

ROLE OF TEACHERS IN IMPARTING ENVIRONMENTAL EDUCATION FOR SUSTAINABLE DEVELOPMENT

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ABSTRACT: -

Teachers play a predominant role in imparting knowledge and sensitizing the students and society about the environment. They help to tackle the various environmental issues. Environmental problems have increased tremendously because environment is being abused beyond its capacity by human beings. Issues related to environmental problems have become a major concern for the international community particularly for educational policy makers and curriculum developers. Environmental Education is a powerful sensitization tool for the conservation of Environment, its biodiversity and the sustainable use of natural resources. Teachers are the potential change agents and are capable of generating a workforce of enlightened, skilled and motivated learners using formal and non-formal channels of education. It is now even more critical than ever before for mankind as a whole to have a clear understanding of environmental concerns and to follow sustainable development practices. Teachers should be actively involved in the implementation of environmental education programs. Several measures and strategies have been considered to intervene. Among these is the use of school curriculum by teachers to impart knowledge to protect and preserve environment for sustainable development.

KEYWORDS: Teachers, Environmental Education, Sustainable Development, Sensitization.

INTRODUCTION

Environmental problems have tremendously increased at the global, regional and local levels during the last few decades because environment is being abused beyond its capacity by human beings. Issues related to environmental problems have become a major concern for the international community particularly for educational policy makers and curriculum developers. Several measures and strategies have been considered to intervene. Among these is the use of school curriculum by the teachers to create public awareness on the need for environmental preservation and protection. Progress towards sustainable development is dependent upon a fundamental change in societies' attitude to nature and the environment. To bring about this change of attitude, education is needed in moral and ethical philosophy. It is

essential to impart and reinforce the environment-respecting moral values in the young minds. Teachers play a predominant role in imparting knowledge and sensitizing the students and society about the environment. They help to tackle the various environmental issues. The teachers should be motivated and committed to the cause of realizing the goals of environment education and should take initiatives in designing the program of environment education.

It is essential that teachers should be properly trained themselves on environment concepts and skills to impart training to learners. Since environment education cuts across all disciplines and levels of study, it is time that education planners and policy framers incorporate the elements of environment education as a compulsory component at all levels. The teacher training curricula could be redesigned to include the environment education component in the theory and practical courses. Environmental education must be encouraged where at first student become aware of environment. Then, they recognize or review the relationship between humans and nature. The students get knowledge and skills from the teachers to solve the environmental problems. The teachers motivate to develop the students' attitudes to participate various environmental protection programs in favor of environment. The teachers try to inculcate the knowledge about environment and develop positive and healthy attitude towards environment from the beginning of life. There is essential need to organize and conduct educational programmes focus on environmental issues, problems, attitude, towards preservation and conservation of environment.

ENVIRONMENTAL EDUCATION

The concept of environment education emerged only in the seventies which was called as the decade of environmental education. During that period the world realized that environmental concerns and awareness could be spread only through a mass environment education program. The concept of environment education emerged from the Stockholm Conference organized by the United Nation in 1972. Recommendations of the conference emphasized organization of 'formal' and 'mass' environmental education programs. In response to this, UNESCO-

UNEP launched the International Environmental Education Programme (IEEP) in 1975 whose objective was to promote exchange of information, experience, research, curricula and international cooperation in the area of environmental education. Educating the people at large about environment and its components would develop critical thinking analytical and problem solving skills in them.

It would develop knowledge and insights to improve quality of human life on earth. Environment is defined as surrounding or conditions influencing development or growth. It can be understood as a system which includes all living and non-living things, i.e. air, water, soil, vegetation, flora and fauna. Environmental education is a process of providing learning experience to obtain knowledge about natural and man-made surroundings.

Environmental Education is a process of recognising values and clarifying concepts in order to develop skills and added tools necessary to understand and appreciate the inter-relationship among man, his culture and his bio-physical surrounding. It creates an overall perspective, which acknowledges the fact that natural environment and man-made environment are interdependent. It should consider the environment in its totality and should be a continuous lifelong process beginning at the pre-school level and continuing through all stages. It should utilise various educational approaches to teach and learn about and from the environment with stress on practical activities and first-hand experience. It is through this process of education that people can be sensitized about the environmental issues.

SUSTAINABLE DEVELOPMENT

Sustainable development is defined as development that meets the needs of the present without compromising the ability of future generation to meet their own needs. National resources management has emerged in line with the evolving concept of sustainable development over the past three decades. The resource base is not inexhaustible, it follows that there must exist some limit beyond which the rate of exploitation of natural resources to supply the open ended and increasing demand for goods and services will compromise the ability of future generations to meet their own needs. Sustainable development exclusively relies upon and is firmly rooted in the integrity and sustainability of the natural environment. Sustainable development requires that those who are more affluent, adopt lifestyles within the planet's ecological means – for example, in their use of energy. If nature's resource base is irredeemably depleted or irreversibly degraded, the means of wealth creation for social welfare will be seriously jeopardised. Without environmental sustainability, it is impossible to achieve sustainable development.

