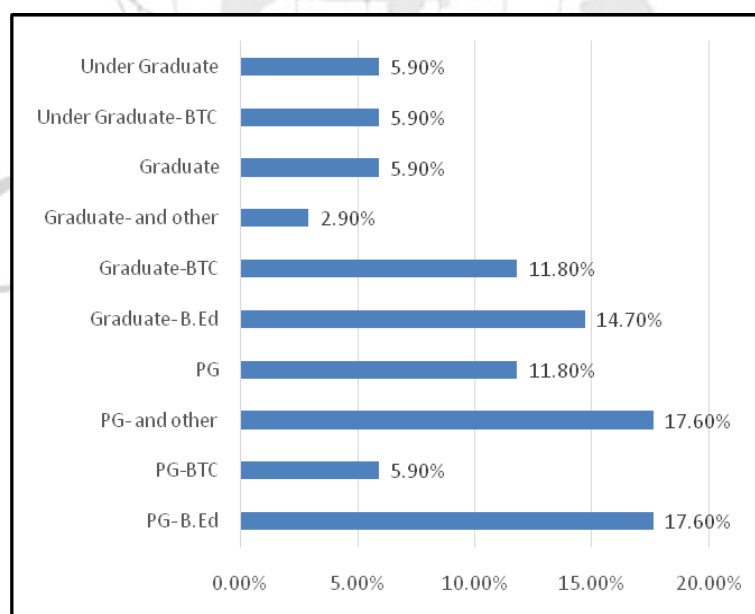
1.2 Percentage Distribution of Educational Qualification of Principals



Profile of Teachers

With 48 teachers in all the 12 school, only 34 became a part of the sample. The average age of these teachers was 41 years. Around 23 teachers were male and about 13 teachers belonged to OBC category. 12 teachers held educational qualification of post-graduation along with B.Ed. or some other qualification.

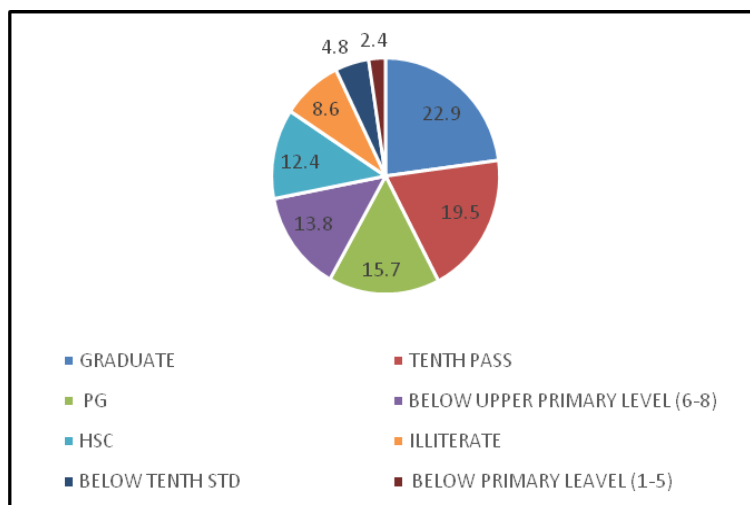
1.3 Percentage Distribution of Educational Qualification of Teachers



Profile of Parents

210 parents were interviewed. The average age of the parents was 31 years and most of the respondent parents were male. 41.9 percent of parents belonged to General category. Around 21 percent of parents were less than graduate. And 8.6 percent of parents were illiterate.

1.4 Percentage Distribution of Educational Qualification of Parents



KAP Assessment of Primary Stakeholders

Assessment of Knowledge amongst Primary Stakeholders

More than half of all the three primary stakeholders were aware that RTE Act 2009 was about primary education and not secondary. More than half of the parents accepted that school does not demand any sort of donation or capitation fees. Only a few respondents responded that parents or guardians have to go through the screening procedure at the time of their child's admission. 65.7 percent of parents, all the teachers and nearly 92 percent of principals responded that women can participate in SMC. It suggested that teachers and principals had more knowledge on the matter in comparison to parents.

Assessment of Attitude amongst Primary Stakeholders

Majority of the (88.2 percent) teachers and (83.3 percent) principals reported that non-educational activities affect teaching quality but the proportion of parents feeling the same was 64.8 percent.

