Environmental Education: The Need of The Day

Seema Saini
Lecturer,
Vision International College of Education,
Dhansu (Hissar)

Abstract
Environmental education is the tool for sustainable development. Environmental education serves society in a variety of ways. Environmental education also serves society by providing a critical reflection the world, especially its failings bad injustices, and by promoting greater consciousness and awareness, exploring new vision and concepts, and inventing new techniques and tools. Environmental education, humanity’s best hope and most effective means to achieve sustainable development. Environmental education must not be equated with schooling or formal environmental education alone. It include non-formal and informal modes of instruction and learning as well including traditional learning acquired in home and community. In order to reach this goal of, environmental education programs must be effective. Effective environmental education programs are relevant to the mission of the agency or organization, to the educational objectives of the audience, and to the everyday lives of the individual learners. They involve stakeholders in all stages of the program, from the development of the program to its evaluation. Effective programs empower learners with skills to help prevent and address environmental issues and with a sense of personal and civic responsibility. Further, they are accurate and balanced, incorporating multiple perspectives and interdisciplinary aspects. Effective environmental education programs are instructionally sound, using “best practices” in education. And finally, effective programs are evaluated with appropriate tools.

Index Terms: Environmental Literacy, Effective Environmental Education, Effective Programs, Immediate Surroundings, Incorporating Multiple Perspectives And Interdisciplinary Aspects

1 Introduction
Today man is living in a world of crises. The social, economic, political and value crises are some of threats which the humanity faces and these threats are quite alarming. Added to this, in the recent decades, the environmental crisis has become another important factor which has made...
everyone in the world to think of its gravity. Though the environmental dimension has its own history, it has gained prominence in the recent past due to several reasons such as urbanisation, industrialisation, automation and population explosion along with pollution, acid rains, gas leaks, nuclear disasters which have made man a helpless victim. In this back ground several international organisations including some Non-Governmental Organisations (NGO) have started working on the sustainability of environment and ecological balance. In this direction a large number of workshops, seminars and meetings have been conducted. Some of them are United Nations’ conference on Human Environment (Stockholm, 1972), International Workshop on Environmental Education (Belgrade, 1975), UNEP UNESCO conference on Environmental Education (Tbilisi, 1977), National Seminar on Higher Environmental Education (New Delhi, 1979) and five day global forum on Environmental Education for Sustainable Development (New Delhi, 1993). Coming to the contribution of education Environment Education has acquired popularity throughout the world since about 1972. Following the Indian Education Commission Report (1964-66) the NCERT prepared curriculum for ten year schooling in 1975. Text books and teacher guides were also prepared but the distribution of the subject at different levels was not definite and cleans particularly at the primary stage. In other stages, the NCERT prepared text-books in science and social sciences with good coverage of environment oriented topics. Teaching aids, films and slides have also been produced. Non-formal models of education like health, environmental studies, literacy, vocation, social awareness and numeracy were also developed. Environmental education is essential to understand and tackle the environment problems. The following suggestions are given below for facing the environmental problems through the environmental educational programme:

i.) Environmental education should be closely linked with Gandhian thought.

ii.) Environmental education should result in the development of an ecological ethics—a change in attitude of man towards man, society and nature, in realization of man as part of nature, not alien to it.

iii.) The UGC should accord high priority in establishing courses in colleges and universities on environmental education.

iv.) The instructional materials on environmental education should be produced according to the local needs. The text books and teaching aids should be developed to supplement instruction. Writing of text books on environmental education should be encouraged.

v.) Trained teachers should be appointed in schools.

vi.) Teachers, parents, public, doctors, engineers, planner’s administrators and scientists should be involved in environmental education programme.

vii.) The inter disciplinary research projects on environmental problems should be undertaken.

viii.) Seminars, conferences and workshops should be organized from time to time on environmental education.

ix.) The general public should be educated about the environmental degradation and improvement of the environmental quality through mass media and visual aids etc. Documentary films should be prepared on these themes and exhibited for the benefit of the people.

x.) The Govt. should establish Environmental Research Centers in every state.

xi.) Adequate funds should be provided by the UGC, Department of Science and Technology Central and State Governments for effective implementation of environmental education programme.
2. How To Impart Environmental Education To Children?

While said more than 30 years ago, the importance of this statement has not lessened. Amidst numerous, growing and complex environmental problems, the need for the preparation of world problem solvers is as great as ever. Environmental educators have globally accepted this role of preparing students to become critical thinkers, informed decision-makers and able communicators – a role that exceeds far beyond presenting information. Environmental education helps learners achieve environmental literacy, which has attitude and behavior components in addition to a knowledge component. Thus, the goal of environmental education is to in still learner’s knowledge about the environment, positive attitudes toward the environment, competency in citizen action skills, and a sense of empowerment.

