



INFLUENCE OF ENVIRONMENTAL AWARENESS, PRACTICES AND SUSTAINABILITY: A COMPREHENSIVE REVIEW

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Abstract:

When you look up the term "environment," you'll find that it refers to the things that surround you, as well as the things that influence the growth and development of humans, animals, and plants. The environment is defined as the physical components of the Earth, such as land, air, and water, that sustain and influence life in the biosphere. It has been said that A. Goudie has considered the environment as a physical representation of Earth's components, in which man is an essential part. A more comprehensive definition of the environment is one that encompasses a wide range of spatial elements and socio-economic systems, each of which has its own unique characteristics. The scope, in turn, could be determined by our own concerns and priorities, which are reflected in our definitions of the environment (Patten,1978). There are many ways to perceive the environment, but it can be fairly said that the environment is an indivisible totality and is composed of the interconnected systems of physical, biological, and cultural aspects. As a result of the physical environment, human habitats were characterised by a wide range of possibilities and constraints. Plants, animals, microbes, and humans are all included in the biosphere. Essentially man-made components (economic, social, and political) make up the cultural environment.

DEFINITIONS OF ENVIRONMENT

The following are some examples of environmental definitions. E.J.Ross describes environment as an external factor that affects us. 'The environment' Environmental factors are those factors that have an impact on the growth and development of an organism. According to P. Gisbert, an object's



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immediate surroundings has a direct impact on it. It is the sum of all external factors that affects the life of an individual or community, especially the life of man, according to Detwyler. The quality of one's environment has the most impact on one's ability to live and thrive. The sum total of all external (physical, social, cultural) influences and situations that impact the life, nature, behaviour, and growth and development and maturity of living beings may be characterised as the environment. As a result, man's environment comprises both living (biotic) and nonliving (Abiotic) components, such as plants, animals, vegetation, flora and fauna, air, water, soil, and land. Our lives are influenced by these influences directly. However, these definitions seem to be insufficient in today's context since they do not address environmental issues such as pollution, climate change, ozone depletion, etc. In the context of this discussion, we might state that all of the conditions that allow us to live and exist can be referred to as our environment. The existence of all living beings is also a part of the equation (Markert, et al. 2003).

ENVIRONMENTAL EDUCATION

Environmental education is the acquisition of information and comprehension of environmental issues, such as pollution, overcrowding, deforestation, ecological disturbance, and energy shortages, as well as the implications of these issues. To assist individuals become more environmentally conscious and concerned, it serves as a means of developing skills, attitudes, and awareness (Neal & Palmer, 2003). The importance of Environmental Education has been asserted at global levels from time to time. New Delhi Conferences on Environmental Education In 1981 and 1985, New Delhi, India hosted two international conferences. As our late Prime Minister Indira Gandhi said at the inaugural conference, environmental education's goal is to raise social awareness and make the society aware of the realities that ecological disturbance harms both individual well-being and collective well-being.

Environment conservation is an important concern at both local and global level. The rapid industrialization and infrastructural development, human population growth and urbanization have resulted in deterioration in the quality of environment. Calamities like natural disasters climate change. Our environment has polluted. Climate are changing daily due to global warming and high temperature. Pollution is a fact that has been coming in the environment for a long time. It is defined as dirt pollutant in to an ecosystem which cause harm to human beings, animals and living things. The main reason of pollution is human activities or natural calamities also. Human comes on first position to pollute the environment because they produce waste products so our environment is going to pollute day by day. Due to pollution, we are losing our ecosystem, generating health problems and social issues also. Scientists are also working hard to develop solutions but lack of awareness among people is aggravating the problem. Environmental deterioration has resulted in a wide range of negative consequences and it is now more necessary than ever to discover a strategy to slow down and ultimately mitigate long-term environmental harm. By promoting environmental awareness in society, especially among students who will become future leaders and custodians of the environment planners and policymakers, as well as educators of the environment and its issues, one of the best ways to preserve our planet is to educate them about the importance of protecting the environment. For decades, population increase, urbanization, and land loss have weakened the link between people and the natural world, creating a potential gap. This detachment may be repaired and our relationship with nature restored if we spend time in nature and learn about it. Encouraging this kind of awareness may be done via Environmental Education (EE). Exposure to the natural world, whether in the form of EE programmes or unstructured play, may have a positive impact on children's development (Woodgate, 2012). Environmental consciousness is the most powerful motivator for people to learn more about the environment. In order to recognize an issue with the environment, one must have a better understanding of the current status of the ecosystem. There are three factors that contribute to environmental awareness: fundamental attitudes about the issue, factual and scientific information, and a strong desire for environmental solutions. Shobeiri (2006) argues that environmental awareness and correct knowledge must be ingrained in the education system at all levels of schooling in order to solve the current environmental catastrophe. Many chances exist for students to become environmentally conscious thanks to the current curriculum at the elementary, secondary, and college levels. An understanding of environmental issues will allow pupils to influence their attitudes and behaviour. It is the ultimate purpose of environmental education, which is a vital basis for sustainable development, to promote responsible environmental behaviour. Environmental education is an organised attempt to educate about how natural environments work and, more specifically, how human beings may regulate their behaviour and ecosystems in order to live sustainably. A process of recognising values and clarifying concepts in order to develop the skills and attitudes necessary to understand and appreciate the interconnectedness between man, his culture, and his biophysical surroundings is known as environmental education (EE) by the International Union for the Conservation of Nature (IUCN). **CURRICULUM OF ENVIRONMENTAL EDUCATION**



