

Need of the Environmental Education for Students in Global Scenario

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Abstract: All the physical and biological aspects of human survival involve some kind of interaction with his environment. Both, non-living and living components of the biosphere influence each other. All the environmental problems could be classified under two categories according to nature of the damage to human beings. Those directly affecting human welfare, health, social disruption and quality of life. Those indirectly affecting human welfare through interference with services provided for society by natural biological systems. The current markers of contemporary world scenario i. e. globalization, industrialization, liberalization and consumerization has eroded the delicate balance between human activity and nature. Education is expected to play a pivotal role in all developmental processes, which ought to be eco-friendly in nature. Environmental education is education in environmentally responsible decision making and problem solving. The relationship between man and his environment begins at birth and continues throughout his life. Hence Environmental education should begin at the pre-school age and continue through adulthood. We require need-based, life-oriented, environment oriented education. Environmental education should be interdisciplinary, drawing from biological, sociological, anthropological, economic, political and humanistic sources. Environmental education involves focusing on a wide range of concepts, processes and perspectives. Environmental education lays emphasis not only on cognitive domain but also affective and psychomotor domains. Affective domain emphasis on interests, attitudes, values and commitment towards environmental problems and its solutions. Psychomotor objectives enables students to participate in environmental activities. Environmental awareness is a kind of 'value' and should become a part of everyone's value system.

Keywords: Environmental education, affective domain, psychomotor domain

1. Introduction

Man is a product of his environment. His survival and development depends on the symbiotic interactions with his social, physical, cultural, economic and political environment. Man (Chauhan 2006) is an integral ingredient of Physical and Biological world in which he lives. This Physical and Biological world as 'Environment' which consists of biotic (living) and abiotic (non-living) components. All the physical and biological aspects of human survival involve some kind of interaction with his environment. Both, non-living and living components of the biosphere influence each other. The non-living components of the biosphere consists of the physical environment like soil, water and air along with the inorganic substances like carbon dioxide, nitrogen, oxygen, water, phosphorous, sulphur, sodium, potassium, calcium and other elements present in them. The factors like sunlight, temperature, pressure and humidity are also a sort of non-living components. The living components of the biosphere consists of three organisms are Producers, Consumers and Decomposers. Ecological concepts formed as a part of ancient Indian knowledge. The entire earth was considered as a small family (Vasudhaiva Kutumbakam) and all living and non-living forms were considered to be equal partners. The concept of ecological balance is contained in the following verse of Suklayajurveda:

Dyauh santih, antariksam santih
Prthwih santih, apah santih
Osadhyah santih, vanaspatayah santih
Viswe devah santih, Brahmah santih
Sarvam santih, santireva santih

In Atharvaveda, there is prayer according to which man wishes that whatever he takes from the earth should grow again immediately.

Yatte bhume vighnami
Ksipram tadapi rohatu
Mate marma vimrgvari
Mate hrdayamarpitam

This is the modern concept of sustainable development. In the opening verse of Kumarasambhava, Kalidasa describes the Himalaya as the yardstick to measure the earth. The environmental condition of the Indo-gangetic plane is to be measured by the condition of Himalaya.

"What of thee I dig, let that quickly grow ever.
Let me not hit thy vitals or thy heart." (Atharva veda)

The hymn above conceptualizes 'thee' as nature and refers it to the warning him of the relationship, he must maintain to live in the harmony with 'nature'.

"The Ocean is your girdle,
Your bosom the mountains,
Goddess Earth, my obeisance to you,
Forgive me for daring to touch you with my feet."

Ancient Hindu Hymn quoted by Former Prime Minister of India, P. V. Narasimha Rao, in his address to The United Nations Conference on Environment and Development held in June 1992 at Rio de Janeiro.

Environment comprises, "the surroundings in which man lives, works and plays. It encompasses the air he breathes, the water he drinks, the food he consumes and the shelter he provides for his protection against the elements. It also includes the pollutants and other detrimental environmental factors which adversely affect his life and health." (Committee on Environmental Health Association of America). UNEP defines Environment as "that whole outer physical and biological system in which man and other

organism live as a whole, albeit a complicated one with many interacting components.”

