

Environmental Education In India: A Scenario

Dr. Seema Singh

Department of Geography, Govt. College for Women, Hisar, Haryana

ABSTRACT

Forests have been severely impacted by population pressure, conversion of forests into agricultural land, and allotment of land to displaced people, leading to a decline in natural resources and a need for effective forest management for sustainable production. India has transitioned from traditional training and education to university education, emphasizing the importance of environmental education for human resource generation, natural resource management, pollution prevention, ecosystem preservation, water budget control, and soil erosion prevention.

India has established environmental sciences as a separate department in many universities since 1980, but the current education system needs to evolve to meet the increasing challenges of the 21st century. Environmental studies are heavily incorporated into schools curriculums and classroom interactions, with many states adopting it as a separate subject for students in class 3 and above. The National Curriculum Framework emphasizes providing a "education for life" and making learning relevant to daily life. The education system has been restructured to focus on watershed management planning, eco-development, environmental conservation, biodiversity conservation, land and forest resource economics, silviculture, decision-making science, forest biometrics, joint forest management project formulation and appraisal, medicinal plant cultivation, environmental laws, farmer's rights, benefits sharing, tribal welfare, global forestry, and computer application.

However, the current environmental education system faces contradictions, such as a lack of national consensus, strong faculties/departments, infrastructure, course curriculum, academic packages, research priorities, job opportunities, and coordination. Neighborhood awareness and action programs are planned to facilitate understanding of neighborhood concepts, motivate voluntary actions, and promote energy and resource conserving methods in neighborhood building and management.

KEYWORD

Environmental education, natural resource management, ecosystem preservation, silviculture, pollution prevention.

INTRODUCTION

The environment has a major role in both the survival of life on Earth and the well-being of all species. Earth is home to a wide variety of life forms, and all living beings depend on the environment for basic necessities including food, oxygen, water, and other resources. Therefore, it is everyone's duty to protect and preserve the environment. Unfortunately, a lot of people don't know what defines good and harmful environmental practices or the main environmental issues that the globe is currently experiencing. Because of this, our planet continues to be damaged on a daily basis. The destruction of the environment is a result of a lack of awareness and understanding of its importance. For this reason, environmental education is essential.

Environment education has assumed greater importance for generating the required human resources in their Indian context, to play a vital role in natural resources management, preventing pollution, preserving the ecosystem and balancing it in entirety, controlling water budget, preventing chronic problems of soil erosion and floods etc. Thus, in order to improve and sustain the above functions, a strong education research, extension and application system is essential with the global changing concept of natural resource management and environment conservation, there is a need to evolve a sound education system to take training of human resources to meet the increasing challenges.

Emerging Environmental Issues

Due to population pressure, conversion of forests into agricultural land, utilization of forest areas by big dams, and allotment of forestland to displaced people, the forest area has shrunk. The natural resources have deteriorated to a large extent and are not able to meet the increasing demand of the dependent population. To mitigate these problems many operational research projects have been launched and implemented. In this changed context, governmental organizations, NGOs, individuals, many village institutions are faced not only with protecting the forests against encroachment and illicit felling but also to meet the needs of the community by effective management of the forests for production on sustainable basis, dealing with problems relating to soil conservation, watershed and grassland management, agroforestry systems and educating the masses. Most countries of the world, with a few exceptions including India, have now changed from the traditional training and education to the university education. The present dichotomy of environmental education and training exhibiting parallel paths in the country needs to be carefully reviewed in the broader national interest. To keep pace with the modern trends in environment education, in many universities of the country environmental sciences as a separate department has been established since 1980. The education in environmental subjects carried out on conventional and traditional lines by the universities needs drastic change to meet the task it is required to perform in the 21 st Century.

Environmental Research, Training And Education In India

The importance of formal environmental education was realized at the national level. But over the years the need for promoting environmental education and research in universities and fostering growth and development of science has been perceived and during 1980 the environment was introduced in postgraduate levels. The recent National Education Policy lays emphasis on environmental education as a scientific discipline as well as a profession. Specialization and orientation refresher courses in the environment have also been emphasized. Environmental courses at the M.Sc. level and eventually the M.Phil and Ph.D degree programmes have been started in many universities. These are changes, which bear promise for the future. In the 1990s the majority of the Universities of the country had introduced, environment as a separate subject. The concept of a multi disciplinary faculty of environmental sciences was also conceived simultaneously.