Environmental education also includes exercise in decision-making and the development of a code of conduct on environmental quality problems (IUCN, 1971). "A permanent process in which individuals gain awareness of their environment and acquire the knowledge and values and skills and experiences and also the determination that will enable them to act individually and collectively in order to solve current environmental problems and to meet their needs without

compromising those of future generations," is how UNEP/UNESCO/OECD Paris defined environmental education in 1992. Education at all levels of the school system is often referred to as "schooling". Science enrichment, field excursions, community service, and participation in outdoor science schools are all examples of environmental education at the primary school level. It's possible for environmental education in secondary school to be part of a student-led interest group or club. For undergraduate and graduate students, it might be regarded an entirely separate discipline under environmental studies, environmental policy, human/cultural ecology, and environmental education. Teachers who teach pupils about the natural and man-made worlds connect the classroom to the students' everyday lives. Students learn about the world around them via hands-on, experiential learning. Students learn critical thinking, problem-solving, and effective decision making abilities as a result of environmental education's emphasis on inquiry and exploration. Learning about environmental issues and making ethical choices as individuals and as members of one's community is the goal for students who are environmentally literate. The protection of human health and the promotion of environmental stewardship are two of the primary goals of high-quality, standards-based environmental education. Environmental education is seen as a unified approach to teaching and learning. However, in some nations it is seen as a kind of values education, while in others it is viewed as a fresh approach to education that teaches students how to appreciate nature's abundance (concerning education in, about and for the environment). All of this suggests that environmental education should not be a stand-alone topic. A more accurate description would be that it is a method of teaching that considers the physical, social, and cultural context in which students live and learn.

Environmental education is an organised attempt to educate about how natural environments work and, more specifically, how human beings may regulate their behaviour and ecosystems in order to live sustainably. A process of recognising values and clarifying concepts in order to develop the skills and attitudes necessary to understand and appreciate the interconnectedness between man, his culture, and his biophysical surroundings is known as environmental education (EE) by the International Union for the Conservation of Nature (IUCN). Environmental education also includes exercise in decision-making and the development of a code of conduct on environmental quality problems (IUCN, 1971). "A permanent process in which individuals gain awareness of their environment and acquire the knowledge and values and skills and experiences and also the determination that will enable them to act individually and collectively in order to solve current environmental problems and to meet their needs without compromising those of future generations," is how UNEP/UNESCO/OECD Paris defined environmental education in 1992. While rapid industrialization, automation, and scientific advancements have improved human comfort, they have also resulted in catastrophic environmental issues (Pai, 2000). We have been overcoming nature for and now we years. are beating it to death, and we risk falling into a chasm of natural disasters unless we alter our course. According to Gokmen (2008), man, culture, and his biophysical surrounds constitute an inseparable system. To a certain degree, human knowledge, attitudes, values, ethics, and environmental practices all have a significant impact on the quality of the environment.

Since the biosphere's resource availability has limits, the viability of Such a network architecture unit peacefully relies each coexisting on is survival because the biosphere's availability limited resource Agency for Environmental Protection, 1996). According to Stapp (1969), global citizens did, in fact, progressively begin to comprehend the issues that man faces in his biophysical environment and began taking part in problem solutions and responsibility. The widespread environmental concerns were echoed by the statement that it is "better to be frightened now than killed here after"

(Churchill, 1946). This is because people are certain that, in the end, their society will be defined by what they refuse to care for rather than just what they create. In order to contribute to the harmony of the environment and its ties with our society, it is implied that people must be conscious of their human position in the universe, including its moral and ethical dimensions. People in society ought to be inspired to appreciate their natural heritage and acknowledge the connection between their cultural traditions and the environment. In regard to nature, society should be made to acknowledge cultural practices, cultural identity, cultural

attitudes, and cultural values, as these are crucial in establishing goals and fostering shared commitments. People in the community must acknowledge that other species' existence and wellbeing are essential natural processes.

