ENVIRONMENTAL EDUCATION IN THE INDIAN UNIVERSITIES

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Abstract :

This paper examines the present status of environmental education in India at the college/university level. Even though the paper is confined to the Indian situation it is likely to reflect the patterns existing elsewhere, especially in the Third World.

Environmental education is besieged with two kinds of problems. Of the first kind are the problems that are associated with all our degree programmes as reflected by the deteriorating quality of the graduates we are producing? The second type of problems is specific to environmental education. They emanate essentially from the all-pervasive nature of environmental education which tries to draw upon, all at once, too many disparate disciplines. This causes the course programs to spread themselves too thin, at the cost of substance and focus.

Keyword : ENVIRONMENTAL EDUCATION.

Introduction:

Till a couple of decades ago there wasn't a single multi-disciplinary department of environmental studies anywhere in India. Whatever environmental research and teaching was done in our country till the mid-1970s was all confined to uni-disciplinary groups. Ecology was considered as one of the specializations of botany. Strangely even limnology - which draws upon myriad branches of physical and natural sciences and has only a small share of botany - was practiced by experts who had their formal training in botany. Environmental research was being done by wild-life zoologists, geographers, and others but it was bracketed as part of the respective parent discipline.

In the field of technology, environmental teaching and research was mostly the prerogative of the public health engineering departments of engineering colleges and universities. Water supply and sanitary engineering was the basic discipline where, off and on, some R&D was getting done in

areas which as of now would be considered as belonging to environmental engineering.

Around that time India witnessed its first - and to date the most famous - environmental movement: the Chipko Aandolan**.** This movement not merely sensitized the Indian people about environmental protection, it had enough force to catch global attention and become a part of the conservation lore the world over. Chipko Movement was followed by the Chaliar Movement. Whereas the first movement was against the plunder of forests by those perceived as the agents of the government, the second one was to protect a river from unscrupulous industrialists. In the years to come forest and water were to become the recurring themes in people's struggles against environmental degradation.

Problems Associated with Environment :

The problems faced by environmental education in India come under the following two broad categories.

a)   Problems which are common to the education of all disciplines in India;

b)   Problems which are specific to environmental education.

The Common Problems :

There is no quantitative study available, or of which I am aware, of the quality of. Output of our degree programmes during the 1990s compared to that of the past decades. But my own experience in interviewing candidates for doctoral programmes, faculty positions, or other jobs over the last several decades as also the feedback from a large number of colleagues and friends, makes me believe that *on an average* the quality of degree holders - be it bachelor's or master's or a doctorate degrees - has perceptibly declined over the years. There are, of course, exceptions. We still have some institutions who have maintained their peak level of quality and we still have outstanding graduates coming up now-and-then. But the general output seems to have deteriorated. This deterioration is in the following terms.

Poor Communications Skills :

One can condone the discomfort of a youngster who is facing an interview board by attributing it to nervousness. One can also attribute poor oral communication *Vis a Vis* scientific or technical matters to lack of command over the subject, mentioned in the preceding Para. But even when one is dealing with simple day-to-day matters one comes across a shockingly large number of degree holders who say what they do not mean and take meanings which are different from what

they were told. The situation with respect to written communication is still worse. Rare is the research scholar who can write even a correctable draft of his/her thesis. Generally what the student's write- of their research is so atrociously bad that it is beyond correction? As a result the guides end up writing all the theses of their students.

Lack of Originality:

When the basic attributes of clarity and communication skills/are missing in most, the more prized talent - originality -is naturally a rarity.

What are the reasons of the deteriorating quality of our average graduate? It cannot be lack of opportunities or infrastructure because over the years teaching aids such as slide projectors, overhead projectors and video films have been increasingly used to *assist* understanding. The ubiquitous Xerox machine, and the ever falling cost of photocopies, has made it a lot easier for a student to gather material for study or research than it was earlier. The concept of inter-library links which WAS in its infancy in the 1970s has become widely operational now. Students are, therefore, no longer forced to limit themselves to what is available in the libraries of their own colleges/universities. Current contents enable one to know about all the papers published in one's field as soon as the primary journals come out. Earlier we had to wait for some time. And as no single library could afford to purchase all the journals, one had to travel here and there to complete the primary literature search. Now we also have computerized literature searcher available which enable a student to do in a day what his/her seniors needed months to accomplish. PCs are every-where and so are all kinds of software packages illustrating concepts and assisting in calculations. India being still quite away from the international copyright net, these packages pirated are available to Indian students practically free of cost, With friendlier and friendlier word-processing packages coming every six months, writing a paper or a report has become infinitely less laborious than it was till a decade back.

As today's student is tomorrow's teacher we can easily see why the rot is going on unabated. The plain fact, on the other hand, is that the job prospects are proportional to ability, Selection committees do look for virtue, and are frustrate when they find it missing.

Environmental Education and Computer Education :

Comparison of environmental science and computer science, two young disciplines of identi-cal age and importance. The comparison can give us some more. Insights into what is wrong with environmental education and, hopefully, provide hints on what can be done to remedy the situation.

In its first few years computer science was developed by persons formally trained in electronics/electrical engineering, operations research, mathematics, statistics, and physics. All these happen to be closely related physical science disciplines. Even before computer science emerged as an independant discipline, the above mentioned contributory streams were liberally drawing from one another and helping each other to grow. Some other disciplines have also contributed, especially to computer hardware, such as materials science but these contributions have come in widely-spaced quantas and are rarely specific to computer science (developments in material science influence all types of instruments, not computer hardware alone). On the other hand environmental science is a heterogeneous mix of a large number of disciplines which are either unconnected or have, at best, only tenuous links.

The better focus of its educational programmes and the clear links between the levels of training and the employment slots has made computer education into a much 'harder' science than environmental education.

What needs to be done?

In our opinion we have to begin restructuring our environmental science/ ecology/environmental studies programmes so as to produce, instead of generalists, professionals whose forte is environmental botany/environmental zoology/ environmental chemistry/ environmental economics/environmental sociology etc. Within these, relatively specific, curricula should be provisions for training students in specializations such as forest ecology, limnology, marine ecology, environmental analysis, pollution studies, environmental toxicology etc. There is also a scope for producing professionals for manning specific and well-defined slots as is the case with the different levels of computer science education.

Conclusion :

We must conclude by stressing that our efforts to uplift environmental education would have a greater meaning if they are integrated with a general thrust to improve the quality of all our educational programmes.

A comparison is made between environmental education and computer education - the two branches of knowledge which began evolving into independent disciplines at roughly the same time, and whose importance is continuing to increase by the day - to further delineate the problems afflicting the former. At- tension is also drawn towards the confusion often displayed by environmental science graduates in their perception or the real life conflicts between development

and conservations.

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