

Eco-Literacy and Sustainability Integration in English Language Teaching: Insights from CBSE Secondary School Teachers

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Abstract

Education for Sustainable Development (ESD) has become a global priority, highlighting the need for teachers across disciplines to promote environmental awareness and responsible citizenship. This study explores eco-literacy, sustainability perceptions, and classroom implementation practices among CBSE secondary English teachers. A survey was administered to 207 English teachers using an instrument based on ecological knowledge, environmental values, eco-pedagogical competence, and reflective practice. The findings revealed moderate-to-high levels of eco-literacy and positive attitudes toward sustainability-oriented English language teaching. Teachers strongly recognized the role of language education in shaping environmental awareness and ethical responsibility. However, implementation of sustainability-related activities was constrained by limited institutional support, insufficient professional development opportunities, and inadequate collaboration among teachers. The study highlights the growing readiness of English teachers to integrate sustainability into language education while emphasizing the importance of teacher training and institutional support for effective implementation.

Keywords: Eco-literacy, English Language Teaching, Sustainability Education, Teacher Perceptions, Environmental Values, Education for Sustainable Development

Introduction

The increasing urgency of environmental challenges has intensified calls for educational institutions to contribute to sustainable development. Education for Sustainable Development (ESD) emphasizes the development of knowledge, values, attitudes, and competencies that enable learners to address environmental and social challenges (UNESCO, 2020). While sustainability education has traditionally been associated with science and environmental studies, recent research highlights the important role of language education in promoting ecological awareness and critical engagement with sustainability issues (Yu et al., 2024).

Teachers are central to the successful implementation of sustainability education. Their ecological knowledge, environmental values, and pedagogical practices significantly influence how sustainability concepts are integrated into classroom instruction (Mercer et al., 2022). However,

previous studies have identified challenges including insufficient training, limited institutional support, and a lack of sustainability-focused teaching resources (Chetty et al., 2025).

This study examines the eco-literacy levels, sustainability perceptions, and classroom implementation practices of CBSE secondary English teachers.

Literature Review

Eco-literacy refers to an individual's understanding of ecological systems and their capacity to apply this knowledge in ways that support sustainable living (McBride et al., 2013). Contemporary perspectives conceptualize eco-literacy as a multidimensional construct that includes ecological knowledge, environmental values, critical awareness, and action-oriented competencies (Molina, 2022).

Research in English Language Teaching (ELT) has increasingly emphasized the role of language classrooms in addressing sustainability-related issues. English lessons provide opportunities for students to engage with environmental themes, global citizenship, and ethical questions through literature, discussion, and critical literacy practices (Kazazoglu, 2025). Studies have shown that teachers generally support sustainability education but often face barriers related to curriculum demands, lack of resources, and insufficient professional preparation (Mercer et al., 2022; Chetty et al., 2025).

Methodology

A quantitative survey design was employed to investigate teachers' eco-literacy and sustainability-related teaching practices. The participants consisted of 207 CBSE secondary English teachers. The survey instrument measured four dimensions:

1. Ecological Knowledge
2. Environmental Values
3. Eco-Pedagogical Competence
4. Reflective Practice and Institutional Support

Responses were collected using a five-point Likert scale and analyzed using descriptive statistics.

Findings and Discussion

4.1 Eco-Literacy Levels Among Teachers

The findings revealed moderate-to-high levels of eco-literacy among participants. Teachers demonstrated strong familiarity with eco-literacy concepts and recognized the relevance of sustainability to English language education. The overall mean scores indicated positive levels of ecological knowledge, environmental values, and eco-pedagogical competence.

The results suggest that English teachers increasingly view sustainability as part of their professional responsibilities. These findings support earlier studies reporting positive teacher

attitudes toward environmental education and sustainability integration (Mercer et al., 2022; Chetty et al., 2025).

4.2 Perceptions of Sustainability-Oriented English Education

Teachers expressed highly positive perceptions regarding the role of English language education in promoting sustainability. The highest mean scores were associated with statements emphasizing the role of language in shaping students' perceptions of environmental issues and fostering environmental responsibility.

Participants agreed that English classrooms provide meaningful opportunities for discussing environmental challenges and developing ethical awareness. These findings align with research suggesting that language education can promote sustainability through literature, discourse, and critical reflection (Kazazoglu, 2025; Yu et al., 2024).

However, teachers reported lower levels of engagement with critical examination of environmental ideologies embedded in educational materials, suggesting that critical ecolinguistic perspectives remain underdeveloped within classroom practice.

4.3 Classroom Implementation of Sustainability Education

Teachers reported regularly incorporating sustainability-themed reading materials and environmental discussions into classroom activities. Literary texts addressing environmental responsibility, social justice, and ethical concerns were frequently used to promote sustainability awareness.

Despite these positive practices, more transformative approaches such as project-based learning, community engagement, and problem-solving activities were less frequently implemented. This indicates that sustainability integration remains primarily discussion-oriented rather than action-oriented.

The findings support previous research indicating that sustainability education is often implemented through awareness-raising activities rather than through participatory and experiential learning approaches (UNESCO, 2020).

4.4 Institutional Barriers to Sustainability Integration

Institutional support emerged as a significant challenge. Teachers reported strong personal commitment to sustainability but identified several barriers affecting implementation. These included limited collaboration among colleagues, inadequate leadership support, and insufficient professional development opportunities related to sustainability education.

The findings suggest that positive teacher attitudes alone are insufficient for effective sustainability integration. Sustainable educational practices require supportive institutional environments, leadership commitment, and ongoing professional learning opportunities. Similar challenges have been reported across diverse educational contexts (Mercer et al., 2022; Chetty et al., 2025).

Conclusion

The findings indicate that CBSE secondary English teachers possess moderate-to-high levels of eco-literacy and demonstrate positive attitudes toward sustainability-oriented language education. Teachers recognize the potential of English classrooms to promote environmental awareness and ethical responsibility. However, sustainability integration remains constrained by institutional barriers, limited professional development, and insufficient opportunities for collaborative practice. Strengthening teacher education, school support systems, and sustainability-focused professional development initiatives may enhance the capacity of English language teachers to contribute more effectively to Education for Sustainable Development.

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