Everyone in the community should be made aware of the common ecosystem model, which holds that all systems on Earth are interconnected and must be maintained. It is generally acknowledged that an individual can lead a desirable quality of life in their own environment by developing the awareness, knowledge, attitude, ethics, and practices gained through environmental movements. There was no distinct start to the global environmental movement; instead, local groups were formed by people starting in the middle of the 19th century. Following World War II (1939–1945), local organizations came together to form a multi-national movement, which has now expanded to become an international movement (Santra, 2001). Two international conferences were held to evaluate the issues of the new ecology, which was associated with the origins of several social and cultural revolutions pertaining to human rights issues. Subsequently, the Stockholm Declaration on Environment and Development, which was adopted at the UN Conference on Human Environment in 1972, emphasized the value of the environment and established June 5th as World Environment Day annually. This was primarily done to raise public awareness of environmental issues through a variety of environmental-related activities. According to the declaration, (i) Man has a fundamental right to decent living conditions in a high-quality environment that supports a life of wellbeing and dignity. (ii) The protection of Earth's natural resources, such as its air, water, land, flora, and wildlife, is essential for the survival of the human race today and in two generations. (iii) States must do everything within their power to keep the oceans clean. In order to educate the public about a variety of environmental issues, the first Declaration on Human Environment was signed. This led to the creation of the United Nations Environmental Programme (UNEP, 1973), which has offered leadership and promoted collaboration in the fight for environmental protection. "The goal of environmental education is to develop a world population that is aware of and concerned about the environment and its associated problems, and that has the knowledge, skills,

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MESENCHYMAL STEM CELLS: A REGENERATIVE HOPE FOR ALZHEIMER'S PATIENTS

attitudes, motivations, and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones," according to the widely accepted goal statement for environmental education found in the 1975 Belgrade Charter, which was adopted at the United Nations Educational, Scientific, and Cultural Organization Conference in Yugoslavia (UNESCO, 1976). Rio de Janeiro hosted the first United Nations Conference on Environment and Development, also known as the UNCED Earth Summit, in 1992. It marked a sea change in how we see development and the environment. During the Earth Summit, the world

Agenda 21, a blueprint for achieving sustainable development, was embraced by leaders. At the international, national, and local levels, Agenda 21 offers a thorough action plan to achieve sustainable development and combine the treatment of environmental and developmental challenges. The 1997 Kyoto World Conference brought attention to the growing threats posed by the greenhouse effect, which is causing global climate change. To prevent catastrophic global warming, industrialized nations were required to reduce their greenhouse gas emissions.

India has been actively involved in international efforts to address environmental issues since the early 1970s it attended the Stockholm Conference on Human Environment in 1972, but it wasn't until the 1980s that significant progress on environmental issues and concerns in India started to be made. The Department of Environment was founded in India in 1980 to guarantee a healthy environment for the nation since environmental conservation is ingrained in Indian culture. In changed its name to the Ministry 1985, this of Environment and Forests. Beginning in the early 1970s in the Garhwal Himalayas of Uttarakhand, the Chipko movement was a social movement that employed Gandhian principles of nonviolent resistance and satyagraha by acting to stop the destruction of trees. It was a genuinely grassroots movement that began with a local issue and progressed to macro-level ecological and environmental preservation decisions (Mohapatra, 2000). In 1978, the Kerala government started the Silent Valley initiative. To build a dam, which would drown the prime rainforests that are home to five species of endangered plants and animals that are exclusive to this valley (Mohapatra et al. 2000). The Kerala Sastra Sahitya Parishad and an NGO led an effort to safeguard the environment by preserving the little valley's ecosystem and biodiversity. In many respects, the effort to preserve Silent Valley evolved into a campaign to preserve the ecology. People loved the teak trees after they were cut down to build ships and sent to Mumbai as fuel and lumber.

