

# Sustainable Environmental Education Through School-Community Collaboration: A Case Study From India

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## Abstract

*In the context of growing environmental challenges, the integration of sustainability in education is imperative. This case study investigates how leadership and community collaboration within a secondary school in Delhi, India, facilitated the development and implementation of a sustainable environmental education plan. By employing qualitative methods including unstructured interviews and document analysis, the study highlights the pivotal role of the school principal in shaping institutional practices, mobilizing community participation, and nurturing environmental consciousness among stakeholders. The findings underscore the importance of visionary leadership, teacher capacity-building, and participatory governance in promoting environmental stewardship. The paper concludes with practical recommendations for scaling such initiatives within broader educational frameworks.*

*Keyword's: Sustainability; Environmental Education; Sustainable Practices; Policy Initiatives; Educational Change.*

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## INTRODUCTION

"To see the world in a grain of sand, and heaven in a wildflower, hold infinity in the palm of your hand, and eternity in an hour..."(William Blake, 1863)The environment refers to the space in which human being exist and perceive their surroundings. It can mean different things to different people, as everyone has their own interpretation and understanding of their environment. The term environment education first appeared after World War II, when Goodman brothers in their book *Communitas* published in the year 1947 talked about planning urban space with green belts around the cities which at that time were a utopian concept (Goodman & Goodman, 1947). The term environment education is very closely tied to the understanding and development of human psychology, sociology and how humans learn. Environment Education as a subject must become an essential part of all citizens as it has immense educational potential in emergence of scientifically literate nation (Palmer, 1998). Indigenous Education Systems have traditionally emphasized upon environmental education, preservation of surroundings and ecology. Indian Knowledge Tradition also focussed on sustainable practices and mutual coexistence of all. The very foundation of education was built upon preservation of biodiversity, culture and environment. Recent environment education in India, have been advocated post Stockholm summit 1972, Indian constitution incorporated environmental concern through 42nd Amendment in 1976. Environment concerns also became the part of policy statements, Planes and Strategies exclusively after 1980. Establishment of a Ministry of Environment and forests was another milestone in the process of recognising environmental worries. The very next step towards it was Environmental Education (EE) introduced in schools of India. On 18th December 2003, the Honourable Supreme Court of India's directed to impart EE in educational institutes as a compulsory subject. The National Council of Education Research and Training (NCERT) circulated its Discussion Document (2000) welcoming comments from concerned agencies for EE. The National Framework articulated in 1988 (NCERT, 1988) provided the insight and systematic approach for EE as school curriculum. This framework designs an integration of environmental concerns into the NCERT model test books. This syllabus has subsequently been reviewed and revised in the light of NCF 2005 (NCERT, 1988). NCERT clarified in an affidavit submitted to the Supreme Court on the 3rd of December 2010 that it is not necessary to have a separate subject for compliance. Instead, infusion in science, social studies, mathematics, language, and other subjects, or a separate subject can be used. However, it must be part of the compulsory curriculum. NEP 2020 includes Curricular Integration of Essential Subjects, Skills, and Capacities in form of environmental awareness including water and resource conservation, environmental awareness and sensitivity towards its conservation and sustainable development, so that environment education becomes

an integral part of school curricula (DNEP, 2019). Achieving access to clean drinking water and sanitation for all, quality education, healthcare, improved transportation, air quality, energy, and infrastructure necessitates the implementation of approaches and solutions that not only draw from cutting-edge science and technology but also stem from a profound understanding of the social sciences, humanities, and the various socio-cultural and environmental dimensions of the nation. Sustainable farming, environmental preservation, and other green initiatives; these will also receive prioritized attention in education (Dash, D. 2018). The Sustainable Development Goals (SDGs) established by United Nations provide a global blueprint for achieving a better and sustainable future. Integrating sustainability and topics of environmental significance at curricular level ensures that learners acquire necessary knowledge and skills to promote sustainable development and practices. A collaborative effort of educational institutions, Non-Profit Organisations, Community and Government can be a game changer in enhancing resource sharing, knowledge exchange and in ensuring collective action towards Sustainable Development (UN, 2015).