EVS As A Subject At School Level

The curriculum and classroom interactions in schools heavily incorporate environmental studies. Many states, including Kerala, Karnataka, Maharashtra, MP Tamil Nadu, Andhra Pradesh and Orissa, have adopted it as a separate subject, particularly for students in class 3 and above. The kid is introduced to concepts related to science, the environment, health, and hygiene through this subject. It is very beneficial to instill environmental concepts in children at such a young age in order to produce future citizens that are environmentally conscious. The textbooks provide kids a lot of flexibility to express themselves and to be creative and adventurous. Children's experiences are being built upon by starting with textbooks as a foundation. Some states have distinct EVS textbooks, but others have integrated textbooks that combine language, math, and EVS.

The National Curriculum Framework, created by the NCERT, places a strong emphasis on giving kids a "education for life" and making learning relevant to their daily lives. To help the kids deal with the stresses of life, a new subject named "Art of Healthy and Productive Living" has been introduced in the primary grades. Many states are demonstrating a growing awareness of environmental issues in the lower grades by releasing language-based EVS textbooks. For example, Gujarat offers a combined language and EVS textbook for first grade. Integrated textbooks including language, arithmetic, and EVS at the class 1 and 2 levels have been tried in a few states. Kerala, Haryana, Orissa, and Uttar Pradesh textbooks are prime examples.

Nature Of Environmental Education And Training

Though education and training are interrelated, these two terms are not synonymous and a subtle distinction exists. Education connotes teaching students to think critically about inner details and dynamics of a subject and is based on generalized theories or concepts from which the learner has been taught to derive a specific solution to a particular problem. Education at a higher level has to be in-depth and broad-based. The practice of environmental education in the country largely remained restricted to books etc and consequently another added dimension to the science was the need to ensure sustained flow of goods and services to the society. Hence, a multidisciplinary subject like environmental sciences has to be integrated with practices in the field. Training on the other hand is the process of acquiring new knowledge, skills and aptitude required by an individual to perform a given job adequately. While the former emphasizes the conceptual integration of various tenets of the subjects, the latter focuses on application and job-related conservation, management and development of natural resources are some of the intricate processes involving biological principles with quantitative approaches.

Environmental Education In Forest Management

During the last four decades the syllabus of the environmental subjects as per the needs of the people as well as location, specific problems has been designed and developed. The management changes in recent years are summarized:

- (i) Emphasis is being laid on conservation of flora and fauna for eco-restoration, preservation of biodiversity and gene pools,
- (ii) Intensified practice of environment management particularly forest section in social context is emphasized bringing participatory approach to forestry to meet the need of fuel, fodder, fiber, small timber etc. of the common people,
- (iii) non-timber forest products are emerging as useful tools for rural development, generating gainful employment implementing poverty alleviation programmes and ensuring economic upliftment of the rural poor,
- (iv) society is prioritizing services rather than goods form forests,
- (v) greater public awareness is promoted for participatory forest management, increased public scrutiny and greater accountability in resource management is appearing on the scene,
- (vi) ever increasing biotic pressure on forests is being stressed,
- (vii) complex demand of forest resources is soaring,
- (viii) dynamic efforts are being made to increase productivity of existing degraded and hitherto unutilized areas,
- (ix) greater need is felt for higher technical, scientific knowledge and skill for keeping abreast with technological changes
- (x) conflicting demand of land use and for resource sharing is on the increase, and

(xi) greater need is emphasized for public motivation awareness raising seeking their active help and cooperation in protection and conservation of natural resources.

Changes In Training Methodology

In consonance with fast changing environmental scenario and demanding requirement of the service, a dogmatic approach, in orientation of education has been adopted. More emphasis has been laid on watershed-management planning, eco-development, environmental conservation, biodiversity conservation and management, land and forest resource economics, silviculture, decision making science, forest biometrics, joint forest management project formulation and appraisal, medicinal plant cultivation, environmental laws, farmer's rights, benefits sharing, tribal welfare, global forestry and computer application etc. Also, a shift from the traditional system with too much emphasis on classroom lecture and stereotyped examination is advisable. Learning with understanding and conceptual integration of knowledge would be the goal of such education, which is largely based on the field. With a view to accelerating the pace of learning and comprehension considerable importance has also been laid on participative approach. Seminars, syndicate presentation, group discussions, case study approach and computer-related learning, guided reading, leadership development etc. now find due priority in the curriculum of environmental education.