CLIMATE CHANGE AND GLOBAL WARMING

Global warming and climate change are the results of humankind's propensity to negatively impact the environment. Given the significant rise in greenhouse gas emissions, Long-term effects of climate change have become concerning and irreversible in the atmosphere, endangering environmental sustainability (Santra, 2001). There is a lot of talk about the ozone layer's depletion because, in addition to greenhouse gases, gases like ozone in the earth are notable for their capacity to absorb UV radiation. Computer-based image processing shows that the ozone layer depleted zone covers the entire Antarctic continent, and beyond which the ozone hole forms annually.

The depletion of the ozone layer is caused by a variety of trace gases in the atmosphere, but the main ones are carbon dioxide, methane, chlorofluorocarbons, and nitrogen oxides. However, environmental contaminants such noise. water. land. and air as Climate change and global warming are caused by pollution from solid waste. These pollutants are thought to be a worldwide phenomenon that most strongly draws human attention due to its serious long-term effects, such as acid rain, drought, and floods that occur annually. In most nations, the volume and type of trash generated has increased due to population growth, growing urbanization and industrialization, and rising living standards (Santra, 2001) endangering biodiversity.

Sustainable harvests that are rich in variety and color depend on biodiversity, which is regarded as one of nature's most gracious gifts. In addition to its vital function in halting ecological degradation, biodiversity has additional benefits for improving cattle. There are currently initiatives in place to protect and conserve animals. Amphibians and other animals are endangered nowadays, raising ecological issues about conservation and preservation. Initiative Elephant was started in 1992 to enhance elephant habitat, which needs support for conservation, and Project Tiger, which was started in 1973 as an ecosystem-based conservation support initiative.



Figure 1.2 Benefits of Environmental Education

BENEFITS OF ENVIRONMENTAL EDUCATION

Shobeiri (2006) argues that environmental awareness and correct knowledge must be ingrained in the education system at all levels of schooling in order to solve the current environmental catastrophe. Many chances exist for students to become environmentally conscious thanks to the current curriculum at the elementary, secondary, and college levels. An understanding of

environmental issues will allow pupils to influence their attitudes and behaviour. It is the ultimate purpose of environmental education, which is a vital basis for sustainable development, to promote Education at all levels of the school system is often referred to as "schooling". Science enrichment, field excursions, community service, and participation in outdoor science schools are all examples of environmental education at the primary school level. It's possible for environmental education in secondary school to be part of a student-led interest group or club. For undergraduate and graduate students, it might be regarded an entirely separate discipline under environmental studies, environmental policy, human/cultural ecology, and environmental education. Teachers who teach pupils about the natural and man-made worlds connect the classroom to the students' everyday lives. Students learn about the world around them via hands-on, experiential learning. Students learn critical thinking, problem-solving, and effective decision making abilities as a result of environmental education's emphasis on inquiry and exploration. Learning about environmental issues and making ethical choices as individuals and as members of one's community is the goal for students who are environmentally literate. The protection of human health and the promotion of environmental stewardship are two of the primary goals of high-quality, standards-based environmental education. Environmental education is seen as a unified approach to teaching and learning. However, in some nations it is seen as a kind of values education, while in others it is viewed as a fresh approach to education that teaches students how to appreciate nature's abundance (concerning education in, about and for the environment). All of this suggests that environmental education should not be a stand-alone topic. A more accurate description would be that it is a method of teaching that considers the physical, social, and cultural context in which students live and learn.

There is a serious lack of study on environmental education in India, both internationally and in terms of the scientific knowledge created on ecology and the environment in India. The specifics of ecology and the environment need to be accounted for in a comprehensive way. There is a pressing need to provide information to students at all educational levels. A well-planned national programme must also be implemented at the grassroots level throughout the country. In addition, the bulk of these research were of the survey type, which collected data using questionnaires or opionnaires. Research using environmental, case study and interview approaches is rare. Samples of students, instructors, and the general public belonging to a variety of socioeconomic backgrounds were used in these investigations. When these studies are examined critically, they demonstrate that no research has been conducted on these four factors, namely environmental awareness, practises, IQ, and socioeconomic level in secondary school students. It is appropriate to conduct a study on environmental awareness and behaviours among secondary school students in order to address the vacuum in research. The environment is essential to man's long-term wellbeing. Environmental and human interdependence is, in fact, profound, as shown by the fact that it has been recognised since antiquity. Man's social environment has evolved throughout time due to population increase, urbanisation, and industrialisation. This, in turn, has had a significant impact on the natural environment. Since man's needs have grown and technology has advanced, he has become more careless about nature and its resources. Among the many consequences of his heinous exploitation of the natural environment are widespread deforestation, soil erosion, pollution, and the eventual extinction of species. In addition to health issues, pollution has a harmful effect on the environment. We all need to be aware of the delicate balance that exists between the many components of nature for it to operate normally in light of the rapidly worsening circumstances of our environment. People all throughout the world are concerned about environmental conservation these days. Environmental awareness is essential to protecting and conserving the environment.