### **Conceptual Background of the Study:**

Sustainable Environmental Education amasses three different commencements 1) of the environment, 2) of education, and 3) of sustainable development. The United Nations outlines sustainable development as a development approach that focuses on meeting the demands and desires of present-day populations without negotiating the future (UNESCO, n.d.). Hart, 1997, suggested that sustainable development focusses on aspects of the economy, society and environment to achieve its goals.

Das et al. (1987) emphasized upon the background of environmental education programmes and highlighted the sensitisation of people towards the environment and its associated problems through education. On the other hand, the approach of teaching Environment Education in school is not uniform all over the country and no universal standard have been defined so far. There is no common code of imparting Environment Education in regular school curriculum. Numerous deliberations and submissions had been done, but no common consensus had resultant at this point (Bhat, 2017). Exceptionally the schools of Uttarakhand included environmental education as one of the regular subjects up to class VIII, no other schools in the country had found a suitable place for regular Environmental Education course. There is still a huge gap continued about the Environmental Education to be introduced as a separate subject or be imparted within the syllabuses interdisciplinary. In this case study, an inductive approach is used to investigate community Efforts and challenges utilization by a school principal of a secondary school in Delhi for developing Sustainable Environmental Education plan. The best practices employed for Sustainable Environmental Education in regular school environment in India was observed. The study aims to elucidate the Developing Sustainable Environmental Education plan from the following perspective:

- a. What are the school principal's beliefs regarding Sustainable Environmental Education?
- b. Which environmental practices have been adopted by the school principal?
- c. What attributes are exhibited by the school principal and the community?

## **METHODOLOGY**

### **Research Design**

The case study delves into the emerging leadership themes concerning the development of a Sustainable Environmental Education plan. It examines the interconnections between community involvement and the environment, drawing on insights and real-life experiences to ascertain the influence of the school principal in engaging stakeholders such as teachers, students, parents, and the community. This determination was made through unstructured interviews. This systematic analytical procedure was selected because it could explain phenomenon and context which are not clearly evident where multiple sources of evidence are used (Yin, 1994) besides facilitating meaningful analysis of data by linking particular facts and areas without biasness (Lincoln & Guba, 1995).

### **Sampling**

The school was selected based on its inspiring record on successful implementation as the progressive model of sustainable environmental development. The school principal was recognized due to his accomplishments in encouraging community participation and adopting healthy environmental practices. The school found to excel in environmental activities.

### **Data Collection**

Open-ended interviews were conducted to determine environmental practices in and outside school. Probing questions were used to discover evolving ideas in depth by allowing unrestricted answers (Lincoln & Guba, 1985). Consent was acquired before the research for participation and use of research data. The interview was recorded and transcribed. Subsequent interviews were carried out to validate the information. Data was also collated from Parents, nearby community people, School teachers, students.

### **Data Analysis**

Upon analyzing the data, we categorized the record based on the research theme and created a map to identify connections between school practices and sustainable environmental development. To support our findings during data presentation and analysis, we supplemented the information with references from relevant literature and direct quotes from the sample.

### **Findings & Discussion**

In the study, it was observed that the promotion of sustainable environmental development and community involvement significantly contributed to the successful implementation of environmental education in schools. Four key improvement strategies were identified, including aligning school practices, enhancing the capacity of teachers and students, garnering community support, and fostering a culture of environmental conservation. The findings were presented in two parts: firstly, the influence of the school principal's beliefs in sustainable environmental practices, and secondly, how the principal's guidance and leadership qualities affected the efforts to promote environmental practices both within and beyond the school. These efforts were instrumental in promoting sustainable, eco-friendly practices.

#### **School Principal's Belief in Environmental Practices:**

Successful improvement practices and initiatives are highly dependent on the beliefs of the school principals due to factors of passion, ownership, skills and knowledge (Fullan, 2000). In this case study, the school principal strongly emphasized the significance of the environment in shaping behavior and promoting sustainable development. Below are the indications- "... As I have pointed out earlier, the school has worked hard in achieving environmental education goals but to maintain and further improve, I choose to use more participation in this area..."