Environmental problem

The threats to India's environment is man - made (Chaudhari 2007). The process of deforestation, indiscriminate killing of wild animals, birds and plant species, urbanization, industrialization, chemicalisation of agriculture and misuse of natural resources by a rapidly growing population pose serious problems to sustainable growth. The forest products including fire wood, timber and minor products withdrawn every year. Seventy percent of wild life sanctuaries are inhabited by humans. More than 100 species of birds, 173 species of larger animals and 135 species of plants are in danger of extinction.

For international co - ordination on problems of environment, (UNESCO 1972) formed a separate wing known as UNEP at Nairobi in Kenya. All the environmental problems could be classified under two categories according to nature of the damage to human beings:

- Those directly affecting human welfare, health, social disruption and quality of life.
- Those indirectly affecting human welfare through interference with services provided for society by natural biological systems.

The first category is generally local problems created by unhygienic conditions, epidemic diseases, floods, mining operations, hydroelectric projects, volcanic activities, urbanization, over crowding, pollution, economic stress etc. All these factors affect the health and socio - economic conditions of man. These problems could be partially solved through legislation, eco planning and environmental education. The second, category is generated by mankind's disruption of the functioning of the natural environment.

Environmental Education

The current markers of contemporary world scenario i. e. globalization, industrialization, liberalization and consumerization has eroded the delicate balance between human activity and nature. Education is expected to play a pivotal role in all developmental processes, which ought to be eco - friendly in nature. It has to help raise awareness and build the capacity of communities to elaborate a vision and participate in the pursuit of environmentally and socially sustainability.

Environmental education is education in environmentally responsible decision making and problem solving. To be able to make such decision and solve such problems students need to become aware of the total environment and its problems. It can provide knowledge, skills, attitudes and values needed to seek solution and act upon them.

Stressing on the importance of Environmental Education, NPE 1986 emphasis that “There is a paramount need to create a consciousness of the environment. It must predate all ages and sections of society, beginning with the child, Environmental consciousness should inform teaching in schools and colleges. This aspect will be integrated in the center educational process.”

Landmarks in Environmental Education at the International Level

The International Union for conservation of Nature and Natural Resources (1970) (now renamed as the world conservation union but retaining the abbreviation IUCN) called an international working meeting of its ‘Commission on Education’ to discuss and workout an Environmental education curriculum for schools. The central theme was to evolve an educational process through which an understanding of the connections between man, his culture and his biophysical environment is achieved.

The National Association for Environmental Education has its mission the improvement of Environmental education in all educational institutions. The primary goal of the association is “to develop, promote, and encourage vigorous support for educational programs that will produce an environmentally literate citizenry which lives in harmony with the ecosystem and possess the skills, attitudes and knowledge necessary to identify and that pertains to the social sciences and humanities as much as it does to the natural sciences. Human learn about their relationship to their environment throughout their lives.

UNESCO (1988) has identified the following objectives of teaching Environmental education at school level:

- To make the child aware of his environment in a very simple manner and his/her place in it.
- To arouse interest in the people around him/her and develop understanding of the environment.
- To develop skills for learning about environment, ie, observation, collection and classification.
- To develop willingness to work individually and in groups to maintain and preserve environment.
- To foster development and positive attitude in pupils towards environment.

The relationship between man and his environment begins at birth and continues throughout his life. Hence Environmental education (Sharma 2006) should begin at the pre - school age and continue through adulthood. We require need - based, life - oriented, environment oriented education. For a nation like ours which offers a wide variety of environments and hence a variety of culture and living styles, advocating a uniform pattern of education for all, will fail to bring about the desired effect of education. R. Venkata Raman, the former President of India suggested the introduction of Environmental education from the primary school level to inculcate a true love for nature in children and to bring awareness of renewable natural resources, land use patterns and soil conservation to the students.

