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Gunjan Rani

(M.Ed. and UGC NET)

Corresponding Author :

Gunjan Rani

(M.Ed. and UGC NET)

ENVIRONMENTAL EDUCATION : ESSENTIAL FOR SUSTAINABLE DEVELOPMENT

ABSTRACT : The pursuit of sustainable development and environmental conservation policies, objectives and targets requires the public to be sufficiently sensitized about the multiple dimensions of environment and development. Awareness and understanding of environmental issues provide the basis and rationale for commitment and meaningful action towards environmentally sound and sustainable development. Education has been identified as a critical force for adopting a range of strategies for implementing such policies and programmes. The purpose of this study is to examine the importance and need of Environmental Education for Sustainable development. Sustainable development is a strategy for progress that prioritizes social, economic, and environmental well-being without sacrificing either. Climate change, water shortages, inequality, and hunger are just a few of the issues that must be addressed on a global scale to be overcome. This article intends to highlight the advantages of Environmental Education and challenges of Imparting Environmental Education.

Keywords: Sustainable Development, Environmental Education, Environmental Sustainability,

INTRODUCTION : Environmental education refers to organized efforts to teach how natural environments

function, and particularly, how human beings can manage behavior and ecosystems to live sustainably. It is a multi-disciplinary field integrating disciplines such as biology, chemistry, physics, ecology, earth science, atmospheric science, mathematics, and geography. The term often implies education within the school system, from primary to post-secondary. However, it sometimes includes all efforts to educate the public and other audiences, including print materials, websites, media campaigns, etc. Environmental Education is the teaching of individuals, and communities, in transitioning to a society that is knowledgeable of the environment and its associated problems, aware of the solutions to these problems, and motivated to solve them. In short, environmental education is provided so that people can have a better understanding of the world around them and know how to take care of it properly so that the world can be a better place.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) states that Environmental education is vital in imparting an inherent respect for nature amongst society and in enhancing public environmental awareness. UNESCO emphasises the role of Environmental education in safeguarding future global developments of societal quality of life (QOL), through the protection of the environment, eradication of poverty, minimization of inequalities and insurance of sustainable development (UNESCO, 2014a). Environmental education is a two-way system in the sense that the educator is making available to the people his findings at the same time the effectiveness of the message is monitored by the educator and made known to relevant authorities. The responsibility of extension person or educator is enormous because he has to be an expert in nearly all the fields since he is supposed to explain and answer questions on various aspects of the environment.

Sustainable development might mean different things to different people, but at its heart it is a strategy for progress that prioritizes social, economic, and environmental well-being without sacrificing either. Climate water shortages, inequality, and hunger are just a few of the issues that must be addressed on a global scale in order to be overcome. One of the fundamental tenets of sustainable development is living within the bounds of the environment. Climate change is one consequence of ignoring the issue.

However, sustainable development is concerned with considerably more than simply the environment. It also involves ensuring a robust, healthy, and equitable society. This involves satisfying the different needs of all individuals in present and future communities, encouraging personal well-being, social cohesion and inclusion, and establishing equal opportunity.

Four pillars of sustainability are human sustainability, social sustainability, economic sustainability and environmental sustainability. The content and substance

of environmental education is also undergoing review and change. Environmental education has developed within the conceptual framework that emerged from the first international conference in Tbilisi (1977) and is now seen as education for sustainability. This allowed environmental education to address the broad range of issues and concerns included in *Agenda 21* and others which evolved through the meetings of the Commission on Sustainable Development (UNESCO 1997).

Environmental education is a complex process, covering not just events, but a strong underlying approach to society building as a whole. Environmental education provides people with the awareness needed to build partnerships, understand NGO activities, develop participatory approaches to urban planning, and ensure future markets for eco-business.

The term "Sustainable development" was first used in the 1987 report "Our Common Future" by Gro Harlem Brundtland's World Commission on Environment and Development, which defined it as "Sustainable development is development that meets the requirements of the present without compromising the ability of future generations to meet their own needs." (UNESCO, 2005) The report warned of the harmful environmental effects of economic growth and globalization and sought solutions to the challenges brought by industrialization and population growth

OBJECTIVES OF ENVIRONMENTAL EDUCATION : The objectives of environmental education are broad in sense of nature. The systematic knowledge about the care should be taken in the explanation and utilization of natural resources for the development and progress of mankind is given through environmental education. The primary aim of environmental education is to impart knowledge about the principles required for the conservation and utilization of natural resources for the existence of mankind. Environmental education gives required knowledge and experience realizing the value of such important views. The role of environmental education is important in the realization of the necessity of maintaining a friendly and well balanced relationship between man and nature.