"It is not mere understanding and showing what we are evaluating since long. We need to involve people, make them aware and motivate them to change. It is supposed to be a revolution, and a transformation. Environmental awareness is to be translated into efficiency and vitalities... it is about community being able to control the surroundings and contribute towards very purpose..."

The school principal's belief in environmental practices is backed by the responses of the teachers. "...the principal is environment friendly and he sees opportunities in using green practices in school... He practices environment friendly behaviour and as you can see, we have a green environment... That's why the school is undergoing green initiatives ..." ...He is diverse and dedicated...I insists on green practices which is rare these days..."

#### **Leadership Practices, Green Attributes and Employment of awareness**

The school principal exhibited impressive leadership qualities, prioritizing instructional excellence and environmental sustainability. Furthermore, they took proactive steps to address key concerns and reorganize priorities, structural goals and planning towards environment friendly behaviour and building school capacity. The respondent was found to be an interventionist and focussed on rearranging school practices towards environment. His initiatives included planning new environmental goals, glance at environmental needs, sketching plan and motivating stakeholders. "...I set targets and make sure the idea of a healthy eco-friendly progression to achieve sustainable environment through education by 2022 is achieved.... I have to redefine the community participation in environmental education. Environment education worked in a very noticeable way even afore setting certain targets for that...I did notice the gaps in areas of practical aspect of environmental education for improvement...I did a SWOT analysis of strengths, weaknesses, opportunities and threats other than my own understanding ... is about turning weaknesses into strengths..." Transformational leadership regularly expect the readiness of teachers to dedicate additional effort and modify their teaching practices or attitudes. "...Teachers are motivated and become part of the student's group and they came up with strategic plans, ... This intentional planning has given a final call to getting things done...This plan is flexible and expandable as we come across

different situations in our daily approaches... “...We have compiled the different strategic plans and discussed among all to set up a better access and experience for all stakeholders “...A very important aspect of any success is the ownership among teachers, I make sure teachers have ownership of their plans and setting targets and I encourage equally top down and down-up management... in attaining our aims...”

### **Building Teacher Aptitude**

Building teacher aptitude by increasing proficiencies and creating professional learning communities is of prime importance in the school. The principal of the school stated that, “... I tried to focus on teacher development and promoted in various environment education learning systems by focusing on learning management .It was linked to the issues of natural resources and local environment based on the concept of learning about the environment and learning for the environment (Learning about-in-for environment) by using problem-based learning and this is a way to encourage teachers to continuously learn...My teachers are all environment literate...they are using their environmental knowledge to develop positive attitude towards environment...”“...we are going to set up an appropriate environmental education with teaching for all the subjects, and instrument the community, parents, and social media for the sustainable environment appropriately.

### **Creating ethos of sustainable environment**

The approaches to enhance the environmental education competency of secondary school teachers should involve multidisciplinary instruction learning, community-based learning, project-based learning, happy teaching and learning, and holistic learning management. (Wanchana ,Y., 2020 pp. 140-152). The constant determinations to shape a culture sustainable environment is inclined with the school principal's beliefs on efforts and how it can be practiced to further boost the active participation. In this instance the school principal exemplified the qualities of an environment leader who continuously builds student's and teacher's aptitude towards environment, “...One of the best environmental practices we have implemented this year... With this new approach, we can achieve and actualise the environmental goals ... we are energised with new ideas... we also worked upon target areas and their issues. We set up a social media group where students can share the responses, issues and ideas for self-pace, self-directed and self-access implementation of the progression.”The school principal's efforts to provide insights about environmental sustainability were reflected below. “...Environmental awareness and attitude development was not at all a challenge during this as we Indians are always near to nature and worship in various forms at different local festivals. The relationship with nature needs to be highlighted ...”If educational programs want to accomplish the goals of both sustainable development and environmental education, they should stress student participation and action in order to create stronger feelings of ownership and empowerment in the learning process (Hungerford & Volk, 1990). According to the Environmental Education and Training Partnership (EETAP), people take expert and up-to-date decisions about environment and exhibit a behaviour based on their responsiveness, skills, and attitudes developed in them. In intervals, the students discussed their outcomes, before teachers and principal. Upon participating in the activity, students demonstrated heightened awareness of environmental issues and an increased ability to critically analyse these concerns.

