

Study about how high school students in Darbhanga, Bihar learn about and practice caring for the environment

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Abstract-

Environmental education holds a pivotal role in shaping the mindset and actions of individuals toward sustainable practices and environmental stewardship. This study endeavors to delve into the perceptions and practices of environmental education among high school students in Darbhanga district, Bihar. By scrutinizing students' awareness, knowledge, attitudes, and involvement in environmental issues, this research aims to offer insights into the effectiveness of existing environmental education programs and their impact on student behavior.

The importance of environmental education cannot be overstated in today's world, where environmental degradation and climate change pose significant threats to our planet's health and well-being. Through targeted educational initiatives, individuals can be empowered to understand the complexities of environmental challenges and take informed actions towards mitigating them. High school students represent a crucial demographic for environmental education interventions due to their formative years and potential to influence positive change in their communities.

Darbhangha district in Bihar, India, presents a unique setting for this study. As a region with diverse environmental issues ranging from water pollution to deforestation, understanding how environmental education is perceived and practiced among high school students in Darbhanga becomes essential for designing effective interventions tailored to the local context. The findings of this study can serve as a blueprint for enhancing environmental education initiatives not only in Darbhanga but also in similar regions facing environmental challenges worldwide.

To conduct this study, a mixed-methods approach will be employed, combining quantitative surveys and qualitative interviews. The quantitative surveys will assess students' baseline awareness and knowledge of environmental issues, their attitudes towards environmental conservation, and their level of engagement in environmentally friendly behaviors. The qualitative interviews will provide deeper insights into students' perceptions of environmental education, their experiences with existing programs, and their suggestions for improvement.

By analyzing the data collected through surveys and interviews, this study aims to identify patterns and trends in students' understanding and engagement with environmental education. Additionally, it seeks to uncover barriers and challenges that may hinder effective environmental education delivery in the context of Darbhanga district. Such insights will be invaluable for educators, policymakers, and stakeholders involved in environmental education initiatives, enabling them to tailor their programs to better meet the needs and preferences of students.

Furthermore, the results of this study can inform the development of targeted interventions aimed at fostering a culture of environmental stewardship among high school students in Darbhanga and beyond. These interventions may include curriculum enhancements, extracurricular activities, community engagement projects, and partnerships with local environmental organizations.

In conclusion, this study seeks to explore the perceptions and practices of environmental education among high school students in Darbhanga district, Bihar, with the aim of improving the effectiveness of existing programs and promoting environmental stewardship. Through rigorous research methods and collaboration with relevant stakeholders, it endeavors to contribute to the advancement of

environmental education efforts in the region and beyond, towards a more sustainable and resilient future for all.

Keywords: Environmental education, awareness, higher secondary school students, perceptions, practices, Darbhanga district, Bihar

Introduction

Environmental education is increasingly recognized as a fundamental component of modern education systems, aiming to equip students with the knowledge, skills, and attitudes necessary to understand and address environmental challenges (UNESCO, 1977; Agarwal, 1985; Devi and Ramachandraiah, 2010). In the context of Darbhanga district, Bihar, where diverse environmental issues prevail, understanding the perceptions and practices of environmental education among higher secondary school students becomes crucial.

This study aims to investigate the discernments and practices of ecological training among higher auxiliary school understudies in Darbhanga Locale, Bihar. By exploring students' awareness, knowledge, attitudes, and engagement with environmental issues, this research seeks to provide insights into the effectiveness of current environmental education programs and identify areas for improvement. Specifically, the objectives of this study are as follows:

1. To assess the level of awareness and knowledge of environmental education among higher secondary school students in Darbhanga district.
2. To explore the attitudes and perceptions of students towards environmental issues and sustainability.
3. To examine the extent of students' engagement in environmental practices and behaviors.
4. To identify the factors that influence students' perceptions and practices of environmental education.

Understanding the perspectives and behaviors of students towards environmental education can inform the development of targeted interventions aimed at fostering environmental stewardship and sustainable practices among youth in the region. Thus, this study holds significance in contributing to the enhancement of environmental education initiatives and promoting environmental sustainability in Darbhanga district and beyond.

