

SUSTAINABLE DEVELOPMENT AND ENVIRONMENTAL EDUCATION

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ABSTRACT

The environmental problem increasing in the world, like global warming, ozone layer depletion, green house effect, rise in sea level, improper monsoon and acid rain. Science and technology on one hand has brought immense benefits but on the other hand we are paying a heavy price for it. There is a wrong notion that economic development is based only on industrialization. However, science and technology can help in the process of global sustainable environment, but only in a limited way. In India, environmental education has been introduced at various school levels. But the teaching of this subject is not satisfactory due to lack of proper training of teachers in the field of environmental education. The present paper examines the significance and awareness of sustainable development and environmental education among the prospective teachers.

Keywords : Environmental education, sustainable development.

INTRODUCTION

India is the second largest population country in the world. Today we find a continuous depletion of natural resources, deforestation, extinction of many plants and animal species, rise of global temperature, environmental pollution, depletion of ozone layer, etc. This depletion creates many problems in human life like food crises, hunger, malnutrition, poverty, insanitation and excessive consumerism which have placed serious strains on the essential life support-system of our planet. Threats to peace and security of nations from environmental breakdown are today greater than any other foreseeable military threats from conventional arms (Rao, 1999). The Tsunami disaster, because of relentless destruction of mangroves and coral reefs, bears testimony to this. (Shiva, 2005) The environment and natural resources directly affect the standard of living or the quality of the people.

World Commission on Environment and Development (WCED, 1987), in its report “*Our Common Future*”, defines Sustainable Development, as the “development which meets the needs of the present generation without compromising the ability of the future generations to meet their own needs”. The objectives of Sustainable Development are to ensure the well-being of the present and the future generations and to maintain a healthy environment and life-support system. The sustainable development framework entails thinking far into the future and taking into account of how our present actions might affect our ability to live a wholesome and fulfilling life. One can look at Sustainable Development on a global, regional, National, state, local and even individual scale. . National Environmental Awareness Campaign (NEAC, 2000-2001), started in 1986 for creating environmental awareness at all levels of society, was continued during the year with the main theme, as, “Keep our Environment Clean and Green”.

The Ministry (2000-2001) (MoEF, 1998) teamed actively with the University Grants Commission (UGC), National Council of educational Research and Training (NCERT) and the Ministry of Human Resource Development (MHRD) for introducing and expanding environmental concepts, themes, issues etc., in the curriculum of schools and colleges”. The present problem can be best tackled if proper awareness and attitude towards environment is developed both among individuals and society. Systematic, organized and awakened social mind can be developed only through right type of education and it is through right type of education that appropriate awareness can be created to make life and its environment creative, constructive and progressive. To develop such a state of mind, fostering a scientific attitude among individuals for the growth and the development of environmental awareness

IMPORTANCE OF ENVIRONMENTAL EDUCATION IN TEACHER’S TRAINING PROGRAMME

Global warming and environmental problem are increasing day by day due to this the scientist and educationalists have started to take keen interest and pay attention to the subject of Environmental Education (EE) The environmental changes caused by the unchecked growth of industries and population in the world. We are also realising that air, water and land are becoming more polluted due to technological advancement. Education has a major role in implementing environmental protection and conservation. Nature conservation and environmental protection are extremely important for primary health care of the individual. Environmental Education programme should be introduced at every level of schooling. If we want to implement the programme of Environmental Education successfully in secondary

schools, it is essential that teacher must be trained with all required skills, attitudes and values essential to teach environmental concepts. Therefore, introduction of Environmental Education in teacher training colleges should get due importance. National level workshops are also organized by National Council for Teacher Education (NCTE, 1998) in different states of India. Thus, we can say that continuous efforts are being made by NCTE to make the prospective teachers environmentally literate (NCTE, 1998). There is mention of environment and its importance in many ancient literatures. However, the beginning of Environmental Education can be traced back to educational thinkers such as Froebel, Montessori, Steiner and Dewey, who had placed great emphasis on the learner and learning environment, on learning by doing and participation and on different learning needs and styles (Kirk, 1992).

Environment education concept was given by Scottish Professor of Botany, Patrick Geddes, known as the father of modern Environmental Education. He was the first to make the vital link, fundamental to environmental education, that the quality of environment and education were closely interdependent and a child brought into the realities of his environment would not only learn better but would also develop a creative attitude towards the environment (Saxena, 1993). In October 1977, the Intergovernmental Conference on Environmental Education held at Tbilisi, USSR, outlined the structure of Environmental Education that formed the prototype for environmental education programmes worldwide (UNESCO, 1978). Environmental education (EE) has two intimately linked goals (Chopra and Kadakoli, 2001; Reddy, 2002) education towards protection and improvement of the environment, and education as an instrument of development and improving the quality of life of human beings. United Nations Conference on Environment and Development (UNCED, 1992) popularly known as “Earth Summit” held at Rio-de- Janeiro in 1992 endorsed the concept of Sustainable Development (Koshoo, 1998) and the global environmental concerns came into sharp focus in this conference. It stressed, “Reorienting education towards Sustainable Development”. UNO has declared (2004 to 2015) as the Decade on Education for Sustainable Development (DESD). Hence, Environmental Education for the 1990s has become Sustainable Development Education (Atchia, 1990). The Education for Sustainable Development is not the same as Environmental Education. After Rio Earth Summit, besides EE various terminologies such as Education for a Sustainable Development (ESD), Education for Sustainability (EFS), and Education for a Sustainable Future (ESF) and Sustainability Education (SE) have emerged (Sterling, 2005). However, ESD is regarded as the new generation Environmental Education (Hesselink et al., 2000).