The general objectives of environmental education include the following:

1. To develop the sense of awareness among the students about environment and its various problems.
2. To help the students in realizing the inter-relationship between man and environment.
3. To inform the students about the social norms that provides unity with environmental characteristics.
4. To create positive attitude about environment among the student.

5. To develop proper skill required for the fulfillment of the aims of environmental education and educational evaluations.
6. To help the students in realizing the importance of taking proper steps to solve environmental problems.
7. To develop required curiosity among the students for the realization of environmental problems so that they would be inspired to work for the solution of such problems.
8. To create appropriate situations for the students to participate in the process of decision making about environment.
9. To develop the capability of using skills to fulfill the required aims, to realize and solve environmental problems through social, political, cultural and educational processes.
10. To enlighten the people on the physical components of the environment.
11. To inform them about their dependence on the environmental resources.
12. To enlighten them about the changes in the environment in the last decade and the consequences of their present actions.
13. To alert them about the consequences of human actions on the environment both on man himself and other forms of life.
14. To create concern for environmental quality and conservation and to foster understanding of man's relationship and interactions with the ecosphere.
15. To develop personal, community and national sanitation and conservation ethics.
16. To awaken appreciation of the aesthetic quality of nature in order to encourage its uses for recreation.

NEED AND SIGNIFICANCE OF ENVIRONMENTAL EDUCATION FOR SUSTAINABLE DEVELOPMENT

There are various ideas about the environment, education, and sustainable development. These ideas affect the definitions and methods used by educators and environmental education (Sauve et al., 1996). Education is a key component in fostering a culture of climate action because it equips individuals with the information, values, and beliefs necessary to make a difference in the face of the climate crisis. Environmental education encourages both individual and systemic transformation toward more sustainable lifestyles by equipping students with the necessary abilities, information, behaviors, and attitudes to deal with a rapidly changing environment and climate (Ogando et al., 2022). Therefore, sustainable development and environmental education go hand in hand. Different people may interpret this connection in various ways. The name environmental education "for" sustainable development has been proposed to reflect the view that sustainable development should be the ultimate objective of environmental

education.

Environmental education teaches us about both the built environment and the natural environment, connecting us to the world around us. Through Environmental education, we may all become more aware of the problems affecting the environment and the steps we can take to protect and preserve it. Children can bring about big changes. Their capacity to endure climate dangers can be significantly increased by expanding access to vital services like water and sanitation, health care, and education. Therefore Environmental education plays a vital role in obtaining sustainable development goals.

ENVIRONMENTAL SUSTAINABILITY : The goal of environmental sustainability is to maintain natural resources while enhancing human welfare. When they guarantee that the demands of the people are addressed without the chance of compromising the needs of future generations, initiatives and programmes are said to be ecologically sustainable.

According to (Dunphy et al., 2000), environmental sustainability focuses on how businesses can produce successful economic results without endangering the environment in the short- or long-term. An ecologically sustainable firm, aims to incorporate all four sustainability pillars, and to accomplish this, each one must be given equal consideration.

(Nazish et al., 2021) pointed out the principles for Strategy of environmental sustainability as

- Principle of Conservation of Biodiversity and Energy resources
- Principle of Social needs: Ensuring that people in the present and the future have access to essential goods and services.
- Principle of Regenerative capacity: Preserve the harvest rate of renewable resources within the capacity of regeneration to prevent the depletion of natural resources.
- Principle of Recycling: In order to reduce waste, emissions, costs, and improve product efficiency, support reuse and recycling methods.

COMPONENTS OF ENVIRONMENTAL EDUCATION : The aim of environmental education is clearly to show the economic, social, political and ecological interdependence of the modern world, in which decisions and actions by different countries can have international repercussions. Environmental education should, in this regard, help to develop a sense of responsibility and solidarity among countries and regions as the foundation for a new international order which will guarantee the conservation and improvement of the environment. The main aim of environmental education at the grass root level is to succeed in making individuals and communities understand the complex nature of the natural and the built environments. Further, to acquire the knowledge, values, attitudes, and practical skills to participate in a responsible and effective way in anticipating and solving social problems, and in the

management of the quality of the environment. Therefore, necessary components for environmental education are:

- Participation
- Knowledge and awareness
- Attitude
- Skills and building
- Evaluation
- Participation

LEVELS OF ENVIRONMENTAL EDUCATION : Reorienting education as a whole towards sustainability involves the various levels of formal, non-formal and informal education at all levels of society.

