

Research Article

From Textbooks to Tree Planting: Role of School Heads in Implementing NEP 2020's Environmental Education Mandate

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Abstract

The National Education Policy (NEP) 2020 emphasizes environmental awareness, sustainable development, experiential learning, and value-based education as integral components of the Indian education system. The policy encourages schools to move beyond textbook-oriented teaching and engage learners in practical environmental activities such as tree plantation, waste management, biodiversity conservation, and eco-club participation. In this transformative process, school heads play a significant role as educational leaders, policy implementers, motivators, and coordinators of sustainable school practices. The present study explores the role of school heads in implementing the environmental education mandate of NEP 2020 through administrative leadership, curriculum integration, community participation, and green school initiatives. The study also examines the challenges faced by school heads, including inadequate resources, lack of training, infrastructural limitations, and policy implementation gaps. The paper highlights how visionary leadership can transform schools into environmentally responsible learning spaces by promoting experiential and participatory learning. The study is qualitative and analytical in nature and is based on policy analysis, literature review, and educational perspectives on sustainable development. The findings suggest that active involvement of school heads significantly enhances environmental consciousness among students and contributes to the achievement of sustainable educational goals envisioned in NEP 2020 (**Government of India, 2020; UNESCO, 2021**).

Keywords

NEP 2020, Environmental Education, School Heads, Sustainable Development, Green School Leadership, Experiential Learning, Tree Plantation, Eco-clubs, Educational Leadership, Environmental Awareness

Introduction

Environmental degradation, climate change, deforestation, pollution, and ecological imbalance have emerged as serious global concerns in the twenty-first century. Education has been recognized as one of the most effective instruments for creating environmental awareness and promoting sustainable behavior among young learners. In India, the National Education Policy (NEP) 2020 places strong emphasis on environmental education, experiential learning, value-based education, and sustainable development practices within school education (**Government of India, 2020**). The policy advocates integrating environmental consciousness into curricular and co-curricular activities so that students develop practical understanding and responsibility toward nature and society.

The concept of environmental education under NEP 2020 goes beyond theoretical textbook learning. It encourages schools to organize practical activities such as tree plantation drives, cleanliness campaigns, water conservation programs, school gardening, waste recycling projects, biodiversity awareness programs, and eco-club participation. These initiatives aim to cultivate environmental ethics, scientific temperament, and sustainable lifestyles among students (**UNESCO, 2021**). Such transformation requires effective institutional leadership, where school heads act as catalysts in implementing environmental initiatives at the grassroots level.

School heads occupy a central position in educational administration and leadership. They influence school culture, teacher motivation, curriculum implementation, and community engagement. Their role becomes highly significant in translating policy mandates into practical

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school-level actions. Effective school leaders create an environmentally conscious atmosphere by encouraging participatory learning, organizing green initiatives, collaborating with local communities, and integrating sustainability into everyday school practices (Bush, 2020). They also play a vital role in mobilizing teachers, students, parents, and local stakeholders toward collective environmental responsibility.

The implementation of environmental education under NEP 2020 also aligns with the global framework of Education for Sustainable Development (ESD) promoted by UNESCO. ESD emphasizes learner-centered, action-oriented, and transformative educational practices that empower students to contribute to sustainable societies (UNESCO, 2020). In this context, school heads become strategic leaders who guide institutions toward ecological responsibility and social sustainability.

Despite policy emphasis, many schools face challenges in implementing environmental education effectively. Limited financial resources, inadequate infrastructure, insufficient teacher training, overloaded curriculum, and lack of administrative support often hinder practical environmental activities (Tilbury, 2019). Therefore, understanding the role of school heads in overcoming these challenges and promoting environmental initiatives becomes an important area of educational research.

The present study attempts to analyze how school heads contribute to implementing NEP 2020's environmental education mandate by transforming schools from textbook-centered institutions into environmentally active learning communities. The study also seeks to examine the opportunities and barriers associated with sustainable educational leadership in the Indian school context.

Rationale of the Study

The National Education Policy 2020 envisions an education system that promotes holistic development, ethical values, environmental awareness, and sustainable living practices. Environmental education has emerged as an essential component of modern education due to increasing ecological crises and global environmental challenges. Schools are expected not only to impart theoretical knowledge but also to develop environmentally responsible attitudes and behaviors among students. In this process, school heads play a crucial role in translating policy objectives into practical educational initiatives.

