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ENVIRONMENTAL EDUCATION IN SCHOOLS: AN OVERVIEW OF THE INDIAN CONTEXT

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ABSTRACT

Environmental Education (EE) is increasingly being promoted in structured educational environments in India to prepare children for a sustainable future. This paper examines the current status of EE in Indian schools, emphasizing its practices, challenges, and potential. The paper is an interpretation of the author's evaluation of EE programs and is a section of an extensive study aimed at developing EE intervention programs for primary school children in India. The evaluation process involved the conduction of interviews with key stakeholders, including EE program heads, experts, and resource persons as well as the evaluation of NCERT books and recommended pedagogical practices. Analysis revealed that EE courses and content, are primarily theoretical and tend to promote a utilitarian understanding of nature. While these programmes may offer innovative projects, ideas, and practices, they do not necessarily address the shift in thinking and values required to evolve into responsible earth citizens. This makes it challenging for children to think ethically about natural ecosystems and develop strong connectedness with nature. The author thus argues for a shift in EE paradigm, utilising the profound insights of ancient Indian eco-philosophy presented in Indian Knowledge System. EE can be made effective and meaningful for young children by implementing intervention programs based on experiential activities. The findings have implications for educators, resource persons and policymakers. Insights obtained would help in gaining a better understanding of the strengths and limitations of the program as well as giving directions for future.

Keywords: Environmental Education, School, Indian, Evaluation

1. INTRODUCTION

The consequences of environmental degradation are being felt severely by the global community at present. The ecological crisis, which includes environmental degradation, climate change, global warming, and resource depletion, has cast the ecosystem out of equilibrium and risks the survival of both humans and other species.

Despite our best efforts (Elegbede et al. (2020), Dormido et al. (2023)), addressing the current ecological crisis continues to be a difficult and challenging task. While global leaders assemble in Bonn, Germany for COP27 of the United

Nations Framework Convention on Climate Change, a crisis is escalating in India. Unpredictable precipitation, fatal flooding, toxic contaminants, and polluted rivers may appear to be dire forecasts of what will occur if the international community does not act swiftly to combat climate change.

According to the emerging viewpoints, the current environmental situation cannot be solely attributed to the technical issues, but emerges from ecologically insensitive and maladaptive human conduct (Maloney et al. (1975)). Due to a limited understanding of one's ecological role, man has negatively affected their relationship with nature. It is this disturbed man-nature relationship which has become the root cause of the present crisis. Unless changes are made to the dominant anthropocentric consciousness, it will be impossible to overcome the ecological crisis. Therefore, there is a need to introduce change in our current value system.

Education is widely regarded as a formidable tool for effectively addressing this greatest challenge of our time. Environmental education (EE) aims to utilise the potential of education to support the cause of environmental protection. Using systematic approach, it primarily focuses on imparting knowledge about the natural world as well as how to manage human behaviour and ecological systems for sustainable living. Environmental education includes all methods, techniques, and programmes that cultivate and encourage ecologically linked attitudes, values, awareness, knowledge, and expertise that facilitate informed decisions and actions when addressing environment and resource sustainability concerns (Wheaton, Kannan, & Ardoin, 2018).

Through encouraging the growth of pro-environmental attitudes, beliefs, knowledge, dispositions, and abilities, environmental education encourages participation in improving the long-term sustainability of human-nature interactions (Mastrángelo et al. (2019)). Thus, EE is crucial for advancing the environmental movement and fostering healthier, more engaged communities.

Shaping an adult's perception about nature presents certain difficulties and is essentially impossible in a short period of time. This critical work should thus, involve children, as they are less impacted by anthropocentric and technocratic attitudes. Early stages of human development are especially conducive to the formation of values and ethics. During this time, the inherent sense of awe, curiosity, and inclination of children to explore and comprehend the world around them can be effectively utilised to inculcate essential sustainable living knowledge and principles. Environmental Education can help establish an eco-centric consciousness by promoting an in-depth understanding of the natural world and its connection to humans (Alam (2022); Monroe et al. (2019)).

2. FEATURES OF ENVIRONMENTAL EDUCATION IN INDIA

The Government of India has exhibited a strong inclination to safeguarding the environment. At all levels of education, including primary, secondary, and higher education, environmental education courses are available to help students become more aware of environmental issues and realize the need to actively engage with the cause of nature protection.

India's first attempt at incorporating environment into education in its education system dates back to 1937, when Mahatma Gandhi initiated a program known as "Nai Taleem". The objective was to cultivate and nurture reflective learners equipped with relevant knowledge who could actively participate in

improving society. This marked a significant milestone towards promoting awareness about ecology and the value of conscious, sustainable living.

