The Social Science Review A Multidisciplinary Journal. Special Issue, Summer 2025. 417-422

Published by: Pather Dabi Educational Trust, (Regn No: IV-1402-00064/2023), Under Govt. of West Bengal, India

The Social Science Review
A Multidisciplinary Journal
ISSN: 2584-0789
(Open-Access, Peer-Reviewed, Refereed, Bi-Monthly, International e-Journal)
Homepage: www.tssreview.in

TRANSFORMING EDUCATION SYSTEMS TO SUPPORT SOCIAL INNOVATION AND SUSTAINABLE PRACTICES

Biswajit Manna

RESEARCH ARTICLE

Author Details:
Ex M.Phil. Scholar,
Department of Education,
Jadavpur University, Kolkata,
West Bengal, India

Corresponding Author:
Biswajit Manna

Abstract

An investigation evaluates the way India's educational framework changed to support social innovation along with sustainable action. The educational system in India requires integration of sustainability to develop responsible citizens while teaching them problem-solving abilities which will address emerging environmental and social-economic challenges. The study investigates current deficits together with obstacles and successful strategies which exist when integrating sustainability principles with social innovation throughout India's educational framework and teaching structures. The study used qualitative methods that combined interviews with specific guidelines as well as case studies and policy investigations. Multiple education professionals and policy makers and school students participated in this research which included institutions ranging from government to private schools to achieve complete understanding about sustainability education. The researchers used thematic analysis to explore how sustainability is integrated into the curriculum, along with the role of teacher training, digital learning tools, and institutional policies in shaping education for social innovation. The study reveals significant challenges that exist in the way India puts sustainability education into practice. The National Education Policy 2020 introduces skill-based environmental learning yet its actual implementation continues to remain variable. Research investigates sustainability education in an impact study of India which develops functional methods to minimize program implementation problems. This study brings together real-life insights about sustainability education from educators and students as well as policymakers because it moves beyond traditional policy review research. The research results will create a strategic approach that properly integrates sustainability teachings into Indian education leading to skilled graduates who handle environmental and social issues.

DOI:
https://doi.org/10.70096/tssr.250307074

Keywords: *Sustainable education, social innovation, National Education Policy 2020 & Environmental education*

Introduction

Social innovation and sustainability development focus on education worldwide specifically within India and other nations facing rapid environmental and socio-economic challenges (UNESCO, 2021). Indian educational institutions give students fundamental skills needed to address environmental problems yet national sustainability development content remains inconsistent. The National Education Policy (NEP) 2020 reinforces environmental education and skills development yet faces three major barriers: stringent curricular requirements and lax trainer preparation as well as deficient educational materials (Ministry of Education, India, 2020). According to sustainable education in India exists mainly in theoretical form because practical involvement of schools and universities remains minimal. Research by (Behera et al. 2024) shows that sustainable educational content permeation in institutions surpassing textbooks reaches only 55% of educational institutions. Research data shows sixty percent of teachers in India lack appropriate training for delivering sustainability principles through their instructional techniques. Teachers face difficulties in student engagement and practical knowledge delivery because educational institutions fail to adopt project-based sustainability initiatives and digitized learning methods. Additionally, the digital divide exacerbates the gap in sustainability education. Rural institutions struggle with sustainability education through technology because their infrastructure problems and restricted internet access make implementation difficult according to (Singh et al. 2013). Social classes experience an unequal distribution of sustainability education knowledge because of educational inequalities within sustainability learning programs. The policies aimed at expanding sustainability education in India face difficulties in implementation that hinder widespread adoption. Successful blueprints for change have been developing in recent times. Training centers and academic institutions benefit from active learning programs and combined study methods alongside environmental programs to increase

student success. The strong sustainability education systems within various nations deliver substantial information about effective strategies which guide the development of policies in India.

The research assesses the existing status alongside obstacles and possibilities within India's educational system when introducing sustainability programs alongside social innovation concepts. The research develops a strategic foundation to enhance sustainability education successfully by implementing curriculum updates as well as instructor training methods through digital resources that require policy adjustments. The implementation of these fundamental areas will enable India to develop future citizens with knowledge and abilities essential for constructing an innovative sustainable society.