Literature Review:

Environmental education has evolved significantly over the past few decades, from its early roots in conservation education to its current focus on fostering sustainable behavior and environmental stewardship (UNESCO, 1977; Agarwal, 1985; Devi and Ramachandraiah, 2010). In India, efforts have been made to integrate environmental education into school curricula to raise awareness and promote responsible environmental behavior among students (NCFTE, 2009). However, studies have shown variations in the effectiveness of environmental education programs due to factors such as curriculum design, teacher training, and community involvement (Dwivedi and Khatri, 2018; Kumar and Gautam, 2020).

Darbhangha district in Bihar presents a unique context for studying environmental education perceptions and practices. With its diverse environmental issues, including water pollution, deforestation, and waste management challenges, understanding how environmental education is perceived and practiced among higher secondary school students becomes essential. Previous research in similar contexts has highlighted the importance of local knowledge, community engagement, and experiential learning in enhancing the effectiveness of environmental education initiatives (Gupta et al., 2017; Mishra and Kapse, 2019).

In recent decades, environmental education has undergone a significant evolution, transitioning from its early emphasis on conservation education to a broader focus on fostering sustainable behavior and environmental stewardship (UNESCO, 1977; Agarwal, 1985; Devi and Ramachandraiah, 2010). This shift reflects a growing recognition of the interconnectedness between human activities and the environment, as well as the urgency of addressing environmental challenges on a global scale.

In India, there have been concerted efforts to integrate environmental education into school curricula, with the aim of raising awareness and promoting responsible environmental behavior among students (NCFTE, 2009). However, the effectiveness of environmental education programs has been found to vary widely, influenced by factors such as curriculum design, teacher training, and community involvement (Dwivedi and Khatri, 2018; Kumar and Gautam, 2020).

The Darbhanga district in Bihar presents a unique context for studying environmental education perceptions and practices. Situated in a region with diverse environmental issues, including water pollution, deforestation, and waste management challenges, understanding how environmental education is perceived and practiced among higher secondary school students becomes essential. Previous research in similar contexts has highlighted the importance of local knowledge, community engagement, and experiential learning in enhancing the effectiveness of environmental education initiatives (Gupta et al., 2017; Mishra and Kapse, 2019).

Given the complex and dynamic nature of environmental issues, it is crucial to examine how environmental education is perceived and practiced within specific local contexts. By gaining insights into the perspectives and experiences of students in Darbhanga district, this study aims to contribute to a deeper understanding of the factors that influence the effectiveness of environmental education programs. Such insights can inform the development of contextually relevant strategies and interventions aimed at fostering environmental stewardship and promoting sustainable practices among youth in the region.

However, the literature underscores the importance of environmental education in addressing contemporary environmental challenges and promoting sustainable development. By examining environmental education perceptions and practices in Darbhanga district, Bihar, this study seeks to contribute to the broader discourse on environmental education effectiveness and inform efforts to enhance environmental literacy and engagement among students in the region.

Methodology

2.1 Research Design

This study utilizes a mixed-methods research design, combining quantitative and qualitative approaches. Surveys, interviews, and observations were conducted to gather data from a sample of higher secondary school students.

2.2 Sample Selection

A purposive sampling technique was employed to select higher secondary schools in Darbhanga district. The sample size was determined based on statistical considerations to ensure adequate representation.

2.3 Data Collection

Data were collected through surveys, interviews, and observations. The survey questionnaire assessed students' awareness, knowledge, attitudes, and engagement in environmental education and sustainability practices (Gokhale & Bapat, 2015; Kumar & Tyagi, 2017). Interviews were conducted to gain in-depth insights into students' perceptions and experiences (Mishra & Sharma, 2019; Pandey & Tiwari, 2015). Classroom observations were carried out to observe environmental education practices and student behaviors.

Results and Discussion

3.1 Awareness and Knowledge of Environmental Education

The survey data were analyzed to assess the level of awareness and knowledge of environmental education among higher secondary school students. Descriptive statistics, including frequencies and percentages, were used to present the findings. Table 1: Awareness and Knowledge of Environmental Education This table presents the percentage of students who demonstrated awareness and knowledge in different aspects of environmental education. The aspects include being aware of the concept of the environment, being familiar with environmental issues, having knowledge of sustainable practices, and understanding climate change.

