

## **Study of Environmental Education among the Senior Secondary Students**

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Education is a product of the interaction of many factors or variables, stemming from within the individual and the environment. Defining the term “Environment” is as difficult as quantifying it. For Environment educational research usually resort to empirical definitions of the “Climate” or “Atmosphere” of schools. Generally, Environment is defined as the aggregate of the various forces and stimulations which the individual receives from the conceptions till death. Environment includes all the physical and cultural factors and conditions influencing the existence and development of organism.

Some of the important merits of education are being listed below:

- i. Education enables a person to know about his rights and duties;
- ii. It enables to know him about the impacts of his activities on environment;
- iii. It makes him know about different processes going on in the natural environment and their importance in keeping up the natural balance;
- iv. It is through education that a person becomes able to have the knowledge about the status of different natural resources, needs and modes of their conservation etc.;
- v. Education enables a person know about various processes of development and their impacts on environment;
- vi. Education enables a person to understand the phenomenon of Globalization and its impact on environment, economy and the social equality.

Webster’s (1975) New World Dictionary describes environment as an aggregate of all the external conditions and influences affecting the life and development of an organism.

From the time of birth, the child’s personality is developed and shaped through various agencies like home, school and society.

Environmental Education is a process of recognizing 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 be interdisciplinary and examine major environmental issues from local, national and international points of view. 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.

Environmental education is education through, about and for environment. It is both style and subject matter of education. Style is concerned with an approach to education while subject matter or content is concerned with teaching about the components and constituents of environment. Environmental education is to improve all ecological relationship including relationship of humanity with nature.

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Environmental education is an approach to learning. It endeavors to create a way of thinking requiring people to overcome prejudices. It helps in programming learning experiences ranging from the simple to complex. The principle of environmental education is that it makes the pupil aware about the problems, related to understanding the environment and hazards of its pollution. The environmental education is socially relevant as it help us to know that how unchecked and unplanned development pollutes air, water and soil and thereby threatening our existence. Therefore environmental education means the educational process dealing with man's relationship with his natural and man made surrounding and includes the relations of population, pollution resources allocation and depletion conservation, transportation, technology energy, urban and rural planning to the total biosphere.

Defining "Environmental Education" is not an easy task unlike other curriculum areas, the specific content of environmental education has never well defined, it is universally agreed. However, that environmental education should be interdisciplinary, drawing from biological, sociological anthropological, economic, political and humanistic sources. It is also agreed that a conceptual approach to teaching environmental education is best.

In 1969, President, Nixon formed the environmental quality council which advanced the idea of harmony between human beings and their environment as national policy. A number of national and state environmental education

organizations were subsequently formed and in 1971 the national association for environmental education was created.

Since 1971 a number of studies have dealt with the identification of concepts to be included in environmental education. Both Pella and Schoenfeld (1970) with the cooperation of a national Panel representing 40 disciplines developed a taxonomy of 111 concepts appropriate for inclusion in environmental management education.

The comprehensive definition of environmental education is formulated in the Tbilisi Conference held at Georgia in 1977 as Environment Education should.

- Consider the environment in totality.
- Be a continuous life long process beginning at the preschool level.
- Be interdisciplinary in its approach.
- Examine major environmental issue from the local national, regional and international point of view.
- Promote the value and necessity of co-operational energy level in the prevention and solution of environmental problems.
- Relate environmental sensitivity, knowledge and problem solving skills to every age but with special emphasis in early age.
- Help learners to discover the symptoms and real causes of environmental problems.
- Emphasize the complexity of environmental problems and thus need to develop critical thinking and problem solving skill.

Environmental education is also a part of adult education because it is needed by all citizens at all ages to make their lives better, systematic and prosperous. Environmental education will help to improve the quality of life of the people and will conserve environment.

Environmental education (EE) refers to organized efforts to teach about how natural environments function and, particularly, how human beings can manage their behavior and ecosystems in order to live sustainably. The term is often used to imply education within the school system, from primary to post-secondary. However, it is sometimes used more broadly to include all efforts to educate the public and other audiences, including print materials, websites, media campaigns, etc. Related disciplines include outdoor education and experimental education.

Environmental Education; according to the Annual Report (2004-2005) of the Ministry of Environment and Forest, the Government of India; can be defined as '*a process of recognizing values and clarifying concepts in order to develop skills and added tools necessary to understand and appreciate the interrelationships among man, his culture and his biophysical surroundings.*' Through this definition, it is clear that environmental education can play a most significant role in building Awareness about- the relation between modern development and environment; and the impact of developmental practices on the surrounding environment among masses, if imparted properly. It is the educations which can enable a person know about everything.

Environmental education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes,

motivations, and commitments to make informed decisions and take responsible action (UNESCO, Tbilisi Declaration, 1978).

Raina (1980) “Environmental Education as a way of learning subject. It is an approach through activities based on children’s social and physical environment, which leads to a progressive development of attitude and skills required for observation and recording etc.”