Environmental literacy depends on a personal commitment and motivation to help ensure environmental quality and quality of life. This commitment and motivation often begins with an awareness of one’s immediate surroundings. Environmental educators can help foster learners’ innate curiosity and enthusiasm, providing them with continuing opportunities to explore their environment and engaging them in direct discovery of the world around them. As learners develop and apply analysis and action skills, as they have the opportunity to make their own decisions and think more critically about their choices and as they hear stories of success, they are learning that what they do individually and in groups can make a difference. This locus of control, or sense that they have the ability to influence the outcome of a situation, is important in helping learners develop a sense of empowerment and a sense of personal responsibility – further key aspects of environmental education. Every human being is a part of nature and whatever action he does will have its own consequences. The children should be given a change to understand love and care ‘nature’ even from their childhood. The teacher is the best person to induce a sense of responsibility among children about the environment, the hazards of pollution, the interdependence of plants and animals, the care to be taken to protect the environment etc. issues since children spend considerable time in school. Every place and area in and around our community is fit to explore even though they are familiar to children. The following activities can be taken up by the teacher.

A visit to a nearby city or township can give information about the pollution caused by various vehicles by releasing smoke, the poisonous gases released by the factories. Occasional visits to nearby canals, rivers can be planned by the teacher to explain how water gets polluted by man made errors and careless methods adopted by him. Polluted water destroys the flora and fauna living in canals and rivers. Along with, the importance of social environment should also be taught to children. How have people changed their ways of life in course of time, the aspects of socio-economic environment various professionals and people at work, the dignity of labour, relationship, between man and his environment, relationship between man's past and present and to hold in proper perspective, the importance of our culture and tradition and several other issues can be explained. If the above said issues are carefully explored, the children can therefore become worthy and useful citizens of the society.

3. Learners And Learning In Environmental Education

The evidence base on learners and learning in environmental education was found to have the following characteristics:

◆ it is considerable in size and seems to be growing through time;
◆ it comprises six main concentrations or nodes of evidence, three of which are well established and three of which may be regarded as emergent.
◆ it has a predominance of quantitative, rather than qualitative, evidence, but this is changing as new foci (e.g., students’ perceptions of nature) emerge, bringing different methodological approaches and conceptual frames;
◆ it provides more information about students’ environmental knowledge and attitudes than about their educational experiences and preferences, and more about learning outcomes than learning processes. Five concentrations of evidence Established nodes (with considerable research evidence):
  ● Students’ environmental knowledge
  ● Students’ environmental attitudes and behaviours
  ● Students’ environmental learning outcomes.
Emerging nodes (with less research evidence):
  ● Students’ experiences of learning
  ● Students’ influences on adults.
This section summarises the key messages for each of the six nodes within the evidence base.

Students’ environmental knowledge

Surveys of young people in several countries report generally low levels of factual knowledge relating to environmental issues. More detailed investigations of students’ ideas about specific environmental phenomena (e.g., the greenhouse effect) find there to be considerable misunderstanding of the science of such issues. Examples include students confusing ideas about phenomena such as the greenhouse effect and ozone depletion, or displaying poor understanding of processes such as melting or recycling. Across several studies, the main sources of young people’s environmental information are found to be television and school. Other sources include the print media, family and friends, environmental experiences and environmental nongovernmental organisations (NGOs). There is some evidence to suggest that students’ environmental knowledge and information sources can be affected by gender, age, socioeconomic grouping, geographical location and schooling.

Students’ environmental attitudes and behaviours

Surveys of young people in various countries report generally positive environmental attitudes – i.e., greater agreement with pro- rather than anti-environmental sentiments. However, several studies find students to be less environmentally conscious in relation to certain issues, in particular, those linked to their own lives and material aspirations. In terms of pro-environmental behaviours, there is evidence that young people have some involvement in practices relating to energy conservation, recycling and (less commonly) ‘green consumerism’. Most studies, however, emphasise the need for these behaviours to increase, and to encompass consumption practices and social political actions, as well as conservation practices. Evidence on influencing factors in relation to young people’s environmental attitudes and behaviour includes gender, age, socio-economic grouping, geographical location and schooling. In relation to gender, for example, findings from several studies show girls to be more pro-environmental than boys in their attitudes and behaviours.

Students’ environmental learning outcomes

Some educational interventions, including residential field courses and school-based initiatives, can effect change in students’ environmental knowledge and/or attitudes and (in a few cases) behaviour. Effects, however, tend to be measured in the short term, and the evidence on their durability over time
is not clear. Little is known about how and why programmes are able to bring about certain kinds of learning outcomes. The small numbers of studies that have attempted to explore this suggest that:

◆ Learning outcomes can be facilitated by certain processes such as role modelling and direct experience on outdoor courses, and collaborative group discussion in classroom lessons;
◆ Programme duration, location and preparation/follow-up work can affect outcomes;
◆ Different kinds of programmes can affect learners’ environmental knowledge, attitudes and behaviour in different ways; and
◆ Different kinds of students (e.g. those with more or less environmental interest) can be affected differently by environmental learning experiences.

**Students’ experiences of learning**

A small number of studies suggest that students have mixed views of their environmental education at school. While environmental education undertaken with certain teachers or as part of particular action-oriented programmes is praised, there is criticism voiced in relation to environmental teaching being concentrated in particular subjects or lacking practicality and relevance. More detailed investigations of student’s in particular environmental learning situations suggest that learners can be highly individual in their responses to such experiences. The emerging picture is of students as critical consumers, rather than passive recipients, of environmental curricula.