At the same time, all parents responded that school is negligent towards child's education and that child shouldn't be promoted to grade 4, if he is not ready for grade 3. Whereas only 16.7 percent of principals agreed that child shouldn't be promoted to fourth grade if s/he is not ready for third grade. More than half of the teachers and about 34 percent of principals agreed that not failing a child is a right decision. Almost all parents, 41.2 percent of teachers and more than half of the principals agreed that child learns out of the fear of failing. Less than 21 percent of teacher and less than nine percent of principals agreed that child learns in fear of punishment. Again, almost all parents agreed that child attends school regularly out of the fear of expulsion.

It shows that teachers and parents responded almost alike when it came to enhancing the quality of education and they recognize that non-educational activities are impacting the educational responsibilities.

Assessment of Practices amongst Primary Stakeholders

More than half of the teachers and principals responded that teachers perform non-educational duties, which than affects their teaching quality. More than half of the parents responded that in practice teachers conduct private tuitions.

On question “school demands capitation fees or donation for child’s admission”, only 8.8 percent parents and teachers and 8.3 percent principals responded in affirmation.

More than half of the parents, teachers and principals agreed that in practice school does not seek age-proof neither deny admission in absence of it. 68.1 percent parents agreed that in practice child is given age-specific admission and 71.4 percent agreed that child stays in school even after reaching 14 to complete primary education. Nearly all parents agreed that neither a child’s name has been dropped before completion of primary education nor a child has been failed in any grade. Half of the teachers and principals agreed that parents prefer private (PVT) school over government (GOVT) school. Less than nine percent of principals agreed that school has 25% reservation for children from EWS and disadvantaged groups.

ANOVA Assessment of Socio-demographic Characteristics

The results of the ANOVA assessment reveal that knowledge ($F(3,30) = [1.562]$, $p = 0.219$), attitude ($F(3,30) = [1.035]$, $p = 0.391$), and practice ($F(3,30) = [1.558]$, $p = 0.220$), scores does not significantly differ among teachers across different caste categories.

However, in case of parents, knowledge ($F(4,205) = [9.958]$, $p = 0.000$), attitude ($F(4,205) = [4.388]$, $p = 0.002$), and practice ($F(4,205) = [8.375]$, $p = 0.000$), score significantly differ across different caste categories.

In conclusion, caste plays no role on KAP score of teachers. Although, caste plays significant role on KAP score of parents in regards to Right to Education Act 2009.

Similarly, the results reveal that knowledge score of teachers ($F(1,32) = [12.561]$, $p = 0.001$) significantly differ across gender. Whereas, attitude ($F(1,32) = [0.126]$, $p = 0.725$) and practice ($F(1,32) = [3.258]$, $p = 0.081$) score of teachers did not significantly differ across gender.

It was also observed that knowledge ($F(1,208) = [5.167]$, $p = 0.024$), attitude ($F(1,208) = [11.480]$, $p = 0.001$) and practice ($F(1,208) = [6.258]$, $p = 0.013$) score significantly differ among parents across gender.

In conclusion, gender plays no role in knowledge score of teachers. Although, gender plays role in KAP score of parents in regards to Right to Education Act 2009.

The findings reveal that knowledge score of teachers ($F(2,31) = [4.500]$, $p = 0.019$) significantly differ in regards to their educational qualification. Whereas, attitude ($F(2,31) = [0.507]$, $p = 0.607$) and practice score of teachers ($F(2,31) = [0.784]$, $p = 0.465$) does not significantly differ in regards to their educational qualification.

The results reveal that knowledge ($F(6,198) = [20.481]$, $p = 0.000$), attitude ($F(6,198) = [4.126]$, p

= 0.001) and practice score ($F(6,198) = [10.363]$, $p = 0.000$) significantly differ among parents in regards to educational qualification.

In conclusion, educational qualification plays a role in Knowledge score of teachers. Likewise, educational qualification plays a role in KAP score of parents in regards to Right to Education Act 2009, indicating importance of education to improve RTE implementation.

It is seen that the correlation between knowledge and practice score is positive indicating teachers with higher knowledge score also has higher practice score. Likewise, positive correlation is seen in knowledge and practice score of parents as well. This indicates parents with higher knowledge also has higher practice score. It was also seen that attitude and knowledge score of teachers was found to be negative. Similarly, practice and attitude score of teachers was found to be showing negative correlation. Likewise, knowledge and attitude score of parents was also found to be showing negative correlation.