A summary of the environmental initiatives, and attributes towards sustainable environmental development in school is tabulated in Table 1.

<b>Environmental initiatives</b>	<b>Attributes towards sustainable environmental development</b>	<b>Concepts</b>	<b>Descriptors</b>
Knowledge and basic understanding of the environmental issues	Strategies Finding Change Passionate Leadership	Shared Vision Collaboration Interactive Connection	Classroom discussion
Responsibility for the environmental education of professional teachers	Facilitation Intervention Motivation	Goal Setting	Designing the environmental project

Planning and practice regarding the environmental education	Create feelings of ownership and empowerment by offering students direct, hands-on experiences for its participants	Positively influence people in meeting the goals of sustainability	Community Outreach Activities
Promoting learning about the environmental education	Increased level of understanding regarding human-environment interactions and has the potential to increase a sense of stewardship for the environment	Influence the relationship, interest, and understanding between humans and environmental systems	Group discussion and problem-solving
Student's Leadership quality	to engage students academically and provide the skills and experiences necessary to resolve important community issues, to become future community leaders	Engagement of teachers and students in their resolution	Understanding the underlying causes and effects of environmental issues and coming up with solutions
Building outlook	Attitudes, strong feeling, social values, and motivation to participate in the protection and safeguard of environment.	opportunities for students that allows them to develop valuable life skills	Provide environmental awareness and foster better understanding of the local environment
Urgent and appropriate action to solve growing environmental concerns.	Mindfulness and knowledge about environment, its associated problems and the responsible presence of humanity in it.	increased societal awareness towards the environment	Schools have the opportunity to foster an environment conducive to nurturing skills and cultivating innovative ideas that can effectively address the obstacles to achieving sustainable development.
Continuous evaluation	Inculcate skills and ability among citizen to evaluate environmental issues and programmes in terms of social, political, ecological, economic, aesthetic and educational factors.	Inculcating sustainable habits and promoting life-long learning	Mapping the outcomes with activities done during the academic year

Table 1.1: Environmental initiatives, and attributes towards sustainable environmental development in school.

### Recommendations & Conclusions

In relation to environmental education and sustainable practices at school, this case study has consolidated the importance of the participation of students, teachers, community and school principal, their guidance, attributes and beliefs as the key for successful implementation of environment education in school. However, a clear distinction of a single practice of a particular group is not apparent as each group was constantly adjusting to transformational and participative direction at diverse occasions. The school principal's perspective significantly influenced environmental initiatives at the school. The

principal strongly believes that raising awareness and providing consistent follow-up can effectively shape the students' attitudes in developing sustainable behaviour towards environment. Secondly, the school teachers and students also strongly believed that this initiative was the solution for improving community attitude. Developing strong community connect and upkeep are some significant facts for success, and being innovative in implementation of ideas with effective communication skills to bring thoughts across is an advantage. In the light of the research study following recommendations can be made for environmental practices and community participation in schools:

- School-based initiatives and complementary efforts by students and teachers
- Set goals and plan changes for the community-based participation
- Teacher's orientation towards sustainable environmental growth and education
- Guidance and support system for groups of teachers to accelerate the change within the school
- An open communication, cooperation, collaboration and problem-solving by all stakeholders
- Develop shared and participative environment within the school
- Emphasis on continuous community outreach, and interactions
- Prepare checklists, monitoring plans, feedback procedures for sustainable practices in school

The findings of this case study are limited to this particular school. Further investigation is necessary to ascertain the applicability of these principles to other scenarios. In conclusion, community efforts and development of sustainable environmental education plan in school involves the whole working in collaboration with the community. Motivating and inspiring each other for changes and challenges and developing a belief system to encourage sustainability is the key. One can become the leader and ambassador for change at their own level, even an ounce of change at localised level can jointly help in bringing sea change in sustainable educational practices.

#### **Ethical Considerations**

Prior permission was sought from the school authority and principal to share the anecdotes and case study.

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