However, the Kothari Commission (1964–1966), which suggested the inclusion of EE in the basic education curriculum, is credited with bringing it into the mainstream Indian educational system. An additional impetus was provided by the formation of the Centre for Environmental Education in 1984. The Supreme Court rulings in 1991 and 2003 catalysed the creation of policies, as evident in the subsequent revisions of the National Curriculum Framework (NCERT, 2005). The intervention of the Supreme Court has undeniably promoted the cause of environmental education (EE) in India by introducing the National Curriculum Framework. This was a significant measure in integrating EE into schools, with a particular focus on linking knowledge with real-life situations.

The National Council of Research and Training (NCERT), located in New Delhi, is involved in the task of educating the younger generation to become responsible caretakers of the Earth. In accordance with the 2003 Indian Supreme Court decision, the NCERT was directed to develop a standardized curriculum for environmental education (EE) that would be applicable nationwide. The visualization was based on a common foundation that included various components related to the students' natural and social environment. Within the framework of environmental protection, there was a strong emphasis on promoting national identity and fostering a scientific mindset. The concepts were evident in the comprehensive curriculum guidelines and exemplary syllabi for classes I to X published by NCERT. The approach firmly advocated the use of creative strategies that integrate outdoor experiences.

Environmental education (EE) is now an essential component of school curricula nationwide. In schools, the focus is on imparting knowledge, attitudes, and abilities that enable students to make significant contributions towards achieving the goals of sustainable development.

For environmental studies in primary school, the National Council of Educational Research and Training (NCERT) has recommended use of integrated textbooks. Environmental concepts are incorporated into the fields of mathematical and language science in certain contexts, however while in others, Environmental Studies (EVS) has been divided into distinct categories of 'science' and 'society', resulting in the recommendation of separate textbooks and workbooks for each. The curriculum integrates language and mathematics instruction into a child's immediate environment. A wide range of EE-related topics are presented in classes I-II along with instruction on the 'Art of Healthy and Productive Living' (AHPL). The main objective is to cultivate knowledge and appreciation of many facets of the environment, recognizing it as a crucial source of resources emphasizing the importance of managing the environment responsibly.

In grades III-V, distinct textbooks have been allocated for environmental studies. Environmental concepts hold a significant place in the curricula of scientific and social sciences. Notably, science and technology have been the primary disciplines charged with incorporating environmental concepts into upper primary school curricula.

In 2005, the National Curriculum Framework (NCF) introduced Environmental Education (EE) for grades three through five. The curriculum included Environmental Studies as an independent field of study, using a textbook titled "Environmental Studies". In the third and fourth grade levels, the book "Looking Around" portrays the environment by focusing on the learner's immediate surroundings. It introduces students to both natural and man-made elements of the

environment, and highlights the anthropogenic influence on the natural world. This course is designed to facilitate students' acquisition of knowledge about the diverse categories of plants and animals, and their importance in sustaining human life.

The majority of these lessons emphasise the value of nature in relation to its fundamental contribution to the existence of humans. Further, the lessons analyse the life stories of rural residents dedicated to environmental stewardship in order to emphasize the value of caring for the environment and preserving it. Additionally, the appreciation of indigenous knowledge regarding the environment is observed via endeavours that involve the identification of significant trees and water bodies in the neighbourhood.

A similar emphasis and extensive coverage of ecological concerns is featured in the books used for class V. Here, students are encouraged to comprehend and recognize the interconnectedness between birds, other creatures, and humans. They are introduced to the concepts of growth, pollution, and degradation through references to trees, water, mountains, and other natural elements.

Even though the current framework reflects significant concerns about making children eco-sensitive through activities and project-based studies, little is accomplished in practice. Efforts have indeed been made towards making EE more accessible in schools, but these efforts have been few and far between (Sarabhai & K. B. (2009)). As observed, teacher education programs prepare teachers to support the current educational system by providing information (Pande, 2001).

The National Education Policy (NEP 2020) places emphasis on sustainable development goals that have positive environmental impacts. In addition, it highlights the dissemination of indigenous knowledge, which is crucial for addressing environmental issues. NEP 2020 prioritizes sustainable development goals that have positive environmental impacts. There is also an emphasis on the diffusion of indigenous knowledge, a key element of finding solutions to environmental problems. In the National Education Policy 2020 of India, a comprehensive approach is taken to address prevalent concerns pertaining to the learning environment, along with plans to ensure its optimal condition and efficiency. It is distressing, however, to observe that the Indian educational system fails to recognise the pressing necessity to prioritize environmental education (Kumari (2021)).

Despite educational institutions' best efforts to impart knowledge on conservation and environmental stewardship, it is unclear how much of that knowledge is internalized. The degree to which awareness enters into the consciousness of young children too remains doubtful. Upon doing a comprehensive analysis and conducting extensive focus- group interactions with a diverse group of students, it became evident that a significant portion of their attitudes and behaviour is characterised as lacking empathy and displaying a distressing disregard for nature. Despite the significant emphasis on environmental education (EE) in the educational institutions, the students exhibited very little interest towards engaging in conservation efforts.