Recommendations

The following are the major recommendations obtained from the primary stakeholders' responses and evaluation of overall obtained data:

Basic Infrastructure:

Basic infrastructure of the government schools of rural Golhana Mau cluster was found to be lacking in the most basic of facilities. Principals of some of these schools suggested that government schools must be provided with bus facilities and other services on timely basis to raise the standard of these schools.

In ten schools, approach road and library were not in adherence to RTE norms. In three schools RTE norms was not in adherence in terms of teacher-pupil ratio, separate class for separate grades, separate toilet for girls and boys. Infrastructure of more than 10 schools were in adherence to RTE norms.

Inculcating toilet manners:

Researcher saw the toilet facilities in all the visited schools. In more than half of the schools these facilities were not properly constructed. And in schools where they were at least decent enough they were completely untidy. Hence, initiatives of inculcating toilet manners would be good start in the direction.

Provisions that were amended for good reason:

In the visited schools, all the primary stakeholders be it parents, teachers or principals complained of the provision of 'no- expulsion', 'no holding-back', 'no punishment'. Both the provisions have been revised in the year 2019.

NIPUN BHARAT Needs Teacher:

The initiative of NIPUN BHARAT complements the objectives of RTE Act 2009. But with a mass of overburdened teachers who voice their grievances by stating that non-educational duties

interfere with the quality of their teaching, initiative like Nipun Bharat cannot yield desired results.

Incentives for Motivating Stakeholders:

One of the principals stressed that rural schools and the facilities it provide is mostly taken for granted. This acts as a demotivating factor for teachers and principals alike. Even the parent members of SMC tend to take their participation lightly. Hence, rewards for effective delivery services can make the stakeholders more responsible and appreciated. Increment in the salary of teachers and principals on the basis of their efficiency as against to the years of teaching can give rise to healthy competition amongst teachers and principal alike.

Monitoring of Teachers and Shiksha Mitra's Attendance:

Researcher found that many of the teachers whose name was mentioned on the school board had never visited these schools. These teachers allow local teachers or unskilled degree holders to teach in their place. These unskilled teachers and the Shiksha Mitras who are paid less than the original teachers tend to handle their task poorly. Such arrangements are one form of corruption that needs thorough monitoring, so that RTE Act can materialize effectively.

Need to Change the way of Spreading Awareness:

If creating awareness amongst parents is deemed to be difficult due to lack of education or illiteracy, then the outcome of the present study found that large number of parents were graduate or more as (over 51 percent) compared to mere 15 percent of parents who were below tenth pass. Teachers and principals also mentioned they found the task of taking out rallies time consuming and exhausting. Thus, there's a need to invite youth population and put effort in creating awareness amongst masses in engaging manner instead of merely holding placards and raising slogans on the importance of education. Similarly, it was found that most of the parents, principals and teachers stated that they heard of RTE Act 2009 mostly on radio and television. Thus, the two source of information could be put to better use by making this awareness initiative story-based to target the main audience with vital information.

Conclusion

In the context of all the 12 government schools (S-A to S-L) of Golhana Mau cluster from Sujanganj block of Jaunpur district from the state of Uttar Pradesh, it was seen that more than half of the schools adhered to RTE norms. RTE, however, mentions of standard as well. Requirement of ensuring minimum standard in providing these facilities.

It was found that there was chronic shortage of teachers due to teacher absenteeism. Principals and teachers' responses suggest that they felt overburdened due to non-educational task which affected their teaching quality. School's negligence in teaching was pointed out by all the parents. Due to which, according to parental perspectives, neither the children took the school seriously nor their learning progressed. RTE's provision ensures a child get age-specific admission. But according to parental perspective, because of age-specific or grade-specific

admission and no-holding back policy, age-specific admission wasn't translating into age-specific learning in these rural schools. Almost all the parents responded that age-specific admission does not help their children in any way. As an overburdened teacher who struggles to take regular classes, completely neglects remedial class and its importance.

More than half of the parents, teachers and principals were aware that students are to be provided with free uniform, books and other stationary. RTE's provision was well-practiced in these schools. But all the three stakeholders' perspective showed that they weren't satisfied with the implementation of these provisions.

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