

ENVIRONMENT EDUCATION IN INDIA: CHALLENGES AND OPPORTUNITIES

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ABSTRACT

It is now widely acknowledged that the impact of human activities on environment is significant and will have serious consequences for future generations. Environment education has a significant role in making the youth conscious about their environment, adopting green social behaviour and thus responding to the environment crises. Recognizing the importance and need of environment education, India has initiated several efforts including making the environment education compulsory at all level of education. Today when environmental conditions are changing adversely and all living beings are suffering from the negative consequences of environmental pollution and climate changes, there is a need to reorient the curriculum of environment education for making it more attractive and responsive to the local environmental issues. Moreover, related policies are also needed to be restructured for sensitizing the people, especially school and college level students about the issues related to environment management.

Keywords: *environment education, challenges, opportunities, India, curriculum*

INTRODUCTION

Environment education (EE) is a rapidly emerging and dynamic concept of education, which requires a new vision of empowering people about their nature and their role in conservation initiatives. It is now widely acknowledged that the EE is one of the effective conservation tools, which can play an important role in changing the behaviour of individuals. EE establishes a green social behaviour among the citizens, especially

youth, by inculcating a greener way of thinking, approach, behaviour and commitment towards the environment (Figure 1). There is empirical evidence suggesting a positive link between direct experiences in nature and people's environmental attitudes and behaviours [1]. EE is not only a matter of science teaching, but is an essential part of general civic, moral and liberal education [2]. This trigger also helps in sensitizing the people about various environmental issues and in ensuring their active role in taking actions

toward the environment management. In order to accomplish the key goals to encourage people to understand about their environment, EE relies on both formal and non-formal mode of approaches. Today when entire world is struggling with various environmental issues, EE has become a more important component of education in terms of minimizing the catastrophic environmental crisis. The importance of fostering both environmental knowledge and connectedness to nature as complementary drivers of ecological behaviour, as offered by nature-based environmental education, should be researched further as a highly promising approach to fostering ecologically motivated individuals [3].



Figure 1. Components of environment education

Even though the term “Environment” has been known to everyone for centuries, the United Nations Conference on the Human Environment (Stockholm Conference), which was held in Sweden in June 1972, strengthened the meaning of environment and conservation significantly by putting in place a “Framework for Environmental Action”. In the year 1992, the United Nations Conference on Environment and Development (Rio Summit, Earth Summit) discussed the important role of education, training and public awareness in achieving sustainable development. Later, in the year 2002, in the World Summit on Sustainable Development held in Johannesburg (Johannesburg Summit, Rio+10), a proposal for the Decade of Education for Sustainable Development was included in the Johannesburg Plan of Implementation, which was adopted by the

United Nations General Assembly. In the United Nations conference on Sustainable Development (Rio+20) held in 2012, the international community resolved to promote education for sustainable development and to integrate sustainable development more actively into education beyond the United Nations Decade of Education for Sustainable Development [4].

In general, environment is a very common term that we all understand well; however, it is also true that we probably do not understand how the future of the human beings is linked with this small word. Slowly, with the increase in the environmental hazards and their long-term negative consequences, we realized the importance of EE primarily for raising awareness to address the environmental issues for sustainable future. Given that the environmental pollution has become a worldwide problem, which is affecting the existence of human beings and threatening the survival of floral and faunal species, EE was considered as one of the important discipline in 1990s. It was actually the decade when EE was initiated across the country, mainly to educate people about the environmental issues.

In the year 1991, the Supreme Court of India, in its judgement on the petition titled M.C. Mehta Vs. Union of India ordered the Central and State Governments to ensure environment education in all the educational institutions, making it a compulsory subject for all levels of education including schools, colleges, universities and technical institutions [5]. Further, in the year 2003, the Supreme Court of India once again, in one of its orders, made EE a compulsory subject at all levels of education. Following the orders of the Supreme Court, courses of “Environmental Sciences” were initiated by some of the colleges, institutions and universities across the country. However, in the beginning stage it received very limited interest among the youth and society. Later on, EE had been streamlined in to the curriculums as a separate subject at school as well as at higher education levels. In this way, India is one of the few countries who have given the legal back up to the importance of EE. As per a report of UNESCO, the

judgement of Supreme Court of India has resulted in over 300 million students in 1.3 million schools receiving EE training [6].