- **Formal Environmental Education :** Environmental education is increasingly a prominent part of primary, secondary and tertiary education in the world. The formal education sector plays a vital role in environmental education and awareness by exposing the younger generation to the information, issues, analyses and interpretations on environment and development. There has also been a major shift from schools to adult and community environmental education. (Fien 1999b).

Rather than establishing a new subject, most countries have opted to infuse environmental education objectives and strategies into the existing curricula, while some other countries practice both options. In addition, the focus on practical learning in the real world in environmental education helps schools to address important general educational objectives related to values and to skills development (UNESCO-PROAP 1996).

- **Primary and Secondary Levels :** At primary level, the attempt is made to sensitize the child about environs. Emphasis should be mostly on building up awareness (75%), followed by real life situation (20%) and conservation (5%). Teaching strategy includes audio-visual and field visits. At the secondary level objectives must be real life experience, awareness and problem identification. The contents are supplemented with general science. Teaching, practical's and field visits are to be done. The emphasis must be on conservation, assimilation of knowledge, problem identification and action skills. Contents may be science-based and action oriented work. The diversity of approaches in primary and secondary education seen across the globe is based on each country's major and threatened resources, and issues of concern. For example, in the Maldives, environmental education and awareness programmes highlight issues of the marine environment emerging from the National Environment Action Plan of 1989 (IUCN 1998).

Objectives of environmental education at Primary and Secondary Levels include,

- To emphasize the relevance of science to daily life.
 - To develop a scientific attitude in student.
 - To create an environment conducive to greater reliance on the use of principles and practices of science.
 - To acquaint the students with various natural phenomena.
 - To develop an outlook which emphasizes the method employed in different disciplines of science.
 - To know and understand true aspects of the environment in general.
 - To know and understand the interaction between mammals, between human and their environment and interaction between the various elements and components of the environment.
 - Build understanding, awareness and sensitivity towards causes and efforts of the class that continuously take place in society the world around us.
 - To build and develop skills in thinking, reasoning, enquiring, evaluating and making decisions concerning human and the world around them.
 - Inculcate two attitudes in using the knowledge and skills towards solving problem and issues relating to individuals, society and the environment.
 - To build the values and attitudes towards the need and necessity to live together in harmony in the context of the heterogeneous society.
- **Focus of environmental education emphasized at primary and secondary levels**
- Population - growth, arises and problems of unplanned population.
 - Law - Land use, land reclamation and land and soil conservation.
 - Resources - resource uses, conservation, recycling.
 - Food and Nutrition - Food production, food adulteration and preservation, balance diet etc.
 - Conservation - Causes of wildlife, plant, soil, water and conservation of other non- renewable natural beauty
 - Pollution - Pollution of water, air and soil, noise pollution, pollution by insecticide and other chemicals and waste disposal
 - Health and Hygiene - Individual, family county and social health and hygiene, health hazards etc
 - Humans and Nature - Other compounds of atmosphere, environmental quality and future on earth.
- **Tertiary Level :** Tertiary level education has responded to the increasing demand for environmental managers and experts in the 1990s. At college level, maximum

emphasis should be on knowledge regarding sustainable development and conservation. The content must be college based on Science and Technology. Teaching practical's and action-oriented field work is to be done. At post graduate level, four major areas are recognized environmental engineering, conservation and management, environmental health, social ecology. Key trends have been observed across the region in relation to environmental education at tertiary level these include:

- Basic environmental concepts and elements added to existing courses at undergraduate and postgraduate levels, for all students irrespective of their courses;
- New environmental units or modules introduced into a large number of courses can increase the depth and detail of environmental study;
- New non-degree programmes and courses (at foundation, certificate or diploma levels) introduced by tertiary education institutions to cater to the demand for in-service training and upgrading of knowledge and understanding on environmental issues and practices;
- Greater emphasis on training the trainers, and in strengthening the tertiary education system and research capabilities;
- More research on environmental education policies and practices;
- A greater dialogue and information exchange between the users of environmental skills and talent, in government, private and NGO sectors etc., and the institutions of tertiary education, ensuring, education and training address prevailing practical needs; and
- Increasing emphasis placed on adult and community education, using both formal and non-formal methods to raise the overall environmental literacy levels.