Environmental education helps the learner to perceive and understand environmental principles and problems that enable them to identify and evaluate problems and assess their benefits and risk. Environmental education includes conservation of natural resources and everything that related man to his environment. Environmental education is a life long process. It should not merely at imparting knowledge and understanding of environment and its methods and their application for improving, but it should also aims at inculcating skills, attitudes and value necessary to understand to appreciate and improve our biosphere.

### **Environmental Education in Schools Systems**

A vast section of population is found in different schools and colleges. Minds of these people remain ready to learn and curious to know about what is happening and what is likely to happen around their surroundings. These people can be motivated through proper formal education to take actions for environment. In view of these facts the MHRD had also been interacting with the University Grant Commission (UGC) to take appropriate steps for the inclusion of environmental education at the University Levels.

After the directives issued by Hon’ble Supreme Court of India, the MHRD as well as State Departments of HRD have included the environmental education as a separate and compulsory subject in the education curricula framed by NCERT, at all levels of formal education, that is at primary, Secondary, Senior Secondary and College levels.

The National Green Corps: The Ministry of Environment and Forest started National Green Corps (NGC) Programme in the year 2001 – 02. The objective of this National Programme is to generate Environmental Awareness amongst school children through establishment of Eco-clubs in all the districts of different states and Union Territories of India. The programme is being implemented by different nodal agencies. The principal focus of the NGC Programme is the introduction of action oriented studies of the problems of environment on different levels and finding out easy solutions of these problems through students under the guidance and supervision of their teachers. Though a State Govt. / UTs is free to open any number of such eco-clubs in its districts, the Central Government provides financial assistance to 150 best performing eco- clubs in each district.

### **Emergence of Environmental Education**

Emergence of environmental education as a compulsory subject at school level is a welcome development. India can protect and restore environmental and natural resources by spreading awareness on such issues among its citizens. Teaching of environmental education can be an important vehicle.

## **Our Students Need Stronger Environmental Education**

**Dave Honchalk, Monrovia**

Public schools have long been tasked with empowering students with the ever-changing knowledge and skills necessary to be well-informed decision makers. In September 2010, the Maryland State Board of Education voted unanimously to require every local public school system in the state to provide a comprehensive environmental education program for all students, a bold and worthy initiative.

Given the challenges that current students will face in their lifetime regarding the environment and our resources, this initiative not only would increase basic student awareness of how the natural world works, but would provide them with the critical skills and knowledge necessary to prepare for increasingly "green" career opportunities, the use of "green" technology, and it would equip them to make informed decisions about our impact on finite resources.

In addition to the more obvious goals of this initiative, there is a growing body of evidence that students need extensive experiences with the natural world and how it functions. Environmental education experiences, both in the classroom and outdoors, allow students to apply knowledge to authentic situations.

However in January, the Maryland State Department of Education proposed additional code language allowing students to meet this bold initiative by simply completing existing science and social studies requirements, thereby taking away the intent of the new proposal and giving no incentive to school systems to provide a comprehensive, multidisciplinary program to all students.

Both the State Board of Education and MSDE have been important partners and supportive of environmental education over the past few years. I am urging both to strike the additional code language that provides for a less-than-comprehensive approach and replace it with language stating that all students must complete a locally designed, comprehensive environmental literacy program.

If our students are to meet the challenges of the future, they deserve to be well informed and educated about the environment they will inherit.

In the past few decades, the world, and more specifically, America, has seen dramatic changes in its culture, and a new way of life has formed. If one were to step outside, he/she would see completely different surroundings than just thirty years ago. Unfortunately, the new habitat being created is not pretty, and the problem seems to be that children born today aren't even taking that initial step outside. Instead, new generations are being thrown into a world of computers, video games, and digital music players. This creates a comfort zone in the home, which becomes increasingly hard and undesirable to leave. Amongst other problems, this has created ignorance to the fact that the planet is suffering from steady deterioration. The fact is, if something isn't done immediately, the changes being faced will soon be irreversible. The opportunity to heal the Earth relies on the cooperation of the entire nation, and requires not only a shift in the ideals of politicians and older generations, but also a change of plans for children's values. The ideas of solar power, wind energy, biodiesel fuel, and other eco-friendly changes are all great cornerstones to solve the environmental crisis, but in order to make sure these ideas continue to be

implemented, they must be passed on to upcoming generations. With a strong foundation of environmental conservation laid out before them, children will then be well-equipped to face the ecological challenges ahead of them. That is why ultimately, environmental education is the key to ensuring the safety of our species and the future biodiversity of the planet.