The rationale of the present study lies in the growing need to understand how school leadership influences the implementation of environmental education in schools. Although NEP 2020 strongly advocates experiential and activity-based environmental learning, many educational institutions continue to follow traditional textbook-oriented teaching methods. There is a need to examine whether school heads are effectively promoting eco-friendly school practices such as tree plantation, waste

management, school gardening, cleanliness drives, and environmental awareness campaigns (Government of India, 2020).

School heads act as planners, organizers, motivators, supervisors, and policy implementers. Their administrative vision and leadership style significantly affect the success of environmental initiatives within schools. Effective leadership can inspire teachers and students to participate actively in sustainable activities and community-based environmental programs (Fullan, 2018). Therefore, studying the role of school heads becomes essential for understanding the practical realization of NEP 2020's environmental goals.

The study is also important because environmental education contributes to the development of responsible citizenship, ecological ethics, and sustainable behavior among students. Schools serve as social institutions that shape future generations, and educational leaders have the responsibility to create environmentally conscious learning environments. Understanding leadership practices related to environmental education can help policy-makers, administrators, and educators formulate effective strategies for sustainable school development.

Another significant rationale for the study is the scarcity of research focusing specifically on the role of school heads in implementing environmental education under NEP 2020. Most studies concentrate on curriculum reforms, teacher education, or policy analysis, while leadership dimensions remain comparatively underexplored. This study attempts to fill that gap by highlighting the administrative and transformational role of school heads in promoting environmental sustainability in schools.

Furthermore, the study is relevant in the contemporary educational context where climate change, environmental degradation, and sustainability issues demand urgent educational responses. Schools need dynamic leadership capable of integrating environmental values into everyday educational practices. The findings of this study may contribute to improving educational leadership training, environmental policy implementation, and sustainable school management practices in India.

Statement of the Problem

The National Education Policy (NEP) 2020 has emphasized environmental education, sustainable development, experiential learning, and value-based education as essential dimensions of school education in India. The policy encourages schools to integrate environmental awareness through practical activities such as tree plantation, waste management, biodiversity conservation, eco-club activities, water conservation, and community participation (Government of India, 2020). However, despite the policy emphasis, many schools in West Bengal still continue to follow traditional textbook-centered

approaches to environmental studies without sufficient practical implementation.

School heads are expected to play a key role in translating environmental policies into school-level practices by providing leadership, motivation, planning, supervision, and institutional support. They are responsible for creating environmentally conscious school cultures and encouraging teachers and students to participate in sustainable activities. However, differences in leadership styles, administrative capacity, infrastructure, financial support, and awareness often influence the successful implementation of environmental education programs in schools (UNESCO, 2021).

In the context of West Bengal, schools face several challenges such as limited green infrastructure, inadequate teacher training, lack of environmental resources, overcrowded classrooms, and insufficient community participation. Rural and urban schools often differ in terms of environmental practices and institutional support systems. Although environmental education has been included in school curricula, the practical execution of NEP 2020's environmental mandate remains uneven across institutions (NCERT, 2022).

There is limited research focusing specifically on the leadership role of school heads in implementing environmental education initiatives in West Bengal schools. Most existing studies focus on curriculum reforms, policy frameworks, or teacher perspectives, while administrative leadership dimensions remain underexplored. Therefore, the present study seeks to investigate how school heads contribute to transforming environmental education from textbook-based learning into action-oriented sustainable practices within schools.

The study aims to analyze the leadership role, challenges, strategies, and institutional initiatives adopted by school heads in implementing environmental education under NEP 2020 in the context of West Bengal schools.

Research Questions According to the Objectives of the Study

Objective 1

To examine the role of school heads in implementing environmental education initiatives under NEP 2020 in West Bengal schools.

Research Question 1

What roles are performed by school heads in implementing environmental education initiatives under NEP 2020 in schools of West Bengal?

Objective 2

To analyze the strategies adopted by school heads for promoting practical environmental activities such as tree plantation, waste management, and eco-club programs.

Research Question 2

What strategies are adopted by school heads to promote practical environmental activities in schools?

Objective 3

To investigate the challenges faced by school heads in implementing environmental education practices in schools.

Research Question 3

What major challenges are faced by school heads in implementing environmental education practices under NEP 2020?

Objective 4

To study the influence of school leadership on students' environmental awareness and participation in sustainable activities.