Environmental education (Sharma 2004) should be interdisciplinary, drawing from biological, sociological, anthropological, economic, political and humanistic sources. Environmental education involves focusing on a wide range of concepts, processes and perspectives. Pupils' involvement in their own surroundings is important in Environmental education. Environmental education should reach all sections of the population through the use of both formal and non - formal techniques.

Environmental education lays emphasis not only on cognitive domain but also affective and psychomotor domains. Cognition in Environmental education includes comprehension, application, analysis, synthesis, and evaluation of concepts, materials and methods used in Environmental education. It includes knowledge of the ways of organizing, studying, judging, criticizing data, trends, categories, principles, opinions pertaining to various aspects of Environmental education. Affective domain emphasis on interests, attitudes, values and commitment towards environmental problems and its solutions. Psychomotor objectives enables students to participate in environmental activities using their own hands, activities such as planting of saplings, maintaining a nursery, caring for a sick animal, keeping home and neighbour hood and school clean, spreading environmental awareness in their community etc. Environment based, child centered approach which is based on activities and projects is necessary for the inculcation of proper attitudes and values. Science clubs, drama, debates, painting competitions, all could highlight environmental issues, thus not only creating an awareness amongst peer groups but also amongst the parents.

Curriculum Transaction Modalities/ Methodologies of Environmental Education (Das 2009) are interactive mode of teaching, demonstration method of teaching, comparative method of teaching, discovery approach, action research method, field visit methods - Field activities like identifying local flora and fauna, measurement of carbon emission and noise pollution etc, community based approach, project method, seminars, symposiums, debate etc, problem solving approach, role playing, simulation approach and brain storming strategies etc.

Environmental awareness is a kind of 'value' and should become a part of everyone's value system. At pre - primary stage the basic mode of unbringing children should be through group activities and play way techniques, language games, number games and activities directed to promote environmental awareness (NIEPA 1988).

Environmental awareness can possibly be inculcated through three approaches:

- Hidden curriculum
- General awareness programmes
- Specialized courses in environmental sciences.

The first approach can be used at pre - primary and primary stages where environmental awareness (Chauhan 2006) cannot be generated directly. At this stage, environmental problems and possible solutions may be integrated in the curriculum of all subjects. So that children receive an indirect and hidden message about the need of protection of the environment. The second approach may be used at the secondary stage and above to generate general awareness regarding environment for students and adult learners. The third approach may be used to produce experts and good researchers in the field of environmental sciences.

Visit to zoos, sewage treatment plants, thermal power stations, field trips, trip to observe floods caused by denudation of forests, destruction of ecosystems caused by fire, biogas plants installed in villages, electrification of rural

areas by using non - conventional sources of energy are an integral part of the teaching - learning of Environmental education.

Children's involvement in Environmental approach

Children can make to do a number of activities such as making garlands of leaves, flowers, come to know about form, numbers and colour etc, identification of plants, fruits, edible ones, flowers, animals etc, classification of leaves, trees, flowers, animals etc, collection of specimens, plants, animals, rocks, leaves, flowers, shells, insects, butterflies etc, locality observation, interest in seasonal changes and trees, planting trees, studying ponds, checking soil erosion, watching birds, studying flora and fauna, preparation of nature calendar etc.

The Ministry of Environment and Forest formulated the policy to create awareness among all sections of society through national environment awareness campaigns, setting up of paryavaran vahinis, eco - clubs, production of audio - visual, and print materials, exhibitions, camps, etc. A large number of NGOs, educational institution and other organizations are actively involved in this programme through Padayatras, rallies, public meetings, folk dances, street plays, seminars, competitions etc

One exciting programme for environmental awareness is 'reading to Learn'. Inculcation of good reading habits leads to continuing education through life. It is proposing to bring out low priced reading kits, which will highlights current issues like deforestation, pollution, conservation of wild life etc. For the elementary level these will be read aloud by the teachers. These kits will lay the foundation for environmental consciousness and the urge to improve the quality of life.

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