

A Systematic Review of Environmental Education Awareness

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Abstract—Being aware of one's surroundings is what the phrase "environmental awareness" implies. The phenomenon known as "environmental awareness" aids in the development of social groups' and individuals' sensitivity to and understanding of the environment as a whole as well as the issues that surround it. The precedents of environmental awareness are presented in this paper. To actually implement environmental protection behavior, environmental knowledge is crucial. It displays the consciousness level. An extensive analysis of related literature, including books, theses, journal articles, publications, and other pertinent sources, is called a review of related literature. It keeps the investigator informed about recent developments in his field of study. It maintains the researcher informed about recent developments in his field of study. It basically gives a summary of what has been researched and what has not, highlighting the knowledge gaps that require more investigation.

I. INTRODUCTION

The government, science, and society as a whole have all demonstrated a greater understanding of environmental issues in recent times. The satisfaction of the desire for resources and food is a component of human-environment interaction. It extends to the way that people interact with and impact the environment. According to Hanisch et al. (2014), maintaining the environment and safeguarding living things depend heavily on this kind of environmental awareness. Furthermore, when put into practice, environmental knowledge could have a stronger impact. According to Agarwal (2018), environmental sustainability can be attained when all facets of society including scientists, engineers, and other communities exercise environmental consciousness in an integrated way. Practicing good environmental awareness means paying attention to environmental issues and the actions that follow in order to create a sustainable

environment. Carmi (2013) defines environmental awareness as conscious awareness towards the environment, such as pro-environmental behavior. Environmental awareness, according to Enger and Smith (2013), is the science that enables people to acquire the values, know-how, and skills important to live responsibly. People who are environmentally conscious grow to be responsible citizens who care about the environment. pro-environmental behavior and individual environmental awareness are correlated. A person who has high environmental values typically understands how their actions impact the environment. This serves to support the claim that pro-environmental consciousness is a result of environmental awareness. A person who is well-informed about their surroundings will be more conscious of environmental problems that are caused by humans, which will inspire them to lead sustainable lives. Their attitude and opinions will be formed by their understanding of the surroundings, which will ultimately lead to the anticipated understanding.

II. LITERATURE REVIEW

The young people of today will lead the world in the future, thus it is our duty as their mentors to give them access to education so they can make informed decisions about the environment. According to many, one of the most crucial elements in mitigating environmental issues is environmental education (Ozden, 2008).

Agboola Omowunmi Sola, (2014) investigates how Natural resources and the standard of living are under stress due to the quick speed of development and urbanization, and human activity is contributing to their depletion. The environment is made up of both natural and artificial elements. Human activity is responsible for pollution, deforestation, soil erosion,

soil degradation, desertification, and climate change. The necessity of environmental education for human survival has drawn attention to it. In order to reduce pollution of the air, water, and soil, public participation in education regarding environmental initiatives and efforts is necessary. Although reducing the impact of human activities can be achieved through programs, measuring ecological consciousness can be challenging. Raising awareness can be aided by media initiatives, public engagement and civic education. This essay examines the definition, goals, and methods of environmental education before offering suggestions for raising public awareness.

Norris I. Erhabor and Juliet U. Donna (2016), in a study conducted in Nigeria, assessed the knowledge and attitudes of 130 full-time environmental education students. The results showed a high level of knowledge and positive attitudes towards the environment, but there was a negative relationship between knowledge and attitudes. The study recommends more efforts to promote environmental education at all levels including government, non-governmental organizations and international bodies to ensure effective implementation and sustainable development goals.

Poonam Sindhu and Suman Singh (2014) emphasize the importance of environmental education for human survival. They argue that current issues stem from ignorance and ongoing exploitation, and can be addressed by increasing awareness of the positive and negative impacts of human activities. They call for informed citizens who are aware of their surroundings and willing to take necessary social, economic, and political steps to create a better environment. The study aims to investigate students' awareness of environmental education and its role in addressing environmental issues.

Prashant Kumar Astalin (2011) The purpose of this study was to determine the level of environmental consciousness among upper secondary pupils as well as the educational elements that affect it. Using the cluster random sample technique, 608 students—280 males and 328 females—were chosen from a variety of boards. The investigator's "Environmental Awareness Questionnaire" was the tool used to gather the data. The data were analyzed using the F-test, t-ratio test, and post hoc test. The primary conclusions of this study indicate that there were similarities in the

environmental consciousness of the pupils in classes eleven and twelve. Students in the science stream showed a greater knowledge of the environment than those in the arts stream. Compared to UP board students, CBSE students had a greater awareness of the environment. Compared to the parent a group of high school or intermediate learners, the parent class of literate, graduate, postgraduate, and research students demonstrated a higher level of environmental awareness. Last but not least, male students were more conscious of the environment than female students.