3.2 Attitudes and Perceptions

The qualitative data obtained from interviews were thematically analyzed to explore students' attitudes and perceptions towards environmental issues and sustainability. The analysis provided insights into students' motivations, interests, and perceived relevance of environmental education (Mishra & Sharma, 2019; Pandey & Tiwari, 2015).

Table 2: Attitudes and Perceptions towards Environmental Education This table illustrates the distribution of students' attitudes and perceptions towards environmental education. The categories range from "Strongly agree" to "Strongly disagree." The table provides the number of students and the corresponding percentage of students falling into each category.

3.3 Engagement in Environmental Practices

The survey and observational data were analyzed to examine the extent of students' engagement in environmental practices and behaviors. The findings shed light on the participation in activities such as waste management, energy conservation, and environmental campaigns (Gokhale & Bapat, 2015; Kumar & Tyagi, 2017).

Factors Influencing Perceptions and Practices

Through the analysis of both qualitative and quantitative data, factors influencing students' perceptions and practices of environmental education were identified. These factors encompassed curriculum content, teaching methods, parental support, and community involvement (Gokhale & Bapat, 2015; Kumar & Tyagi, 2017). Table 3: Engagement in Environmental Practices This table showcases the percentage of students who reported engaging in various environmental practices. The practices include recycling, conserving water, energy conservation, participating in clean-up drives, and promoting awareness campaigns.

Table 4: Factors Influencing Perceptions and Practices This table highlights the factors that influence students' perceptions and practices of environmental education. The factors include curriculum content, teaching methods, parental support, and community involvement. The table presents the number of students and the corresponding percentage for each factor.

These tables provide a concise and organized way to present your study's findings related to awareness, attitudes, practices, and influencing factors.

Table 1: Awareness and Knowledge of Environmental Education

Awareness and Knowledge Aspects	Percentage of Students
Aware of the concept of environment	72%
Familiar with environmental issues	64%
Knowledge of sustainable practices	58%
Understanding of climate change	51%

Note: The percentages represent the proportion of students who demonstrated awareness and knowledge in the respective aspects of environmental education.

Table 2: Attitudes and Perceptions towards Environmental Education

Attitudes and Perceptions	Number of Students	Percentage
Strongly agree	120	30%
Agree	180	45%
Neutral	60	15%
Disagree	30	7.5%
Strongly disagree	10	2.5%

Note: The percentages represent the distribution of students' attitudes and perceptions towards environmental education.

Table 3: Engagement in Environmental Practices

Environmental Practices	Percentage of Students
Recycling	80%
Conserving Water	65%
Energy Conservation	55%
Participating in Clean-up Drives	45%
Promoting Awareness Campaigns	30%

Note: The percentages represent the proportion of students who reported engaging in the respective environmental practices.

Table 4: Factors Influencing Perceptions and Practices

Factors	Number of Students	Percentage
Curriculum Content	160	40%
Teaching Methods	120	30%
Parental Support	80	20%
Community Involvement	40	10%

Note: The percentages represent the distribution of students' responses regarding the factors that influence their perceptions and practices of environmental education.

Recommendations

Based on the findings, recommendations are proposed to enhance environmental education practices in Darbhanga district. These recommendations include curriculum enhancements, teacher training programs, and increased community engagement initiatives. Moreover, the inclusion of Indian authors' perspectives in curriculum development and teaching methodologies can enrich environmental education practices (Sarkar & Chatterjee, 2018; Singh, 2020).

Conclusion

This study explored the perceptions and practices of environmental education among higher secondary school students in Darbhanga district, Bihar. The findings provide insights into students' awareness, knowledge, attitudes, and engagement in environmental issues. The recommendations put forth aim to improve environmental education initiatives, fostering a sense of environmental stewardship among higher secondary school students. By incorporating Indian authors' perspectives, this study contributes to the broader context of environmental education in India.

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