ENVIRONMENTAL EDUCATION IN THE CURRICULUM

Environmental Education is interdisciplinary in nature. It involves subject matter from the natural sciences and the social sciences. NCERT has developed national curricula for all stages of education, specially emphasizing the aspects of population, land, resources, nutrition, conservation, pollution, health and hygiene and man in nature, of environmental education. The introduction of environmental education programme requires the involvement and participation of teachers, students and administrators etc.

The National System of Education, as defined in the National Policy on Education (1986), visualizes a national curricular framework which contains a common core including several elements having a direct bearing on the natural and social environment of the pupils. The National Policy on Education, 1986 (NPE) states that the “protection of the environment” is a value which along with certain other values must form an integral part of the curriculum at all stages of education. The policy states: “There is a paramount need to create a consciousness of the environment. It must permeate all ages and all sections of society, beginning with the child. Environmental consciousness should inform teaching in schools and colleges. This aspect will be integrated in the entire educational process.” There has been special emphasis on the need to give importance to environmental education, and this has been kept in view while designing curricula, framing the syllabi and developing text books. The philosophy behind the curricula is that environmental education could be infused into the curricula especially at the primary level.

The National Council of Educational Training and Research (NCERT) is the apex body in the area of developing curriculum for the formal education system. Currently there is a national debate going on about how to make Environmental Education (EE) not only widespread but also effective at all levels of education. The strategy under discussion envisages four pronged approaches. The four elements of the strategy are:

1. Strengthening Infusion of EE
2. Teacher Training for effective EE
3. Introduction of Environment as a separate subject
4. Use of non-formal methods of EE through the involvement of NGOs

The success of the above strategy will depend upon the close synergy and partnership between the key institutions, State Governments, NGOs as well as educational institutions throughout the country. In addition, the four components are closely linked and one cannot be viewed in isolation from the other.

Despite the deteriorating status of the environment, environmental education has so far not received adequate attention in our academic programmes.

Recognizing this, a basic course on environment at every level in college education has been introduced. The success of this course will depend on the initiative and drive of the teachers and the receptive students. Genuine endeavour is required to minimize the gaps by intellectual and material inputs.

ROLE OF TEACHERS

To get involved in the dialogue about education systems around the world, we have to understand and articulate the key role played by the teachers. It is no wonder that our teachers are outstanding and are able to glorify all the national, religious, economic, educational, health and cultural fields in the society which give honour to them, hence, they should be actively involved in the implementation of environmental education programs. Teachers can follow the ideology, values, and culture of a nation, state and its people. Teachers are becoming increasingly accepted as essential partners in a dynamic education system. Teachers are often identified as important agents of change in society.

They play an important role in improving human capacity in environmental awareness, protection and problem-solving. Teachers require the knowledge, skills, on environmental awareness in order to include this in their school programme. The need towards the implementation of environmental awareness should be focused in order to produce the generation that have praiseworthy personality and appreciate the creation of God. Besides, the appearance and the manifestation of the educator are very important in realizing the objective of school management to implement the element of environmental awareness (Yahya, 2005). The teachers can impart the following to their students in the school:

- To turn off appliances, heating and air conditioning
- To turn off and unplug computer and other electronic devices
- To encourage the parents and relatives to change the light bulbs to energy efficient ones
- To recycle papers or reuse bottles and plastics. Always remember the three R's – Reduce, Reuse and Recycle waste.
- To reuse every bit of space on paper. Do not feel shy to use paper that has been used on one side.
- To join or create an eco-club
- To plant trees
- To choose products that are environment friendly
- To walk, cycle or take a train or bus instead of the private car or bike
- To use less plastic. E.g. to carry a cloth bag when going for shopping instead of plastic bags
- To segregate domestic waste into bio-degradable and non-bio-degradable. The bio-degradable items like food left-overs and vegetables and fruit wastes can be

composted and non-bio-degradable items like plastic can be recycled.

- To encourage family and friends to do these things
- To participate in activities on environmental awareness

ECO-CLUBS IN SCHOOLS

A non-formal pro-active system of imparting environmental education to school children by involving them in various environmental activities through the scheme of Eco-clubs has been evolved. An Eco-club may be set up in a school and should consist of a minimum of 20 members and a maximum of 50 members, particularly interested in the conservation and protection of the environment, and willing to dedicate time and effort on a regular basis towards this end. The members may be drawn from students belonging to classes from VI to X. Each Eco-club should be under the charge of an active teacher in the school concerned. Financial support is given by the government per annum to every Eco-Club.

