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Education for a Sustainable Future: National Education Policy 2020 and the Role of Schools in Promoting Environmental Awareness

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Abstract

Context & Objectives: Environmental literacy promotes environmental awareness by integrating knowledge of ecological systems with critical thinking, values, and actions, empowering individuals and communities to address environmental challenges responsibly and collaboratively. Hence, this study explores the integration of environmental literacy in school curricula as envisioned in the NEP 2020, contextualizing it within India's developmental and ecological challenges and promoting environmental awareness for a sustainable future. It aims to assess the policy's approach and potential implications for students to advance sustainable practices. **Methodology:** The study utilizes a thematic analysis of diverse literature and policy documents to critically examine the NEP 2020's approach to environmental literacy in alignment with global educational frameworks to promote environmental awareness. **Key Findings:** The study found that NEP 2020 addresses existing gaps in environmental education by integrating sustainability into curricula, enhancing teacher training, and promoting experiential learning to foster comprehensive understanding and active participation. These measures aim to empower students with critical knowledge, responsible attitudes, and practical skills for sustainable living and global environmental stewardship. **Conclusion:** NEP 2020 is a comprehensive and ambitious policy that aligns with global education goals, particularly SDG4, aiming to enhance environmental literacy and promote sustainable development through education for sustainable development (ESD) and global citizenship education (GCED). NEP 2020 fosters environmental literacy by embedding sustainability across curricula, promoting experiential learning, encouraging green practices, preparing students to be proactive global citizens, and advancing a culture of sustainability. **Implications:** The study highlights schools' potential as centers of environmental education under NEP 2020, emphasizing sustainability integration, experiential learning, and community engagement to empower students as responsible environmental stewards.

Key words: NEP 2020, Sustainable Practices, Environmental Awareness, Environmental Literacy, School Education etc.

Introduction

Background of the Study

Education has long been recognized as a powerful tool for fostering sustainable development and environmental stewardship. In an era marked by escalating environmental challenges—ranging from climate change and biodiversity loss to resource scarcity and pollution—it is imperative to inculcate environmental awareness and literacy from an early age (Atta et al., 2024). Schools, as foundational institutions in shaping societal values, play a critical role in cultivating attitudes and behaviors conducive to sustainable living. Globally, integrating environmental education into curricula is increasingly seen as essential to equipping future generations with the knowledge, skills, and values necessary to address environmental crises effectively (Suralin, 2023).

In India, the National Education Policy (NEP) 2020 represents a transformative step in education reform, seeking to align the nation's educational goals with the 2030 Agenda for Sustainable Development (Kirmani et al., 2024). A pivotal aspect of this policy is its emphasis on environmental education at the school level. The NEP envisions an education system that nurtures environmentally conscious citizens by focusing on aspects like water conservation, hygiene, sanitation, and sustainable waste management (Saluja, 2024; Varadharaj, 2023). This focus is particularly significant in a diverse and rapidly developing nation like India, where environmental awareness can empower communities to tackle local and global sustainability challenges (Pradhan et al., 2023).

Statement of the Problem

Despite the growing recognition of environmental literacy as a cornerstone of sustainable development, there remains a gap in its systematic integration within the school curriculum in India (Saluja, 2024; Suralin, 2023). Previous education policies have often treated environmental education as a peripheral or extracurricular activity rather than embedding it into core subjects (Saluja, 2024). This lack of emphasis has contributed to low levels of environmental awareness among students, limiting their ability to understand and act on pressing ecological issues. The NEP 2020 proposes a paradigm shift by integrating environmental education directly into the curriculum (Suralin, 2023). However, the effectiveness of this approach, its feasibility, and its potential impact on fostering environmental awareness among students require critical evaluation (Hnatuyk et al., 2024).

Objectives of the Study

The primary objectives of this study are to:

- Analyze the approach outlined by NEP 2020 for promoting environmental awareness and literacy in schools.
- Assess the potential implications of integrating environmental education into the curriculum on students' knowledge, attitudes, and practices related to sustainability.

Rationale of the Study

This research is driven by the urgent need to understand how educational reforms can address environmental challenges in a systematic and impactful manner. By evaluating the NEP 2020's provisions for environmental literacy, this study aims to provide insights that can inform policy implementation and curriculum design. Furthermore, it seeks to contribute to the global discourse on education for sustainable development by highlighting India's unique approach and its potential lessons for other nations. The findings will be valuable for policymakers, educators, and stakeholders striving to align education systems with sustainability imperatives.

Research Methodology

This study conducts a review of the extant literature, including policy documents, academic articles, reports, and online resources, using a descriptive and analytical framework to explore how NEP 2020 addresses environmental literacy in schools to promote environmental awareness. Key documents critically analyzed include the National Education Policy 2020, environmental education guidelines and frameworks for undergraduate curricula, UNESCO's documents on education for sustainable development, global citizenship, and the Education 2030 framework. A thematic analysis is employed to identify and compare key themes and sub-themes related to environmental literacy as outlined in the NEP 2020 and complementary sources. This research methodology is crucial for understanding and promoting environmental literacy as it integrates diverse perspectives and international frameworks to analyze and enhance educational policies on environmental awareness.