Thereafter, consequent upon the increase in environmental crisis viz. environmental pollution, biodiversity loss, waste management and climate change, EE received wide attention of the stakeholders and specialized courses were also initiated by several universities like “Environmental Microbiology”, “Biodiversity”, “Natural Resource Management”, “Wildlife Biology”, “Marine Biology/Sciences”, “Environmental Impact Assessment”, etc. Considering broadly the status of EE at school and college level, it is clear that EE is only a vocational subject, which needs to be read and cleared by every student. At school level (up to the class fifth), EE is a separate subject which is basically a science discipline and class six onwards it is a science subject under which students read some of the contents related to environment. At college level, EE is taught in the first year or semester of the technical and professional courses. The National Council of Education and Research and Training has also developed a model curriculum of EE and a resource book titled “Towards a green school” on education for sustainable development for elementary schools.

Education has been recognized as one of the essential component for ensuring sustainable development. A skilful education can play a crucial role in changing the attitude and behaviour of individuals and in motivating them to take appropriate actions to conserve the environment. Education can play a major part in the required transformation into more environmentally sustainable societies, in concert with initiatives from government, civil society and the private sector [6]. A separate Agenda 21 (Chapter 36) on “Education, Awareness and Training” was included and adopted at United Nations Conference on Environment & Development held in Rio de Janeiro in 1992. Later on, based on the lessons learnt about the contribution of education to sustainable development over the decade between the United Nations Conference on Environment and Development in 1992 and

the World Summit on Sustainable Development 2002, UNESCO indicated that there is a need of reorientation of education towards sustainable development and a new vision for education (2002) [7]. Out of the 17 Sustainable Development Goals (SDGs), SDG “4” refers about “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. Achieving quality education for all sections of society reaffirms that education is one of the most powerful and proven vehicles for ensuring SDG “4” as well.

CHALLENGES AND OPPORTUNITIES

Even though we achieved success in ensuring all the modalities to implement EE, there is a gap in its effective implementation as a result of which a large portion of the society is not aware about the functional role of ecosystems and its services, harmful impacts of environmental pollution and climate change, etc. Some of the issues attributed to non-implementation of EE effectively are lack of attitude, commitments and skills towards environment management, lack of environmental training modules and adequate curriculum, lack of preparedness to tackle immediate environmental problem, lack of organizational support, lack of jobs in environment field, increasing rate of developmental projects and economy, lack of measurable results, etc. All these concerns have a restricting effect on spreading awareness and establishing responsible citizens, who can serve the environment.

Besides, formulating policies relating to EE and re-examining existing policies from environment conservation point of view as well as political decisions and actions are also a critical part of EE. Lack of concern and commitment for the environment as well as individual lack of skills to tackle environmental problems due to ineffective environmental courses are some of the reasons behind non-visibility of the impact of EE on the ground [8]. Today, when climatic conditions are changing adversely and all

living beings are suffering from the negative impacts of environmental pollution and climate changes, there is a need to inculcate such knowledge and skills, which will play an important role in sensitizing the people about environmental issues. This will facilitate the people to adopt green social responsibility for the protection of environment. Consequently, a plan of action is needed to interest the students and the educators in environment and related issues (Figure 2).

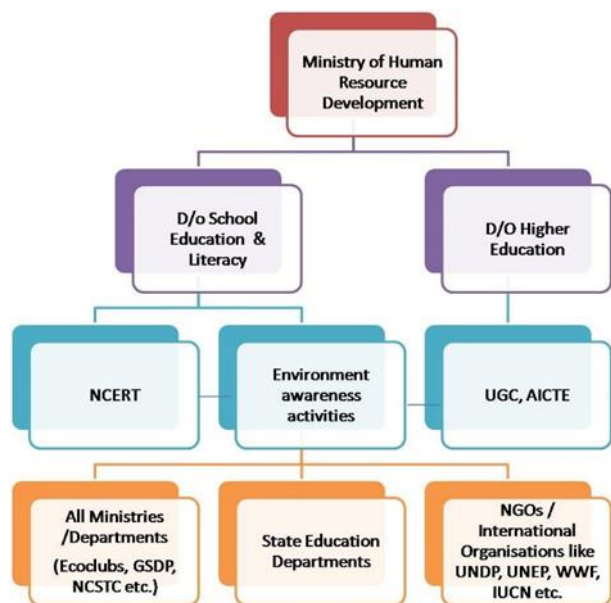


Figure 2. The action plan to implement the environment education, involving all the line agencies across the country