NEED OF ENVIRONMENTAL EDUCATION

We have taken use of the environment's natural riches at our own peril. There are many environmental issues nowadays because natural resources are being depleted at an alarming pace. This suggests that our views regarding the utilisation of natural resources need to change. We need to be aware of how important they are, and we need to take action to keep them that way. When it comes to teaching people about environmental issues and how to deal with them, environmental education has shown to be a very successful tool for accomplishing this goal. An environmental education programme is needed now more than ever because of this situation. Both formal and non-formal education have been devoted to teaching environmental awareness, which is necessary for a better quality of life for everybody. Teachers may have a significant impact in the education of their pupils in the formal education system (Jensen, & Schnack, 1997).

IMPORTANCE OF ENVIRONMENTAL EDUCATION

Individuals and the government alike recognise the need of environmental education today. It is a novel notion in the contemporary world, but one that may be used to stop the destruction of the environment. Various conferences throughout the world have recognised its significance, further solidifying its presence in educational curricula.

References:

- A.S. Goudie The Human Impact on the Natural Environment: Past, Present, and Future
- (seventh ed.), Wiley-Blackwell (2013)(410 pp.)
- Goudie, A. S., and N. J. Middleton. 2006. Desert dust in the global system. Heidelberg: Springer.
- Goudie, A. S., and H. A. Viles 1997. Salt weathering hazard. Chichester: Wiley.
- Shobeiri, S. M, Omidvar, B. and Prahallada, N. N (2007), A Comperative Study of Environmental Awareness among Secondary School Students in Iran and India. Int. J. Environ. Res.1 (1): 28-34.
- Gokmenoglu, T., Eret, E., &Kiraz, E. (2011). The link between Environmental Awareness and Science-related factors: Suggestions for science curriculum. Evaluation in Education in the Balkan Countries, Belgrade.
- Jensen, B. B., & Schnack, K. (1997). The action competence approach in environmental education. Environmental education research, 3(2), 163-178.

- Markert, B. A., Breure, A. M., & Zechmeister, H. G. (2003). Definitions, strategies, and principles for bioindication/biomonitoring of the environment. In Trace Metals and other Contaminants in the Environment (Vol. 6, pp. 3-39). Elsevier
- Neal, P., & Palmer, J. (2003). The handbook of environmental education. Routledge.
- Patten, B. C. (1978). Systems approach to the concept of environment.
- Shobeiri, S. M., Omidvar, B., &Prahallada, N. N. (2006). Influence of gender and type of school on environmental attitude of teachers in Iran and India. International Journal of Environmental Science & Technology, 3(4), 351-357.
- Woodgate, R. A., Weingartner, T. J., & Lindsay, R. (2012). Observed increases in Bering Strait oceanic fluxes from the Pacific to the Arctic from 2001 to 2011 and their impacts on the Arctic Ocean water column. Geophysical Research Letters, 39(24).
- Commission for UNESCO, (1977) Intergovernmental Conference on Environmental Education. Organized by UNESCO in cooperation with UNEP, Tbilisi, USSR, Paris: UNESCO.
- UN, (1972), The United Nations Conference on the Human Environment. Stockholm Recommendations, Home Page of United Nations Environment Programme
- (UNEP).www.unep.org UNEP, (1989). Environmental Data Report. Oxford : Brazil Black Well Ltd..
- UNEP. (1986). Environmental Education and Training in Asia and the Pacific: Report of a Regional Meeting of Experts. Development of a Programme of Action for EE and Training in Asia and the Pacific. 11-15 Nov., 1985. United Nations Environment Programme, Bangkok, Thailand.
- Ross, R. D. (1972). Air Pollution and Industry. Van Nostrand Reinhold Co.
- Sungoh S.M. (2006). "An Introduction to Environmental Education". Akashi Book Depot, Shillong, Santra .S.C (2005). "Environmental Science". New Central Book Agency (P) Ltd.
- Mohapatra A.C, Barik S.K, Rao C.S. (2000). "Man And Environment". Published By Mrs K. Goel, Star Publishing House, Rynjah, Shillong 793004.