Environmental Literacy Promoting Environmental Awareness

Environmental literacy serves as the cornerstone for fostering environmental awareness by empowering individuals with the knowledge and critical thinking skills necessary to understand complex ecological systems and the challenges they face. Unlike mere factual knowledge, environmental literacy integrates an understanding of interconnected systems—air, water, soil, and living organisms—with the human actions that impact them. It emphasizes the cause-and-effect relationships within ecosystems, enabling individuals to recognize the consequences of unsustainable practices such as deforestation, pollution, and overconsumption. By cultivating this comprehension, environmental literacy moves beyond rote memorization and encourages a systems-based perspective, equipping individuals to discern the broader implications of environmental decisions (Alshehri, 2024). This deep understanding fosters a sense of responsibility and urgency, which is essential for proactive engagement.

Moreover, environmental literacy shapes values and attitudes, nurturing a sense of empathy for nature and a commitment to sustainability. It inspires behaviors aligned with ecological stewardship by linking knowledge to actionable strategies, such as conservation practices, advocacy, and innovation in sustainable technologies (Huang et al., 2024). For example, an environmentally literate person not only understands the science behind climate change but is also motivated to reduce their carbon footprint and advocate for policy reforms. Through education and community involvement, environmental literacy also fosters collaboration, encouraging collective problem-solving and action. Prior studies emphasize that by combining intellectual awareness with emotional investment, individuals and communities can become active participants in addressing pressing environmental challenges, thus promoting a culture of awareness, responsibility, and resilience (Hariram et al., 2023).

Existing Practices and Challenges

Environmental awareness faces several challenges due to the current practices in education. First, environmental topics are often treated as standalone subjects like Environmental Studies (EVS) or Environmental Science (ES), usually taught at the secondary level. This compartmentalization creates a perception among students and teachers that these subjects are less important or engaging compared to others. Additionally, environmental themes are rarely incorporated into other subjects, leading to a fragmented understanding of the issues rather than a holistic perspective (Saluja, 2024).

Second, teacher education programs lack sufficient focus on equipping educators to teach environmental topics effectively. Teachers often do not receive adequate training in both the content and teaching methods needed to address environmental issues in the classroom. Furthermore, there are limited opportunities for professional development or collaborative learning specifically aimed at improving environmental education, which hampers the ability of teachers to engage students meaningfully (Ajani, 2023).

Another significant challenge is the insufficient integration of hands-on, experiential learning opportunities for students (Saluja, 2024). Many students miss the chance to engage in practical projects related to environmental conservation, such as community-based initiatives or real-world problem-solving. This limits their ability to apply theoretical knowledge in meaningful ways and understand the real-life implications of environmental stewardship.

Lastly, the separation of environmental education from other disciplines and its limited scope within teacher training programs contribute to a superficial grasp of environmental challenges among students. Without a robust, interdisciplinary approach and the involvement of practical experiences, environmental education struggles to inspire deeper awareness, critical thinking, and proactive behavior in addressing pressing environmental issues (Alshehri, 2024).

Approach of Nep 2020 to Address Existing Challenges

Integration of Environmental Education across Subjects: The National Education Policy (NEP) 2020 emphasizes integrating environmental education into all levels of schooling and across various subjects, moving away from the isolated approach of treating it as a standalone subject (Suralin, 2023). This interdisciplinary integration aims to help students develop a comprehensive understanding of environmental issues, encouraging them to make connections between these challenges and other areas of learning such as science, social studies, and languages.

Revamping Teacher Education for Environmental Awareness: NEP 2020 seeks to revamp teacher education programs by incorporating training on environmental issues and pedagogical strategies for effective teaching. This includes equipping educators with relevant content knowledge, teaching methodologies, and tools to engage students. Additionally, NEP envisions continuous professional development opportunities for teachers to enhance their skills and understanding of environmental topics through workshops, collaborative learning, and resource-sharing platforms (Ajani, 2023; Saluja, 2024).

Promoting Experiential and Project-Based Learning: To address the lack of hands-on learning opportunities, NEP 2020 strongly advocates for experiential learning, including project-based activities focused on environmental conservation. Schools are encouraged to involve students in real-life problem-solving tasks, such as waste management, afforestation drives, and energy conservation projects (Saluja, 2024). These initiatives aim to foster critical thinking and a sense of responsibility toward the environment among students.

Fostering a Holistic and Value-Based Approach: The NEP 2020 promotes a holistic approach to environmental education by embedding environmental values and ethics into the curriculum. It encourages schools to create awareness through participatory activities such as eco-clubs, community outreach programs, and campaigns for sustainable practices (Kirmani et al., 2024). This focus on values aims to inspire long-term behavioral changes and cultivate a deeper connection between students and their environment.