STRATEGIES FOR PROMOTING EFFECTIVE ENVIRONMENTAL EDUCATION

The following strategies are needed to promote Environmental Education effectively:

1. For a growing child, experiences related to Environmental Education need to occur continuously over a period of time from pre-school into adulthood so that understanding and motivation gained at each stage of life becomes an integral part at each stage of formal education right from pre-primary to secondary stage.
2. Environmental Education is a lifelong process and should not remain confined to formal system of education. It should form a part of non-formal education and adult education as well.
3. In formal education, at all levels, curriculum should be prepared on interdisciplinary basis. It should be based on well-researched facts and data. It should lay emphasis on three C's Connection, Concern and Care. The topics covered should be specific to learning stages and ages.
4. Environmental Education during early years should be based on the sense of wonder and joy of discovery.
5. At the secondary stage curriculum should lay emphasis on awareness, life experiences, conservation, and action skills. Since major aspect of Environmental Education is experience and relationship; experiential learning should be a major teaching strategy at secondary stage.
6. At the secondary stage much emphasis should be laid on knowledge regarding Sustainable Development based on experiences with conservation. Content must be based on science and technology, environmental engineering, health and social ecology.
7. At the secondary and higher education stage co-curricular activities can be effectively organized for action with participation of students in environment related activities. The following co-curricular activities can be organized under NSS and SUPW programmes: (i) Cleaning environment; (ii) Digging pits for the waste in the village; (iii) Growing plants; (iv) Organizing camps of population education. Besides, educational institutions, NGOs and government bodies can collaborate in organization of activities related to environment awareness like essay competitions, on the spot painting competitions, modeling and poster designing etc. The voluntary organizations like WWF-India, Green Ray Foundation, Goa can set up Eco-Clubs in schools.
8. Teachers orientation programme at pre-primary level and at secondary level must be implemented.

9. The media could also play a vital role in the effective implementation of Environmental Education programmes. Radio talks, television programmes, information packs, posters, slides and audio-visual material should be generated. Media can be very effective in non-formal environmental education programmes.

A ROLE OF SCHOOL TEACHERS.

A teacher is the most important person in teaching who sees that educational programmes are successfully implemented by organizing and managing the learning experiences and environments (Shiundu and Omulando, 1992). Therefore, to educate others, one needs to be educated and have a broad background of general cultural training that provides a broad liberal education. Teacher education is an important component of education. Through it, school teachers who are considered mentors of society are prepared and produced. Loughran (2006) looks at teacher education as the pre-service and in-service teacher preparation where students of teaching seek to develop knowledge and skills of teaching and to learn how to competently apply these in practice. Teachers are the most important agents of change responsible for growth, development and progress of societies and communities (Mangal, 2002). Enlightened and empowered teachers lead communities and nations in their march towards better and higher quality of life (NCTE, 1998). As such, their role as teachers is very crucial to achieve the objectives of Sustainable Development. Since teachers play a major role in the education of children, their own education on these sensitive issues must therefore create necessary understanding among teachers about their new roles and responsibilities. Recently following the Hon'ble Supreme Court's directive, NCTE (1998) has observed that Environmental Education as a compulsory curriculum for Teachers' education will be implemented so as to stress Development of critical awareness about pressing problem of life especially, environmental degradation, its consequences and methods to curtail it.

CONCLUSION

As teachers are the key to the whole education system, it is only the initiative and innovativeness of the teachers that such programmes can succeed. Teachers only look into the needs of future generation through children whom they teach and mold their character. As such, their academic needs in terms of training and in-service programmes are to be looked into on priority basis. To conclude, it could be said, that it is the responsibility of teachers and prospective teachers to sensitize their students and the public at large about important issues

related to environment and Sustainable Development. It should be emphasized that man is an integral part of nature and must find ways and means to live in harmony with nature and must be educated about the importance of interdependence of man and nature. It is observed (Uhl and Anderson, 2001) that teachers should be taught to understand a set of five core principles like respecting life and natural process, living within limits, valuing the local issues, considering the costs in the process of development and sharing of power. Such ecological literacy is fundamental to living fully and wisely. The curriculum should guarantee ecological literacy reducing alienation from natural world and strengthening the bond with it.

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