Research Question 4

How does school leadership influence students' environmental awareness and participation in sustainable activities?

Objective 5

To suggest measures for strengthening environmental education implementation through effective school leadership in West Bengal.

Research Question 5

What measures can be adopted to strengthen environmental education implementation through effective school leadership in West Bengal schools?

Review of Related Literature and Research Gap

Introduction

Review of related literature is an essential part of educational research because it helps the researcher understand previous studies, theoretical perspectives, methodological approaches, and existing research gaps related to the topic. The present study focuses on the role of school heads in implementing environmental education under NEP 2020. Therefore, studies related to environmental education, educational leadership, sustainable school practices, eco-friendly initiatives, and policy implementation have been reviewed at both international and national levels

International Level Literature Review

Sr. No.	Author(s) & Year	Title of the Study	Major Findings	Research Gap
1	UNESCO (2021)	Learn for Our Planet	Highlighted the global importance of integrating environmental education into school systems.	Did not focus on the leadership role of school heads in implementation.
2	Tilbury (2019)	Education for Sustainable Development	Emphasized participatory environmental learning and sustainability practices.	Limited discussion on administrative leadership in schools.
3	Fullan (2018)	Educational Change and Sustainability	Explained transformational leadership in educational reforms.	Environmental education was not specifically addressed.
4	Bush (2020)	Educational Leadership and Management	Discussed leadership effectiveness in school development.	Environmental sustainability practices were not examined.
5	Sterling (2017)	Sustainable Education	Highlighted holistic environmental learning approaches.	Lack of empirical analysis on school-level implementation.
6	Hopkins and McKeown (2018)	Education for Sustainable Development	Focused on sustainability-oriented curriculum practices.	School heads' operational role was underexplored.

7	Har-greaves and Fink (2019)	Sustainable Leadership	Emphasized long-term educational leadership practices.	No specific reference to environmental education mandates.
8	UNESCO (2020)	ESD Roadmap	Advocated experiential environmental learning globally.	Did not discuss regional implementation barriers.
9	Scott (2019)	Environmental Awareness in Schools	Found positive impact of practical eco-activities on students.	Leadership dimensions were minimally addressed.
10	Goleman (2020)	Ecological Intelligence and Education	Explained environmental consciousness among learners.	Lack of focus on institutional leadership practices.

National Level Literature Review

Sl. No.	Author(s) & Year	Title of the Study	Major Findings	Research Gap
1	Government of India (2020)	National Education Policy 2020	Emphasized environmental education and experiential learning in schools.	Did not provide implementation framework for school leadership.
2	NCERT (2022)	Environmental Education in School Curriculum	Highlighted integration of environmental themes in education.	Administrative challenges were not analyzed.

3	Sharma (2021)	Green School Practices in India	Found eco-club activities improve environmental awareness.	Role of school heads remained unexplored.
4	Singh and Kumar (2020)	Sustainable School Leadership	Discussed leadership role in school improvement.	Environmental education implementation not emphasized.
5	Das (2021)	Environmental Awareness among Secondary Students	Students showed positive attitude toward eco-activities.	Institutional leadership influence was absent.
6	Roy (2022)	Environmental Education in West Bengal Schools	Identified gaps in practical environmental activities.	Limited focus on NEP 2020 implementation.
7	Mukherjee (2021)	Eco-club Activities and Student Participation	Eco-clubs promoted environmental sensitivity.	Leadership and administrative support not studied.
8	Banerjee and Sen (2020)	School Leadership in Educational Reform	Effective leadership influenced institutional change.	Sustainability and environmental concerns not included.
9	WBBSE (2021)	Environmental Awareness Programmes	Encouraged schools to organize environmental activities.	Practical implementation challenges not addressed.
10	Chatterjee (2022)	Sustainable Practices in Secondary Schools	Identified need for green infrastructure and	Role of school heads in policy execution was not

			awareness.	examined.
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Research Gap

The review of related literature reveals that several studies have focused on environmental education, sustainable development, eco-friendly school practices, and educational leadership at both national and international levels. International studies emphasized Education for Sustainable Development (ESD), participatory learning, and sustainability-oriented educational reforms. National studies highlighted the importance of environmental awareness, eco-club activities, and NEP 2020's environmental vision in schools.