In 2014, the Government of India launched “Swachh Bharat Mission”, a nation-wide environment awareness campaign with an aim to accomplish the vision of “Clean India”. This mission has successfully achieved its objectives and displayed India’s commitments towards a clean, green and healthy India. In fact, “Swachh Bharat Mission” is also a part of environment awareness activity. While the quantitative impact of EE in building environmental leaders is hard to measure, some environmentalists are seeing a huge change in the awareness levels through education while others are not convinced that education is generating anything beyond general nature lovers [9]. As far as legal instruments are concerned, the Ministry of Human Resources Development launched the National Policy on Education in the year 1986,

which was amended in 1992, also advocating the implementation of environmental education at all levels of education. In fact, the Ministry of Human Resource Development is also in the process of bringing out the National Education Policy, 2020 which advocates the EE. In order to implement the EE effectively across the country, National Council of Educational Research and Training, which aim to design a curriculum for school education, can take a lead. Besides, the University Grants Commission and All India Council for Technical Education can play an important role in implementing the environmental education in technical and higher education.

Furthermore, the Wildlife (Protection) Act (1972), the Environment (Protection) Act (1986), the Biological Diversity Act (2002), and the National Environment Policy (2006) are some of the legal instruments being implemented by the Ministry of Environment, Forest and Climate Change, which also highlights the importance of environment conservation. In addition, Ministry of Environment, Forest and Climate Change, through its flagship programmes like National Green Corps (Ecoclub) programme, Green Good Deeds initiative, Green Skill Development, is also developing young professionals to promote green behaviour. Similarly, National Council of Science, Technology and Communication, Prasar Bharati, CSIR - National Institute of Science Communication and Information Resources, etc. also organise various programmes and campaigns on the environmental awareness issues. If we look at the environment related programmes being implemented internationally, there is one such programme namely Global Learning and Observations to Benefit the Environment (GLOBE) programme. This programme provides students with an opportunity to participate in data collection and the scientific process, and contribute meaningfully to our understanding of the Earth systems and global environment. As of now, nearly 122 countries are actively participating in the programme [10].

With changing scenarios of environmental conditions and increase in human population,

the importance and urgency of EE has evolved a lot in the last three decades. There is a need to revisit and revise the curriculum of EE. EE needs to be made more attractive and interesting, especially among the school level students by implementing nature conservation aspects. Building the capacity of students and teachers is one of the important components of this education, which has to be ensured by initiating field-orientated learning activities (Figure 3). The training module can include all the important topics like biological diversity, control of pollution (air, water, soil, and noise), waste management, and forest and wildlife conservation. Besides, incorporation of some field learning tools would be of paramount importance, which will facilitate the teachers and students in learning and disseminating the knowledge about the dynamic components of the nature.



Figure 3. Environment education: training of teachers on types of clouds and their relevance in the atmosphere

CONCLUSION

Though EE has been streamlined in the curriculums of all the education, there is a need to sensitize people, especially school and college level students about the importance of the subject. This can be achieved through both the formal and non-formal education. In order to encourage students about the environmental issues, outdoor learning modules need to be designed, like nature camping, expedition, organization of training programmes and workshops, etc. EE related activities should be

conducted on regular basis. EE should be made compulsory in all the year/semester of the under graduate degree courses. Also the young people need to be made aware of the various opportunities which exists as career options for them like Environment Advisors for various companies in respect of Environment Impact Assessment, one can also join international organizations like UNDP, UNEP, WWF, CEE, IUCN, BNHS, WTI etc.

Effective and meaningful environmental education is a challenge we must take seriously if we and future generations want to enjoy the benefits of quality life and natural heritage [11]. Given that, the term “environment” is the second form of term “nature”, environment education can’t only be considered as a “form of education”, but should be considered as a knowledge-based conservation tool for addressing environmental issues. As Nelson Mandela said in 1990, “Education is the most powerful weapon you can use to change the world.” Moreover, it is an essential component of education at all levels that enables the individuals to adopt green habits for sustainable social development and preserve a cleaner and greener environment for our future generations.

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