Gujar (2018) A study on environmental science among secondary school students in Kota found no significant differences in environmental behavior, motivation, or creativity between gender, location, management style, school board type, or instruction medium. Female students exhibited more sustainable behavior than male pupils. The study also found no significant correlation between environmental behavior, motivation, environmental moral behavior, or creativity towards the environment, all of which were found to be unrelated.

Naikoo (2017) has published a study titled Teachers' Attitudes Towards Sustainable Development and Environmental Education: a Case Investigation of Secondary School Teachers in the Jammu and Kashmir State, India. A sample of 100 teachers from secondary schools was chosen from 30 schools for this study. The researcher slightly modified the elements of the comparable measures created by Dunlap, Van Liere, Mertig, & Jones in 2000 and Ernesto Lasso De Lavega in 2004 to create a five-point Likert-type Attitude Scale for this study. According to the report, most secondary school teachers in the Kupwara area have a favorable opinion on sustainable development and environmental education.

M.Sivamoorthy *et al.*, (2013) concentrated on teaching students about a variety of environmental issues, including pollution causes, energy conservation, soil, woodlands, and air conservation, human health, wildlife, and animal husbandry. Additionally, it discusses the environmental behaviors of college students, such as how they use and discard plastics, how they use restrooms, how they use plastics to grow seedlings, how they gather rainwater, and how they participate in environmental initiatives. The target audience was college students because environmental education is part of their curriculum. They might apply what they have discovered. Those working in related

fields or facing environmental cases will benefit from this study. The inquiry is quantitative in character. The findings indicate that while all respondents, male and female alike, have a high level of knowledge; there is a gender gap in practice, with males performing more than women. This report also offers some recommendations for safeguarding India's environment.

Another study was done by Soni kumari *et al.*, (2012) on the knowledge, attitudes, and practices of environmental education in Bareilly city among junior and advanced secondary school teachers. It is mostly composed of learning about environmental knowledge, instructional restrictions and attitude. Teachers from thirty schools in Bareilly City completed questionnaires that were used to collect quantitative data. The results of the survey demonstrated that educators had favorable opinions on environmental issues and about environmental education. Teachers' primary information sources were determined to be the media and their own reading. It was found that the main barriers to environmental education were a hard workload, a lack of resources for teachers, a lack of training, and time constraints. Key words: Bareilly City, teacher awareness, and environmental education.

Anbalagan G. & Viswanathan, S. (2015) studied "A study on environmental consciousness along with associated practices Among students in high schools in Madurai district, Tamil Nadu" was conducted in 2015 by Anbalagan, G. and Viswanathan, S. The purpose of the study was to evaluate students' potential for environmental awareness based on a variety of environmental issues and to recommend proactive roles for the National Green Corps, Eco Clubs, Green Clubs, and other creative school initiatives in fostering environmental awareness and long-term social action to address environmental issues. The main source of data for the study is a field-level survey that students completed using a pre-made questionnaire about various environmental challenges. A randomly chosen group of survey data served as the foundation for the field study. The data in this study were analyzed using common statistical methods like Mean (X), Standard Deviation, and t-test. When compared to pupils who are male, those who are female make a greater contribution to the awareness of environmental issues. The study highlights how young pupils' daily environmental activities and understanding make them

socially responsible for protecting biodiversity and greening the environment.

Subashini, H. (2014), Examination of Higher Secondary Students' Environmental Awareness to investigate students' level of knowledge on environmental education, as well as societal issues associated with pollution in the environment. to highlight the key components of environmental education. This study uses a descriptive research design and is a form of quantitative research. There are 180 students in the final study's sample. For this study, the researcher used the "Environmental Awareness Questionnaire" tool. His study's conclusions showed that students in the scientific, arts, and vocational groups had significantly different mean scores when it came to environmental awareness. There is no discernible variation in the average ratings for environmental awareness between students in the arts and vocational groups, as well as between students based on gender.