**Students’ influences on adults**

Studies of intergenerational influence suggest that students, after participating in environmental education activities, are capable of influencing the environmental attitudes and/or behaviours of their parents. In other words, environmental education programmes can have an impact not only on students, but also indirectly on parents. Such influence, however, is not an automatic process, and appears to be facilitated by programmes being enjoyable for students, including tasks that can involve parents and dealing with actual local problems, in addition to students and parents having an interest in the environment and good communication patterns.

4. **Implications For Practitioners And Policy Makers**

Perhaps the most important outcome of this review is its demonstration of the considerable amount of research activity that is currently occurring in the area of learners and learning in environmental education. The review highlights a number of topics relating to school students for which research evidence is currently available. In considering possible implications, however, it should be recognised that research evidence will rarely translate easily into simple ingredients for developing environmental education practice or policy. Having said that, I would argue that the empirical findings contained within this review could be useful to research users in terms of:

i.) Suggesting helpful and unhelpful aspects of environmental education from the perspective of learners and/or learning outcomes; and

ii.) Highlighting characteristics of learners that could have implications for practice and policy in environmental education.

I. **Helpful and unhelpful aspects of environmental education**

The research discussed in the review may help to suggest certain aspects of environmental education that are either helpful or unhelpful from the perspective of learners and/or learning outcomes. The research on students’ ideas about global environmental issues, for example, identifies a number of aspects of environmental teaching that may be a hindrance to students’ understanding of such issues. These include:
use of general terms such as ‘pollution’ which, it is argued, can hinder students distinguishing between different pollutants and environmental problems;

- abstract nouns such as ‘habitat loss’ in textbooks which, due to their abstract and agentless nature, are found to have less salience for students and so can be easily overlooked;

- schematic diagrams illustrating the greenhouse effect using arrows approaching the earth which, it is argued, can be misread by students as showing the greenhouse effect being caused by holes in the ozone layer allowing more solar radiation into the earth’s atmosphere;

- Studying environmentally responsible behaviours, such as recycling, without considering exactly how and why such practices are environmentally beneficial as this can result in ‘blurred knowledge’ among primary school children; and

- Learning about scientific explanations for environmental phenomena, such as the timing of spring, which reportedly can lead students to give up more common-sense explanations that may, in fact, be more helpful to them in their daily lives.

II. Characteristics of learners

A second way in which the research evidence may be useful for research users is by providing information about characteristics of learners that could have implications for practice and policy in environmental education. A general point that emerges from this review is that students come to environmental education with a whole host of existing environmental and educational perspectives. These are ways in which these play out in relation to particular environmental learning situations would seem an important issue for practitioners and curriculum developers in environmental education. In terms of specifics, consideration might be given to the fact that:

- Young people, including those of primary school age, are capable of sophisticated thinking in relation to environmental issues;

- Individual students, including boys and girls and older and younger students, may differ considerably in their attitudes towards, concerns about and perceptions of the environment and nature (several studies, for example, suggest that girls are more aware of immediate, local problems relating to human health, while boys focus more on longer-term and more abstract issues);

- Students can differ in their curricular and pedagogical preferences, and thus may respond to different kinds of environmental education activities in varying and individual ways; and

- Certain aspects of global environmental issues, such as their processes, distinctions and interconnections, appear difficult for students to understand, and can become the source of considerable confusion and misperceptions.

5. Conclusion

In this ever changing world of science and civilization and when man has habituated himself to lead a comfortable life, it is a ‘million dollar’ question that can man sacrifice him comfort and demands to protect environment? Man is the most intelligent, useful and thoughtful animal on earth and he knows how to strike a balance between the growing demands of the population without disturbing the order in nature. It is almost impossible to completely lead a pollution free life in this age, but man-made errors can be cut down. Only at the cost of ‘eternal vigilance’ can man protect nature and try to re-establish and balance of nature. He can educate the masses, by waging relentless
war against persons who cause serious problems to the environment, by conserving and adding to forest resources, by maintaining a fair balance among animal life. He should also realize that he is a part of nature and should not destroy himself in his greed to dominate nature itself. Otherwise he has to pay a heavy penalty just like the 'Dinosaur' for its inability to adjust to its environment. So there is a need to increase awareness and understanding of those environments and man's impact upon them and to find out effective ways to manage them. To achieve the above goal, environmental education is the need of the day. In order to reach this goal of environmental literacy, environmental education programs must be effective. Effective environmental education programs are relevant to the mission of the agency or organization, to the educational objectives of the audience, and to the everyday lives of the individual learners. They involve stakeholders in all stages of the program, from the development of the program to its evaluation. Effective programs empower learners with skills to help prevent and address environmental issues and with a sense of personal and civic responsibility. Further, they are accurate and balanced, incorporating multiple perspectives and interdisciplinary aspects. Effective environmental education programs are instructionally sound, using “best practices” in education. And finally, effective programs are evaluated with appropriate tools.

References