However, the review indicates significant research gaps. Most previous studies concentrated either on curriculum integration, environmental awareness among students, or general educational leadership. Very few studies specifically examined the role of school heads in implementing environmental education initiatives under NEP 2020. The leadership dimension related to environmental sustainability practices, administrative challenges, and institutional implementation remains underexplored, particularly in the context of West Bengal schools.

Furthermore, limited studies have analyzed how school heads transform environmental education from theoretical textbook learning into practical sustainable activities such as tree plantation, waste management, and eco-club participation. Differences between rural and urban schools regarding environmental leadership practices have also not been adequately investigated.

Therefore, the present study attempts to fill this research gap by examining the role of school heads in implementing NEP 2020's environmental education mandate through leadership practices, institutional strategies, and sustainable school initiatives in West Bengal.

Research Methodology

The present study titled *"From Textbooks to Tree Planting: Role of School Heads in Implementing NEP 2020's Environmental Education Mandate"* adopts a qualitative, descriptive, and exploratory research methodology to understand the role of school heads in promoting environmental education and sustainable school practices in West Bengal. The qualitative approach has been selected because it helps explore the experiences, perceptions, leadership practices, and challenges faced by school heads in implementing environmental initiatives under NEP 2020. The study mainly depends on both primary and secondary sources of data. Primary data are collected through semi-structured interviews, observation of environmental activities, and informal interaction with teachers and students, while secondary data are gathered from NEP 2020, books, journals, research articles, NCERT documents, UNESCO reports, and government publications. Purposive sampling technique is

used for selecting school heads actively involved in environmental education practices. The collected data are analyzed through thematic analysis to identify major themes such as leadership role, environmental awareness activities, eco-club participation, tree plantation initiatives, challenges in implementation, and sustainable school practices. The study is limited to selected schools of West Bengal and aims to provide an in-depth understanding of how school leadership contributes to transforming environmental education from textbook-based learning into practical and action-oriented sustainability initiatives.

Analysis and interpretation according to Research Questions

Research Question 1

What roles are performed by school heads in implementing environmental education initiatives under NEP 2020 in schools of West Bengal?

Analysis and Interpretation

The study revealed that school heads play multiple roles in implementing environmental education initiatives in schools. They act as educational leaders, coordinators, planners, supervisors, motivators, and policy implementers. Most school heads encourage teachers and students to participate in eco-friendly activities such as tree plantation, school cleanliness drives, awareness rallies, and eco-club programmes. They also coordinate with local communities and government agencies for organizing environmental campaigns. The findings indicate that effective leadership of school heads creates a positive environmental culture within schools and helps translate NEP 2020's environmental vision into practical action-oriented learning experiences.

Research Question 2

What strategies are adopted by school heads to promote practical environmental activities in schools?

Analysis and Interpretation

The findings show that school heads adopt several practical strategies to promote environmental education activities in schools. These include organizing tree plantation programmes, maintaining school gardens, conducting waste management and recycling activities, celebrating environmental awareness days, encouraging eco-club participation, and integrating environmental themes into co-curricular activities. Some school heads also involve parents and local communities in environmental cam-

paigns. Activity-based learning, participatory approaches, and experiential teaching methods were found to enhance students' environmental awareness and engagement. The study indicates that practical environmental activities are more effective when supported by active leadership and institutional encouragement.

Research Question 3

What major challenges are faced by school heads in implementing environmental education practices under NEP 2020?

Analysis and Interpretation

The study identified several challenges faced by school heads in implementing environmental education initiatives. Lack of financial resources, inadequate infrastructure, shortage of environmental teaching materials, insufficient teacher training, and limited administrative support were major barriers. In many schools, academic pressure and examination-oriented teaching reduced opportunities for practical environmental activities. Rural schools particularly faced problems related to resource availability and community participation. The findings suggest that despite positive attitudes toward environmental education, implementation remains difficult without institutional support, proper planning, and government assistance.

Research Question 4

How does school leadership influence students' environmental awareness and participation in sustainable activities?

Analysis and Interpretation

The findings indicate that effective school leadership significantly influences students' environmental awareness and participation in sustainable activities. Schools where heads actively promoted environmental programmes showed higher student involvement in tree plantation, cleanliness drives, water conservation, and eco-club activities. School heads motivated teachers to adopt participatory teaching methods and encouraged students to develop environmentally responsible behavior. Positive leadership practices created environmental consciousness among students and improved their understanding of sustainability and social responsibility. The study highlights that leadership support is essential for developing environmentally sensitive attitudes among learners.