In order to address the issue of environmental education, one must first understand some of the more recent ideas surrounding the development of values among children. The most intriguing concept that has been proposed is called "Nature-Deficit Disorder". The term was coined by Richard Louv in his book, *Last Child in the Woods: Saving Our Children From Nature-Deficit Disorder*, and refers to the unhealthy trend of children vanishing from nature (11). The causes of NDD are all around us. For instance, the aforementioned technological advances provide many reasons for children to stay inside. In addition, there has been an increasing concern about "stranger danger", or the idea that children are likely to be abducted or harmed if they step outside (Graham). Although child abductions occur, they are rare, and Louv says that much more attention should be paid to the creative stimulation and exercise kids are losing because of this irrational fear (Graham). Finally, there is the loss of natural surroundings when businesses replace beautiful landscapes with redundant buildings. If kids view the outside world as frightening or mundane, there will be no chance of getting them to leave the electronics behind.

With these causes, Louv links a number of effects. One of the bigger issues is childhood obesity, which has quadrupled since the 1960's (Obesity). One would find that as more children are staying inside, the obesity rates are increasing alongside them. The main concern with Nature-Deficit Disorder, though, is its social and psychological effects. Like obesity, Attention Deficit Disorder has seen a drastic increase in recent years. From 1997-2003, the average annual increase of diagnoses was 3% (Pastor). This is where the term Nature-Deficit Disorder starts to make more sense. Like ADD, Louv claims that NDD can cause harm to a child's problem-solving skills, mental and emotional health, physical health, imagination, and respect for nature (11, 35, 166). All of these effects can take a toll on a child, and can easily lead to worse long-term effects such as ADD, depression, and poor performance in school. However, the worst effect would be seen from a lack of respect or sensitivity towards nature. This cries out for immediate action. The idea for environmental education is not new. In fact, efforts to start an environmental education program have been underway for some time. With the introduction of the National Environmental Education Act of 1990, environmental education has helped raise awareness and protection of the earth. The Office of Environmental Education has provided \$30 million in grants to support education programs in every state and territory in the nation, including the training of over 100,000 educators nationwide (NEEA). It has also strengthened research and measurement agendas in the field, improved access to quality information, and encouraged students to pursue environmental careers (NEEA). With such a strong stepping stone already laid out, it will not be hard to continue the current progress, but doing so may require some changes. According to the EPA's recommendation for further action, the first step is to update the National Environmental Education Act for the 21<sup>st</sup> century (NEEA Council). This is a vital step

due to the worsening conditions on earth. Since 1990, many environmental battles are still raging. Some of these struggles, such as climate control, have gotten worse. In addition, new problems like the conservation of biodiversity have emerged. With harsher conditions rising, there must also come a more diligent effort in continuing the environmental education plan. The most important step in furthering this education is to provide as much information to children as possible. The good news is that after the initial steps taken in 1990, more direct attention is starting to be given to children. Research on adolescent attitudes towards the environment is scarce, but thanks to a recent study, some information is now available. This report claims that the main reason to take adolescents seriously with regard to the issue is because of the generational replacement theory (Wray-Lake 2). This says that changes in adolescents' attitudes are important warning signs of long term social change (Wray-Lake 2). In this study, attitudes toward the environment were surveyed over a period of thirty years. Unfortunately, negative results have been seen in current adolescent opinions. Specifically, behaviors towards conservation have actually declined. Urgency towards making changes or taking responsibility was highest in the 1970's, and has fluctuated since then, but is now considerably lower than thirty years ago (Wray-Lake 11-14). A notable item to mention is that the sense of materialism runs opposite that of environmental conservation. The study showed that times when materialism was lowest, conservation attitudes were highest and vice versa (Wray-Lake 15). Currently, materialism values among high-school students are soaring, and environmental care is not in high regard. Since adults generally influence children, it may not be a surprise to know that trends among adults are very similar to those of adolescents. Surprise or not, though, this creates one scary picture. With respect to the theory of generational replacement, this means that the current views of the youth will carry on with them into adulthood, and that adults are only adding to the problem by reinforcing these values. If this continues, the current issues with the environment will only get worse. This depicts why it is necessary to exert more effort in the campaign for environmental education.

It is evident that despite the efforts of the EPA, a change in attitudes has yet to arrive. Simply, the problem must be attacked more readily, and at a different source. In addition to raising awareness and education to the general public, this information must be delivered in full effect to grade school and high school students across the country. A program such as this would stop the problem today, but more importantly, in the future.

Implementing an environmental education program in elementary and junior high schools is the key factor in the solution to the problem. Although, introduction into high schools will play a part, it alone will not accomplish the task. If one were to observe the effects of the introduction of sex education into high schools, it would be seen that the results do not match up to the expectations. Even though pregnancy rates among teenagers decreased throughout the nineties, they have increased for the second year in a row (Stein). Rates of sexually transmitted diseases have seen no success at all, increasing steadily up through 2009. If environmental education were given the same prescription, and only taught to some high school and junior high school students, the effects would likely follow the same pattern. Presumably, high

school introduction may be too late of a starting point. Instead, it should be used as a reinforcement stage, with the initiation in grade school.

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