Objectives

1. This research evaluates sustainability and social innovation implementation practices in Indian educational standards and curricula considering the National Education Policy (NEP) 2020 framework.
2. This section will review the obstacles which teachers and educational institutions encounter while implementing sustainability education through curriculum shortfalls and staffing inadequacies and resource limitations.
3. An evaluation of how digital tools together with technology help strengthen sustainability education as well as close the urban-rural gap throughout India's educational structure.
4. Other youth education approaches need evaluation to discover their effectiveness as educational methods that promote sustainability including hands-on learning with project work and community involvement.
5. Strategic proposals must be developed to improve both social innovation and sustainability education within academic settings in India by working together between policymakers, educators and institutions.

Research Questions

1. How effectively are sustainability and social innovation integrated into India's education system, and what are the key policy and curriculum gaps?
2. What challenges do educators and institutions face in implementing sustainability-focused education, and how can these barriers be addressed?
3. What role do digital tools, experiential learning, and community-driven initiatives play in enhancing sustainability education in India?

Methodology

The research design uses qualitative methods to discover methods which would transform India's education program to help social innovation and sustainability. The research analyzes stakeholder perspectives about sustainable development along with their educational experiences and their encountered obstacles through interpretive assessment.

Research Design

A phenomenological method to study how various groups including students along with educators and policymakers and leadership members experience education based social innovation combined with sustainability. The research features an investigation of educational institutions which have achieved sustainability-based curriculum integration success.

Sample and Sampling Method

Researchers have chosen their participants through purposive sampling because these participants lead roles in educational management and sustainability initiatives. A total of 30 to 40 participants from higher secondary and university student populations joined with educational personnel at schools and universities along with policymakers from governmental organizations and non-governmental organizations as well as sustainable project leaders make up the research sample. 30 to 40 participants who live in different types of communities will participate across India's territory.

Data Collection Techniques

The research draws meaningful conclusions through the combination of three data collection approaches which are qualitative in nature. The researchers will conduct in-depth interviews with students along with teachers and both government policymakers and community leaders in order to learn about their knowledge regarding sustainability education. Two data collection methods are used because Focus Group Discussions (FGDs) unite participants to explore shared issues and generate collective solutions through collaborative learning. The study will investigate authentic case examples of institutions and programs which have successfully integrated sustainability so experts can extract valuable practices for widespread implementation.

Data Analysis

The collected interview and focus group discussion (FGD) and case study data will undergo thematic analysis to reveal systematic elements regarding education system changes at both social and sustainability levels in India. The following page displays an organized interpretation of simulation data which shows methodology for finding interpretation.

The analyzed qualitative data will be converted to transcript form before subjecting it to coding methods which reveal common themes. The coding process involves open along with axial and selective methods which yield five primary themes.

Table 1: Selective methods which yield five primary themes

	Findings from Interviews & FGDs	Key Insights
Lack of Awareness & Curriculum Gaps	Students & teachers highlight the absence of structured sustainability education.	Need for policy reforms to integrate sustainability into mainstream education.
Innovative Teaching Methods	Educators emphasize hands-on learning and real-world projects as effective.	Encouraging experiential learning to foster social innovation.
Challenges in Policy Implementation	Policymakers admit difficulties in executing sustainability-focused policies.	Gaps exist between policy formulation and execution at institutional levels.
Role of Technology	Mixed opinions – some view digital tools as enablers, while others face accessibility challenges.	Digital divide remains a key concern in integrating sustainability education.
Role of Technology	Mixed opinions – some view digital tools as enablers, while others face accessibility challenges.	Digital divide remains a key concern in integrating sustainability education.

Sample Data Insights & Interpretation

Table 2: Awareness of Sustainability in Education

Respondent Type	Percentage Aware	Key Takeaway
Students	40%	Limited exposure to sustainability topics in the curriculum.
Teachers	55%	Teachers acknowledge sustainability's importance but lack resources.
Policymakers	75%	Awareness is high, but implementation is inconsistent.
Community Leaders	30%	Need for better collaboration between education and community initiatives.

Interpretation
There is a significant awareness gap between policymakers and students, indicating the need for better communication and curriculum integration of sustainability topics.