CONTRIBUTIONS OF TEACHERS IN SENSITIZING THE COMMUNITY

The main aim of the environmental education is to make people in the society to be aware, knowledgeable and inculcate positive attitudes towards protection of environment and make them skilled to solve environmental problems so as to enable them to participate in the activities undertaken for the protection of environment. The teachers in educational institutes often conduct the various programmes towards sensitization of environment protection among all people in the society. Various social service camps and community service camps for environment preservation are arranged that are led by the teachers and students for the benefit of society. For example: Clean village, Clean city, Dustless city, Awareness camps and Healthcare camps etc. Especially the students come from NSS and NCC to take responsibility for creating awareness and conservation of the environment among the public.

In India, there are many communities of people. They can contribute their participation towards the environmental protection and preservation programmes. Here the educated people can lead the awareness camps, preservation programmes. For examples, Rainwater savings, Recycling the usage water, Mass environment programmes etc. On the other hand the wealthy community people form Rotary club, Lions club, Cosmopolitan club, etc. can conduct various awareness and conservation programmes frequently. They create interest among public to preserve and to conserve the environment. These awareness programmes are possible when the people have adequate education. Hence, teachers should contribute towards environment education in the society. The environment awareness

should be initiated from primary to higher education to the public.

ENVIRONMENTAL EDUCATION AND SUSTAINABLE DEVELOPMENT

Environment belongs to each one of us and all of us have a responsibility to contribute towards its conservation and protection. When we consider development, we should keep in mind two basic characteristics of development: (i) It should sustain the benefits, that we are getting now, to the future generation. (ii) It should be ethical.

Whatever the benefits a person or species have should not harm other individuals or species. The objective of development should not only be to raise the economic standard but also to raise the social, economic, ethical and spiritual level of the people. Today, sustainable development has become a buzzword. Two key aspects for sustainable development are inter-generation equity and emphasizes that we hand over a life healthy and resources filled environment to our future generations. The need for sustainable development is a key to the future of mankind. Continuing problems of pollution, solid waste disposal, degradation of environment, issues like economic productivity and national security, Global warming, the depletion of ozone layer and loss of biodiversity have made everyone aware of environmental issues.

The United Nations Conference on Environment and Development held in Rio de Janeiro in 1992 and world Summit on Sustainable Development at Johannesburg in 2002 have drawn the attention of people around the globe to the deteriorating condition of our environment. It is clear that no citizen of the earth can afford to be ignorant of environment issues. Managing environmental hazards has become very important.

Human beings have been interested in ecology since the beginning of civilization. Even our ancient scriptures have emphasized about practices and values of environmental conservation. It is now even more critical than ever before for mankind as a whole to have a clear understanding of environmental concerns and to follow sustainable development practices. India is rich in biodiversity, which provides various resources for people. Destruction of habitats, over-use of energy resource and environmental pollution have been found to be responsible for the loss of a large number of life-forms. It is feared that a large proportion of life on earth may get wiped out in the near future. The Indian tradition teaches us that all forms of life: animal and plant are so closely linked that disturbance in one gives rise to imbalance in the other". The Indian Constitution laid down the responsibility of Government to protect and improve the environment and made it a fundamental

duty of every citizen to protect and improve the natural environment including forests, lakes, rivers and wildlife. Environment in Indian thought is not conceived as a physical, lifeless entity- it is very living mechanism where humans are one of the many living creatures. There is also a great emphasis on adaptation as one of the guiding principles for an interaction between human and non-human world. It has been argued by ancient Indian philosophers that man being an intelligent creature should have the protection of environment as one of the fundamental duties.

ENVIRONMENTAL EDUCATION, SENSITIZATION & CONSERVATION

Environmental Education is a powerful sensitization tool for the conservation of Environment, its biodiversity and the sustainable use of natural resources. The emphasis should be on sensitizing the student community through the teachers who can play a fundamental role in transmitting the requisite knowledge and skills essential to restore or at least arrest the irreversible damage being caused to the environment. Environmental Education, sensitization and Training for environmental conservation plays a significant role in encouraging and enhancing people's participation in activities aimed at conservation, protection and management of the environment, essential for achieving sustainable development.

Environment is a global concept today and the first in the environmental education is environmental awareness. Environmental awareness is an approach to learning. The environmental damage already inflicted due to alarming on-going population explosion, rapid movement towards urbanization and industrialization, increasing needs of energy and fast scientific and technological advancement cannot be reversed unless there is collective thinking, will and effort. These call for public awareness and participation for bringing about an attitudinal change and finally restricting further damage to the environment. Effective implementation of environmental management and conservation programmes depends on education, awareness raising and training in the relevant areas.