Approach of NEP 2020 to Promote Environmental Awareness

The National Education Policy (NEP) 2020 positions schools as key players in promoting environmental awareness by encouraging them to integrate environmental education into all aspects of the curriculum. Schools are tasked with embedding sustainability concepts across subjects rather than treating them as isolated topics. By doing so, students can develop a nuanced understanding of environmental challenges and their relevance to daily life. NEP 2020 also emphasizes hands-on, experiential learning, encouraging schools to organize activities such as field trips, eco-clubs, and conservation projects that actively engage students with real-world environmental issues. These initiatives aim to create an immersive learning environment that fosters critical thinking, problem-solving, and an emotional connection to nature (Swaroop & Verma, 2022).

Additionally, NEP 2020 calls on schools to build partnerships with local communities and organizations to implement sustainable practices and initiatives. Schools are encouraged to act as role models by adopting green infrastructure, such as rainwater harvesting systems, waste segregation, and energy-efficient practices, thereby demonstrating a commitment to environmental stewardship (Kumar & Shobana, 2024). By creating opportunities for students to participate in these initiatives, schools not only educate them about sustainability but also empower them to take ownership of conservation efforts. This comprehensive approach ensures that environmental education becomes a shared responsibility and a core part of the school ethos, preparing students to be environmentally conscious citizens.

Implications of Integrating Environmental Literacy

Integrating environmental literacy into the curriculum as envisioned by the National Education Policy (NEP) 2020 has profound implications for students' knowledge, attitudes, and practices related to sustainability. By embedding environmental concepts across subjects, students are exposed to a wide range of issues such as climate change, biodiversity, and resource management in a holistic manner (Hariram et al., 2023; Suralin, 2023). This approach helps them develop a deeper understanding of the interconnectedness of ecological, social, and economic systems. As a result, students gain not only theoretical knowledge but also the ability to analyze environmental challenges critically.

The inclusion of environmental literacy also has a transformative impact on students' attitudes. Through experiential learning opportunities such as projects, fieldwork, and eco-club activities, students build an emotional connection with nature and develop empathy for the environment. This exposure fosters a sense of responsibility and the motivation to protect natural resources. Furthermore, the NEP's focus on value-based education ensures that students internalize principles of sustainability and equity, leading to a shift from passive awareness to active environmental advocacy (Hariram et al., 2023).

In terms of sustainable practices, integrating environmental literacy into education equips students with practical skills to contribute to conservation efforts.

Hands-on activities such as waste segregation, tree plantation drives, and water conservation projects enable students to apply what they learn in real-world contexts. These experiences instill habits of sustainable living, encouraging students to make eco-friendly choices in their daily lives, such as reducing waste, conserving energy, and supporting renewable resources (Suralin, 2023). As these behaviors become ingrained, they ripple outward, influencing families and communities.

The NEP 2020's emphasis on interdisciplinary and participatory learning further ensures that students graduate as informed and engaged citizens. By cultivating knowledge, shaping attitudes, and promoting sustainable practices, the integration of environmental literacy lays the foundation for a generation that not only understands the complexities of environmental issues but also actively works toward a sustainable future (Alshehri, 2024; Kumar & Shobana, 2024). This holistic approach aligns with the broader goals of global sustainability and addresses the urgent need for environmental stewardship in the face of contemporary challenges.

Conclusion and Implications

Conclusion

NEP 2020 is a comprehensive and ambitious policy that aligns with global education goals, particularly SDG4, aiming to enhance environmental literacy and promote sustainable development through education for sustainable development (ESD) and global citizenship education (GCED). Its implementation offers transformative opportunities to advance environmental literacy and awareness among students. By integrating sustainability into the curriculum and embedding it across subjects, the policy ensures that environmental education becomes an essential and engaging part of learning, fostering holistic understanding. The emphasis on experiential learning, coupled with strengthened teacher training and continuous professional development, equips educators and students alike with the tools to tackle real-world environmental challenges. Furthermore, the promotion of green practices and partnerships with communities and organizations creates avenues for collaborative problem-solving and practical action. These opportunities not only prepare students to become informed and proactive global citizens but also inspire a cultural shift toward sustainability, positioning schools as leaders in addressing critical environmental issues.

Research Implications

This study underscores the pivotal role schools can play in fostering environmental awareness among students through environmental literacy, as guided by the NEP 2020. It highlights how integrating sustainability concepts across subjects, experiential learning, and teacher training can transform schools into hubs of environmental education. The findings suggest that by adopting green practices and engaging with communities, schools can empower students to become responsible stewards of the environment. These insights are instrumental in shaping educational policies, curricular reforms, and pedagogical strategies aimed at addressing contemporary ecological challenges.

Limitations & Future Research Directions

While this study offers valuable insights, it is limited by its reliance on policy frameworks without extensive empirical validation from diverse educational contexts. Future research could explore longitudinal studies assessing the effectiveness of NEP 2020 initiatives in various school environments. Additionally, investigating the socio-cultural and economic barriers to implementing environmental literacy programs can provide a deeper understanding of the challenges faced by schools. Comparative studies examining the success of similar policies globally could further enhance the relevance and applicability of the findings.

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