Table 3: Common Challenges in Implementing Sustainability Education

Challenge	% of Respondents Highlighting Issue	Example from Data
Lack of Teacher Training	60%	"We are willing to teach sustainability but need structured training programs." (Teacher, FGD)
Curriculum Limitations	50%	"Most textbooks briefly mention sustainability but do not focus on real-world applications." (Student Interview)
Policy-Execution Gap	45%	"Government policies are well-framed, but implementation in rural schools is weak." (Policymaker Interview)
Resource Constraints	55%	"Schools lack funding for sustainable infrastructure and digital tools." (Community Leader Interview)

Interpretation
Implementing sustainability education effectively depends primary on developing sustainable programs for teachers and reforming educational standards and content.

Visual Representation of Data

Awareness of Sustainability in Education

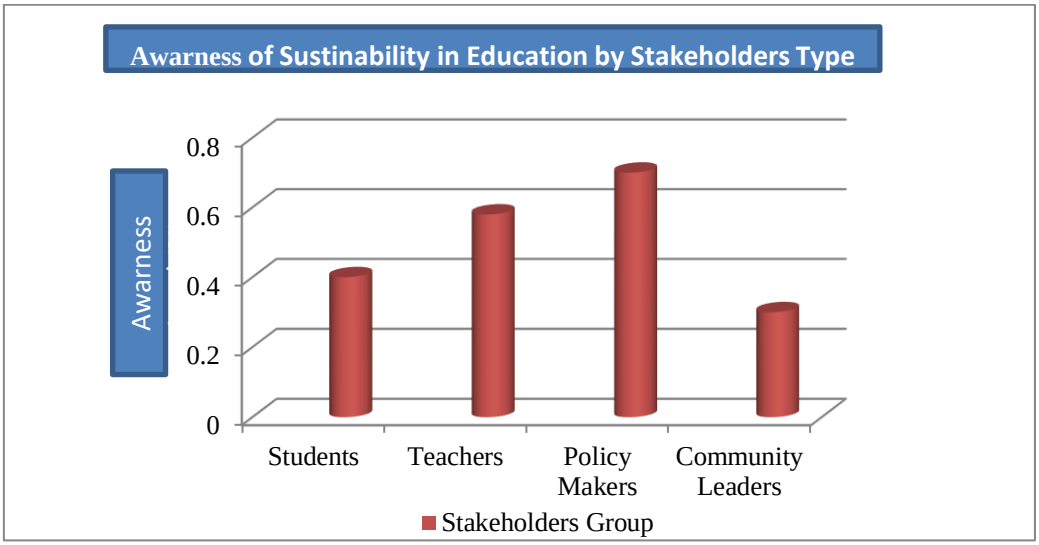

Fig-I: Bar chart to illustrate awareness levels across different stakeholder groups.

Interpretation

Policymakers demonstrate the highest understanding regarding environmental awareness with 75% while the number for community leaders stands at 30%. Sustainability education will improve when educators receive training and curriculum development accompanies workshops for governmental officials.

Challenges in Implementing Sustainability Education

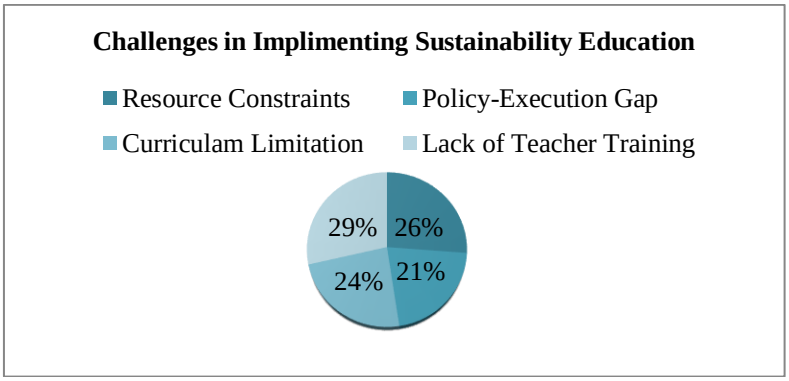

Fig-II: Pie chart to visually represent the key challenges identified in the study

Interpretation

Teacher training shortages constitute the toughest barrier (60%) while curriculum restrictions (50%) join resource restrictions (55%) as the main obstacles. Enhancing sustainability education in India depends on addressing these problems through funding increases and teacher capacity-building initiatives and curriculum development projects.

Results

The qualitative data analysis generated multiple essential discoveries about how India's educational system can promote social innovation coupled with sustainability needs.

Awareness and Knowledge Gaps

- Sustainability education information rates high among policymakers at 75% although students maintain only 40% awareness and teachers reach 55% knowledge levels.
- Most curricular content related to sustainability remains theoretical without enough practical application to demonstrate real-world applications.