In the syllabus of the environmental sciences or education, Agenda 21 of the UN charter need to be incorporated for addressing important issues like sustainable development in developing countries, combating poverty, changing consumption patterns, demographic dynamics and sustainability, integrating environment and development and decision making, managing fragile ecosystem etc. as stated in the Agenda. Transfer of environmentally sound technology, science for sustainable development, promoting education, people awareness and training, national mechanisms and international cooperation for capacity building in developing countries, international institutional arrangements, international legal instruments and mechanisms and information for decision making are some of the other areas covered in Agenda 21.

The present situation of environmental education in the country suffers from a number of contradictions such as:

- (i) lack of national consensus on the importance and significance of environmental issues,
- (ii) lack of strong faculties/departments in environment,
- (iii) lack of infrastructure in terms of lab and field facilities,
- (iv) wide variation in course curriculum and duration among the existing institutions,
- (v) variation in academic package for post graduate programmes in Universities,
- (vi) failure to identify research priorities at the national, regional and local levels,
- (vii) lack of job avenues especially for environmental science students, and
- (viii) lack of sufficient coordination at the regional and national level.

Neighborhood Awareness And Action Programme: Strategies For Education And Training

To have a better environment in any human settlement, the role of settlement designers and planners and the inhabitants are important. The role of environmental education in this regard becomes a pre-requisite. Planned educational programmes for various target groups to bring about a change in the attitude of the people and the settlement planners to work jointly for the betterment of the community and to have a better physical environment among human settlements. The target groups for such programmes should include settlement designers and planners, policy makers, teachers, children, youth women and the neighborhood community as a whole. The broad objectives of the educational programmes would be

- ❏ To facilitate people to understand the concept of neighborhood and its relationships towards their social and physical environment;
- To motivate people in the neighborhood to involve in voluntary actions towards the improvement of their local environment;
- To identify different methods to bring in coordination between people, NGO's, local agencies and technical experts in the promotion of energy and resources conserving methods in neighborhood building and management.

The thrust areas considered in the neighborhood awareness and action programmes are mainly related to:

- The concept of neighborhood ;
- The rational use of natural resource in building neighborhood and its maintenance;
- Safe and healthy way of solid and liquid waste disposal and reuse/recycling of the waste;
- Protection of living environment and conservation of cultural heritage.
- Introduction of more green areas with proper landscaping and maintenance ;
- Conservation of water, energy and other local resources;
- Clean environment around school, house and neighborhood ;
- Residential pollution and prevention;
- Strengthening social integration of neighborhood population through creation of social interaction spaces.

The training programme for teachers should not only bring the importance of the environmental aspect of the neighborhood through the school and the neighborhood as a ground for educating the students and the community. Since the teacher is still a credible source in the community, he/she acts as a dominant figure in motivating children and the community in the neighborhood situation to involve them in the awareness, improvement and maintenance of the neighborhood environment.

FUTURE STRATEGIES

To improve environmental education extension and training there is a need for creation of a Central Advisory committee comprising representatives of the Ministry of Environment & Forests, ICAR, ICFRE, CSIR, UGC, NGOs, research and development institutions working on environmental aspects. This body should be assigned the responsibility of identification of institutions, making recommendations for accreditation of universities, formulating model course curricula, fixing duration of degrees, assessing financial requirements and manpower and planning. This committee should also work out modalities for coordination and switching over from the existing system to the new system of environmental education and training. Further, committees

at state and regional level to be constituted to take quick action on the environmental issues at local/regional/national and global scale.

CONCLUSION

There is a growing awareness about the importance of environmental balance and education because of increasing degradation of natural resources on which humanities survive. This degradation may be due to lack of policy support to provide essential environmental safeguards. Environmental education is therefore a relevant need of the country.

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