CHALLENGES OF IMPARTING ENVIRONMENTAL EDUCATION : The main constraints faced by the teachers in integrating environmental education were time constraints and being overloaded with school work. (Rahman, et al. 2018). There are several challenges arose in implementing environmental education in schools, (Sherpa 2022). They are

- **Insufficient curriculum :** The current curriculum in India does not provide pupils with a sufficiently thorough and informative introduction to environmental issues. If educators want students to understand the deep link between people and their surroundings, they must do more than just teach students about the environment theoretically; they must also provide them with enough opportunity to explore the world on their own. The goal of environmental education is to motivate future generations to take concrete action to restore the deteriorated state of our planet.

- **Insufficient Time** : There is not nearly enough time for educators to educate their students about environmental issues and possible remedies. Because of scheduling constraints, environmental education classes at most schools and universities only meet once or twice weekly.
- **Insufficient Planning for Environmental activities** : Due to the heavy curriculum and the lack of money for environmental programmes and awareness, it is understandable that schools do not regularly organize environmentally beneficial activities. Students often participate in environmental service projects on special days such as World Environment Day or during National Service Learning Week. Students don't get the chance to learn about and act on environmental issues except on special days. Field trips, slogan writing, awareness rallies, debates on environmental issues and human acts, poster making competitions, slogan writing, and symposiums are all excellent ways to raise environmental consciousness, in addition to tree planting and community cleanup programmes.
- **Less weightage Compared to Other Academic Subjects** : Environmental Education as a subject or field has been shown to be of lower academic merit. Even as a vocation or profession, environmentalists are regarded as having little worth or significance. We rarely see schools teaching Environmental Education as a daily topic like mathematics, English, or science. Furthermore, few schools or universities offer Environmental Education as an honors course or as a career option. This scenario of educational provisions in terms of subjects demonstrates that there is a great deal of awareness that needs to be raised not only in learners but also in intellectuals and the nation as a whole to understand the importance of the environment and the education that needs to be provided to future generations.
- **Overloaded curriculum** : The current curriculum places an undue amount of stress on not just students but also their educators and their families. Therefore, it is vital to strike a balance between stressing several areas in the curriculum and not overemphasizing any one of them. This is especially true when it comes to Environmental Education.
- **Lack of Awareness** : Lack of environmental awareness in students is one of the major challenge. In-service educators should also be provided with timely access to relevant information and training on environmental issues. An ecologically conscious and inspiring educator is the only one who can develop a sense of environmental responsibility in their students.

CONCLUSION : Sustainable development encompasses a wide range of ideas with the goal of raising standards of living for people everywhere. Environmental education for

sustainable development has become a crucial strategy to help students and all other stakeholders protect, preserve, and conserve the natural environment at all scales to the best of our abilities. This action has been taken to awaken and save our eco-unfriendly and eco-harmful civilization as well as to conserve this environment. Environmental Education has been introduced at undergraduate level by University Grant Commission as a compulsory subject for all the students of Arts, Science and Commerce and at school level by National Council of Educational research and Training and State Education Councils of almost all the states of India. Curriculum has also been designed at all levels to integrate environmental issues. But despite of these taken initiatives by the country and its education system there are many loopholes that are hindering in equipping the nation in treating environment with care, considering its sustainability. So, it becomes necessary for all of us to diagnose all the hindrances or obstacles that are actually restricting education in particular to address environmental issues.

Environmental education programmes that are effective in addressing educational reform and sustainable development often incorporate a wide range of strategies. Sustainable development benefited greatly from the implementation of environmental education initiatives, which led to improvements in areas such as adolescent and adult comprehension of environmental issues and engagement in the management of natural and social resource allocation.

Environmental education is a dynamic process. The priority of such education is to develop cautious mind of people about their total surrounding. Its main task is to impart proper knowledge and training to solve various problems of our environment systematically. In order to enable people to enjoy good health and a high quality of life, it is vital to prevent harmful effects to human health or damage to the environment caused by pollution of air, water and soil, noise, vibration, noxious smells etc. Environmental Education is a methodology in which people pick up familiarity with their surroundings and secure learning, abilities, values, experiences, and passion, all of which will empower them to act separately and aggregately and to take care of present and future environmental issues. It is the study of relationship and interactions between natural and human systems. Environmental education should constitute a comprehensive lifelong education, one responsive to changes in a rapidly changing world. It should prepare the individual for life through an understanding of the major problems of the contemporary world, and the provision of skills and attributes needed to play a productive role towards improving life and protecting the environment with due regard given to ethical values.

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