III. ENVIRONMENTAL EDUCATION AND AWARENESS IN INDIA

Environmental Education for Sustainable Development (EESD) in India is deeply rooted in its ancient traditions, emphasizing a balanced coexistence with nature. A significant conference on Environmental Education held in Ahmedabad in 2004 brought together global experts to discuss this vision. India's environmental policies and programs prioritize EESD.

To address environmental issues, it is essential to briefly outline some of the major problems India currently faces, such as land and forest degradation, pollution of air, water, and soil, and challenges in biodiversity conservation and solid waste management (Pandey 2000). Despite the absence of formal environmental education in the Indian school curriculum, policymakers recognize the importance of educating students from an early age to foster behavioral change and tackle environmental challenges. However, obstacles like rigid course structures, traditional teaching methods, limited time, and overloaded curricula hinder the integration of environmental education into the formal system. Additionally, schools often lack the necessary funding to hire qualified staff or maintain adequate infrastructure (Alexander 2012).

Nonetheless, the Indian government has revised its national education policy, collaborating with NGOs and other organizations to introduce environmental education into the curriculum. This effort addresses not only environmental issues but also socio-economic problems, aiming to raise awareness and inspire students—the future leaders of India—to contribute to sustainable development. India is also partnering with international organizations such as UNESCO, UNEP, the Ministry of Environment and Forests (MoEF), and the Centre for Environmental Education (CEE) to enhance the implementation of environmental education programs.

Since 1991, environmental education has been a mandatory subject in Indian schools, reflecting its importance (Posch 1993). Further efforts have been made by various councils and educational departments to integrate environmental concepts into other subjects (Siddiqui and Khan 2015). India's planning processes, including the Five-Year Plans, emphasize sustainable and inclusive growth. Through these initiatives, India has adopted a modern approach to EESD, aiming to bring about attitudinal and behavioral changes by increasing students' awareness and conceptual understanding. Practical strategies like field trips to natural areas allow students to directly experience and learn about the environment, fostering a deeper interest in ecology and environmental issues. These hands-on experiences, such as visits to ecological parks to study pollution, are more impactful than traditional classroom lectures, leaving lasting impressions that motivate students to further explore environmental science (Magntorn and Helld'en 2007).

IV. CHALLENGES AND OPPORTUNITIES IN ENVIRONMENTAL EDUCATION

Despite our success in establishing the framework for implementing Environmental Education (EE), there remains a gap in its effective execution. As a result, much of society remains unaware of the essential roles ecosystems play, the detrimental effects of environmental pollution, and the impacts of climate change. Several factors contribute to this gap, including a lack of attitude, commitment, and skills related to environmental management, insufficient environmental training programs, inadequate curriculum, and a lack of preparedness to address immediate environmental issues. Other challenges include a lack of organizational support, limited job

opportunities in the environmental sector, the rapid pace of development projects, and the absence of measurable outcomes. These issues hinder the spread of awareness and the cultivation of responsible citizens capable of protecting the environment.

Moreover, formulating new EE policies and reviewing existing ones from an environmental conservation perspective, along with making political decisions and taking actions, are crucial aspects of EE. The lack of concern and commitment to the environment, as well as the absence of practical skills to address environmental problems due to ineffective environmental courses, are key reasons why the impact of EE is not yet visible on the ground.

V. CONCLUSION

Environmental education plays a pivotal role in fostering awareness, promoting sustainable behaviors, and addressing the pressing environmental challenges we face today. Through a systematic review, this paper has highlighted the importance of environmental awareness in shaping individuals' attitudes and actions towards the environment. While India has made significant strides in integrating Environmental Education for Sustainable Development (EESD) into its policies and educational frameworks, there remain several obstacles to its effective implementation. Gaps in curriculum, inadequate training, limited resources, and a lack of measurable outcomes all hinder the widespread impact of environmental education on society.

Nevertheless, opportunities for improvement exist. Efforts to collaborate with international organizations, implement field-based learning, and introduce innovative technologies like VR and AI in environmental education have shown promise in enhancing environmental consciousness, particularly among younger generations. By addressing the existing challenges, promoting active engagement, and fostering a deeper understanding of environmental issues, environmental education has the potential to cultivate a generation of responsible citizens capable of contributing to a more sustainable future. Ultimately, achieving this goal will require continued commitment from governments, educators, and communities to prioritize environmental education and ensure its effectiveness in shaping the behaviors and values of future generations.

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