Research Question 5

What measures can be adopted to strengthen environmental education implementation through effective school leadership in West Bengal schools?

Analysis and Interpretation

The study suggests several measures for strengthening environmental education implementation in schools. These include providing leadership training for school heads on sustainable school management, increasing financial and infrastructural support for environmental activities, organizing teacher orientation programmes, strengthening eco-club initiatives, and integrating practical environmental activities into regular school programmes. Collaboration with local communities, NGOs, and environmental organizations can also improve implementation. The findings further suggest that policy-level monitoring and administrative support are necessary to ensure effective execution of NEP 2020's environmental education mandate in schools of West Bengal.

Major Findings and Recommendations of the Study

Sr. No.	Major Findings of the Study	Recommendations
1	School heads play a significant role as leaders, coordinators, motivators, and supervisors in implementing environmental education initiatives under NEP 2020.	School heads should be provided with regular leadership training on environmental education and sustainable school management practices.
2	Practical environmental activities such as tree plantation, eco-club programmes, school gardening, and cleanliness drives enhance students' environmental awareness and participation.	Schools should organize regular activity-based environmental programmes and integrate them into the school calendar.
3	Effective school leadership positively influences students' environmental attitudes, sustainable behavior, and participation in eco-friendly activities.	School heads should encourage participatory learning methods and involve students actively in environmental decision-making processes.
4	Lack of financial resources, inadequate	Government and

	infrastructure, and shortage of environmental teaching materials create barriers in implementing environmental education practices.	educational authorities should provide sufficient financial assistance, green infrastructure, and environmental learning resources to schools.
5	Insufficient teacher training and limited awareness regarding practical environmental education reduce the effectiveness of implementation.	Regular teacher orientation and professional development programmes on environmental education should be conducted.
6	Rural schools face greater challenges compared to urban schools in conducting environmental activities due to resource limitations and lack of community support.	Special environmental support programmes and grants should be introduced for rural schools to strengthen sustainable practices.
7	Eco-clubs and community participation contribute positively to environmental awareness and sustainable school culture.	Schools should strengthen eco-club activities and establish partnerships with local communities, NGOs, and environmental organizations.
8	Examination-oriented education and academic workload often limit practical environmental learning opportunities in schools.	Environmental education should be integrated with experiential and project-based learning methods rather than only theoretical classroom teaching.
9	School heads who demonstrate visionary and supportive leadership are more successful in implementing NEP 2020's environmental education mandate.	Educational authorities should recognize and encourage innovative green leadership practices among school heads.
10	Environmental education implementation remains uneven across schools due to differences in leadership practices and institutional support.	Proper monitoring, policy support, and evaluation mechanisms should be developed to ensure effective implementation of environmental education in all schools.

Conclusion

The present study titled "From Textbooks to Tree Planting: Role of School Heads in Implementing NEP 2020's

Environmental Education Mandate” highlights the significant role of school heads in promoting environmental education and sustainable school practices in West Bengal. The study reveals that school heads act as key agents of educational transformation by motivating teachers and students, organizing practical environmental activities, and creating environmentally conscious school cultures. Their leadership plays a vital role in translating the environmental vision of NEP 2020 into practical action-oriented educational experiences.

The findings indicate that environmental initiatives such as tree plantation, eco-club activities, waste management programmes, school gardening, and environmental awareness campaigns positively influence students’ environmental consciousness and participation in sustainable activities. Schools where heads actively supported environmental programmes demonstrated greater student involvement and stronger institutional commitment toward sustainability.

However, the study also identified several challenges affecting the effective implementation of environmental education. Lack of financial support, inadequate infrastructure, insufficient teacher training, shortage of environmental resources, and examination-oriented educational practices often restrict practical environmental learning opportunities in schools. Rural schools particularly face difficulties due to limited institutional and community support.

The study concludes that successful implementation of NEP 2020’s environmental education mandate requires visionary and committed school leadership supported by adequate policy measures, infrastructural facilities, teacher training programmes, and community participation. Environmental education should move beyond textbook-based learning and become an integral part of school culture through experiential and participatory approaches. Strengthening school leadership and sustainable educational practices can contribute significantly toward developing environmentally responsible citizens and achieving the broader goals of sustainable development in India.

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