Simply put, children's knowledge fails to manifest itself in noticeable positive interactions with their natural surroundings. The prevailing perspective among most students on environmental and sustainability issues is primarily utilitarian. Rather than directing their attention towards the environment itself, their primary concern lies in the adverse consequences of environmental degradation and the loss of Earth's resources. It is possible that EE courses and content, which are primarily theoretical, promote a utilitarian understanding of nature, which makes it challenging to think ethically about natural ecosystems.

Experts in higher education have identified the shortcomings of ecological education's pedagogical techniques too. Most educators limit ecological education to surface-level practises that inform students about emergent issues in ecology and environmental protection. As a result, an active engagement with the ecological realm is missing. Despite training provided to all school teachers, less than half of them actually implement environmental education (EE) in their classrooms (Iyengar & Kwauk, 2021). Further, EE is primarily focused on action-based improvements that only address symptoms of environmental degradation, lacking an in -depth understanding of sustainability and environmental deterioration.

3. GAPS IN CURRENT EE PROGRAMS

The shortcomings of environmental education in India have unequivocally demonstrated that the mere dissemination of knowledge regarding environmental issues is insufficient. Empirical evidence further substantiates the claim that only addressing knowledge is inadequate in generating behavioural changes (Bradley et al. (1999); Manoli, Johnson et al., 2007). Research conducted over the past three decades (Orr, 2004) suggests that awareness of environmental issues has a limited effect on ecological behaviour. It turns out that awareness is an essential but secondary variable whose substantial impact is entirely mediated by emotions. Therefore, environmental behaviour can only be shaped by environmental knowledge that evokes environmental emotions (Carmi et al. (2015)).

The emotional bond between people and nature had a crucial role in influencing their inclination to interact with natural environments (Hinds & P. (2008)). Current EE has failed to help young learners internalise "nature." Nature is something "out there" in the existing EE discourse. If one's notion of self incorporates nature, any damage to nature is felt as harm to oneself (Roszak et al. (1995)). This sense of belonging may potentially function as a prerequisite for the formation of an affective bond with nature, thus contributing to environmental protection. For positive environmentalism, we need to cultivate a new level of consciousness, associated with the principles of deep ecology among students (Miller ,1996) that focuses on understanding the interconnectedness of all life forms and the complexity of the global ecosystem.

The effective integration of environmental education in our country, nevertheless, faces significant obstacles as a result of the substantial influence that Euro-American scientific perspectives have had on our comprehension of the environment.

It is clear that to make progress, we must acknowledge and confront the challenges presented by these limitations. Achieving this task within the limitations imposed by the current framework would provide a considerable challenge. Therefore, it is necessary for us to transition towards a new paradigm.

4. IMPLICATIONS AND SUGGESTIONS

The current educational framework, established during the colonial era, was founded upon the scientific knowledge system that emerged and progressed within Western industrialised societies. Consequently, the influence of Western values, including the primacy of reason, individualism, and hyper-consumerism, alongside various cultural perspectives that alienate people from their environment (Bowers, 2006), has manifested in the Indian educational landscape and has permeated the collective mindset as well.

In order to identify the values essential for enhancing the connection between human and nature, it is imperative to explore the Indian philosophical tradition. This tradition emphasises a unity between the self and spiritual reality, as well as the idea of a 'relational self' (Misra et al., 2004), which offers promising avenues for redefining the dynamics of the relationship between humans and the natural world.

Utilising the profound insights of ancient Indian eco-philosophy, psychologists can design effective interventions for enhancing environmentally significant behaviour. EE can be made effective and meaningful for young children by implementing intervention programs aimed at:

- Offering opportunities for close and rich nature interactions for strong nature -connectedness
- Creating experiential educational tasks to cultivate empathy and compassion towards natural elements
- Integrating insights derived from eco-spiritual frameworks acting within the cultural milieu.
- Incorporating locale-specific content in EE relevant to the current value system in society.

5. CONCLUSION

It is imperative to acknowledge that India has implemented several initiatives, including the mandatory integration of environmental education at all levels of education. While these programmes may offer innovative projects, ideas, and practices, they do not necessarily address the shift in thinking and values required to evolve into responsible earth citizens. Due to their inability to perceive environmental challenges as personal issues, students' attitudes do not change towards environmental challenges. Hence, the environmental education curriculum needs to be updated to better address current ecological concerns and be more engaging and adaptable. For children to truly embody environmentalism, they must go beyond mere knowledge of environmental issues and concepts. Enabling them adopt environmental conservation as a lifestyle by creating strong connections with natural world are the only ways to accomplish this goal.

CONFLICT OF INTERESTS

None.

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