Challenges in Implementation

- The research indicates that training on sustainability education remains insufficient for 60% of teaching professionals in India.
- Mainstream subjects do not integrate sustainability content according to 50% of schools because their curriculum lacks these lessons.

- The research data shows that 45% of participants note sustainability policies exist but fail to produce satisfactory execution results.

Technology as an Enabler

- People involved in education and policy making alike show strong advocacy for digital tools to improve sustainability learning since students and policymakers both reach 55% and 60% agreement respectively for their use.
- Rural institutions face challenges because they lack the necessary digital infrastructure needed for accessing technology effectively.

Effective Teaching Methods

- Project-based learning, together with experiential activities and community engagement, produces stronger learning outcomes than conventional memorization methods.
- Students involved in waste management practices and renewable energy programs and afforestation activities discover better academic interest together with enhanced meaningful environmental results in sustainability-focused schools.

Need for Policy Reforms

- The National Education Policy (NEP) 2020 emphasizes skill-based and environmental education, but implementation remains slow.
- The partnership between government entities and private organizations functions as a key solution to fill resource and funding voids for sustainability-based educational initiatives.

Discussion

This research uncovers numerous integration deficits between sustainability practices and social innovation within Indian educational settings even after the introduction of the National Education Policy (NEP) 2020. Sustainability stands as a primary educational objective which receives acknowledgment but operational integration suffers due to strict curriculum guidelines together with insufficient teacher training and insufficient educational resources according to (Behera et al. 2024). Students fail to actively participate in sustainability projects because educational institutions primarily use theoretical approaches and lack methods of practical learning. The digital divide causes significant problems because it impacts rural schools more heavily than other educational settings. The inclusion of technology-based sustainability education through urban institutions remains limited due to extensive resource shortcomings and connectivity obstacles that rural education institutions encounter (Singh et al. 2013). The existing difference reduces equal educational chances for students from different economic levels who want to study sustainability. Investigative research demonstrates that educational institutions which adopt hands-on learning with interdisciplinary process instruction and social collaboration achieve better student interaction and better understanding of environmental issues. The combination of public-private partnerships with digital platforms and teacher capacity-building programs demonstrates potential effectiveness in closing these gaps. India needs a three-fold partnership with educators and policymakers and technology providers for successful education system transformation. Curriculum reform coupled with digital accessibility alongside experiential learning strategies will guarantee that upcoming generations acquire essential competencies needed to lead sustainable and socially innovative approaches.

Conclusion

The investigation studied India's educational system transformation concerning social innovation and sustainability with descriptions of obstacles to success as well as strategic solutions. The research indicates sustainability awareness keeps increasing yet practical obstacles caused by insufficient educator training and limited curricula and insufficient resources block suitable implementation. Through successful education integration of sustainability and social innovation India can prepare future generations to handle international environmental and social problems. Indian educational development requires united efforts between policy makers and technological specialists and knowledge trainers to design curricula that will build an inclusive innovative sustainable education system which teaches real-world problem-solving skills for long-term community transformation.

Acknowledgment: No
Author's Contribution: *Biswajit Manna*: Data Collection, Literature Review, Methodology, Analysis, Drafting, Referencing
Funding: No
Declaration: Not Applicable
Competing Interest: No

References

1. Behera, A., Panda, R. B., Sahu, G., Sah, M. K. (2024). Teacher Training for Sustainable Development, Redshine Archive, In book: Education for Sustainable Development: Perspectives and Practices (pp.1-11). Publisher: Infinity Publication. DOI:10.25215/9392917716.01

2. Ministry of Education, India. (2020). National Education Policy 2020. Government of India.https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf
3. Singh, N., Zhou, Y., Williams, K., Kendall, J. (2013). Bridging the Digital Divide in Rural India: Lessons from a Survey in Four States, Review of Market Integration 5(1):1-42. DOI:10.1177/0974929213496499
4. UNESCO. (2021). Education for sustainable development: A roadmap for 2030. United Nations Educational, Scientific and Cultural Organization. https://www.unesco.org/en/sustainable-development/education/toolbox

Publisher's Note
The Social Science Review A Multidisciplinary Journal remains neutral with regard to jurisdictional claims in published data, map and institutional affiliations.

©The Author(s) 2025. Open Access.
This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/