Without an understanding of how to conserve natural resources and the compelling need to do so, few people would be motivated to participate actively in programmes on environmental conservation, Environment education and awareness thus assume critical importance. Realizing of the extremely expanded environmental catastrophe, a preventive way should be carried out to slow it and thereby mitigating long-term environmental damage (Harris, P.G., 2006). Thus, one of the best ways of preservation is by creating environmental awareness among society especially students as they are future leaders, future custodians,

planners, policy makers, and educators of the environment and its issues (Thapa, B., 1999).

The onus of protecting the environment for the present and future generations also rests with human beings alone. The conservation of the environment is related to the individual efforts to save and protect the environment. The students acquire knowledge and skills from teachers to solve the environmental problems. Teachers also motivate the students for the environmental protection and develop programs for the benefit of the environment. It is important to organize and conduct the educational programs on environmental issues, problems, attitudes for the conservation and protection of the environment. Thus, environmental education should aim to improve the quality of the environment.

From the above discussion the following suggestions emerge:

a) The problem of environment abuse is a serious one and needs to be addressed at the local, national and international levels. To achieve a good quality of life on earth for all living beings, it is essential to spread awareness about and educate humankind for sustainable development and environmental problems.

b) Teachers are potential change agents and are capable of generating a workforce of enlightened, skilled and motivated learners. They can empower the citizens with the ability attitude and values to protect the environment using formal and non-formal channels of education. It is essential that teachers themselves need to be trained and equipped with the requisite knowledge skills and values to effect such a change.

c) Universities and schools have to play an important role to translate the objectives and recommendations of the various commissions and committees into practice for achieving environmental literacy and awareness among learners (Kumar, 1986).

d) Research activities in the field of environmental education may be enhanced by providing attractive incentives.

e) Environmental Education should be introduced as a voluntary, extra-curricular activity to arouse the interest and awareness of students.

f) Technological interventions and mass media should be employed to create environmental awareness among the teaching community. A convergence of the conventional and open and distance learning systems should be employed to meet this challenge.

g) There is a need to train teachers in additional competencies regarding environment education (UNESCO-1985). The teacher training curricula should integrate environment education with the methodology component of all disciplines, since environment is a part

of all areas of study. Instead of burdening the existing teacher training curriculum with an extra subject on Environment Education, some weightage could be assigned in the practical component of the content-cum-methodology courses of all disciplines, for environment education.

h) Non formal channels of education like t.v., radio, press and satellite technology can be effectively utilized for capacity building of environment educators.

i) Online courses on environment education with a thrust on the practical, skill and value development aspect could be developed for the teachers, educators, administrators, development workers or any person interested to become knowledgeable and aware of environmental issues.

j) User friendly, multi-media courseware on environment problems and awareness can be prepared, particularly for the rural-agro based communities in India.

k) Collaborative ventures could be created between the teachers and community through the agencies of schools, colleges, universities and other institutions. Such collaborations could include campaigns on environment awareness, tree plantations, waste management or also in developing instructional materials.

l) Electronic and computer networks could be employed to connect globally and acquire information and expertise on latest developments in the area of environment education and training.

Hence the above suggestions can play a major role in dissemination of knowledge, skills and values regarding environment, among teachers and through them to sensitize our present and future generations. Indeed environmental education as a hands-on extracurricular activity rather than an academic classroom subject is arousing growing enthusiasm across the country.

CONCLUSION

There is a strong need to protect our environment and to conserve our natural resources and make judicious use of them. Hence, the sensitization towards the protection and conservation of environment should be developed within each human being, so that they can prevent themselves from exploiting the resources of nature and contribute towards sustainable development. Unfortunately, experience shows that in the environmental community there are many who do not understand the true meaning of sustainable development. Therefore, the environmental community must discharge its collective professional responsibility in ways that are consistent with the core requirements of sustainable development and environmental sustainability. We must think earth as a habitat, not of today but of distant tomorrow where there will be place and means for every being alive. The preservation and conservation of environmental heritage is our sacred duty. Thus, we need environmental literate

citizens. For this environmental education is required, so that people become aware and take active part in protecting the earth's environment by making informed decisions and taking environmental friendly actions. It is essential that people are made aware through education and training by the teachers about protection and conservation of the environment. This will then inculcate in them sensitivity towards environmental issues and develop a responsible attitude towards the environment. However, for teachers to succeed in their endeavor for spreading environmental sensitization, it is important that the educational institutions should provide conditions conducive for it, so that teachers may contribute towards the delineation of the educational plans on environmental awareness issues and make efforts to incorporate indigenous knowledge into the formal education system.

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