



Integrating Environmental Education into ELT Classrooms in Pakistani Higher Education

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ABSTRACT

The degradation of the environment and the changes in climate have become the global threats of the 21st century and in order to overcome this challenge all the stakeholders including government, industrialists, and educationists need to come together. (Saiful, 2023) Research has shown that the educational institutions need to be particularly involved in proactively promoting sustainable development. Higher Education Institutions (HEIs) are now called upon to provide students with the knowledge, skills and values they need to learn in order to respond to the global environmental issues. In this context, the English Language Teaching (ELT) is a valuable medium in which the Environmental Education (EE) can be integrated as English language learning is actually an exploration of real problems in social, cultural and global aspects. However, in Pakistan, EE is mainly limited to science subjects and language classes focus mainly on language skills and not much on sustainability concerns. An interdisciplinary approach can work in a better manner to teach our learners the importance and urgency of saving our environment. This paper discusses both opportunities and challenges of implementing EE in the ELT classroom in the context of higher education in Pakistan. Theories of communicative language teaching, content-based instruction, critical pedagogy and Education for Sustainable Development (ESD) are the basis of the study. These theories claim that teaching environmental themes via all four areas of language, critical thinking, intercultural competence, and environmental literacy can enhance awareness among students. The article lists some of the institutional, curricular, pedagogical and socio-cultural challenges to effectively implement such strategies, as insufficient teacher training, curricula designed for examinations, and lack of appropriate teaching materials and institutional support. Finally, the paper offers some practical suggestions for curriculum developers, teacher educators, policy makers and university teachers to cultivate environmentally responsible citizenship in the realm of English language instruction. Incorporating EE in ELT has the potential to change the nature of English classrooms and change them into suitable learning environment for cultivating critical awareness for future contributions to sustainable development in Pakistan.



Introduction

Climate change, biodiversity degradation, pollution, forest loss and resource depletion are urgent global issues that are putting the ecological sustainability and human health at risk. The United Nations' 2030 Agenda for Sustainable Development puts education as one of the key pillars towards sustainable societies. The agenda further points particularly to the need to build environmentally responsible citizens who can find solutions to complex environmental issues. For this reason, sustainability topics are on the rise in universities around the world, appearing in both the curriculum and research. As a result, sustainability is being incorporated more into teaching, research, and community engagement in universities around the world.

HEIs play a pivotal role in shaping the professional workforce for the future, equipping them with the required knowledge and skills to contribute to sustainable development processes, through informed decision-making and responsible citizenship. (Barth & Rieckmann, 2012; Barth et al., 2016) Environmental education is not necessarily concerned with natural science, but environmental issues have at least an interdisciplinary character, thus social science, the humanities and language education have to be involved. English Language Teaching (ELT), especially, offers practical and relevant avenues for the involvement of students in genuine discussions on environmental sustainability while at the same time building their linguistic skills.

Language classrooms' educational functions have undergone a shift from the grammar-based ELT to communicative and content-oriented approaches. (Richards & Rodgers, 2014). The focus of contemporary ELT is on meaningful communication, critical thinking, problem-solving and intercultural competence rather than on learning grammatical structures. This change has opened up possibilities for the inclusion of real-world issues from around the world in the language classroom, such as climate change, environmental protection, sustainable consumption, renewable energy and biodiversity.

As one would expect, the environmental topics can be included in a language class by incorporating all four of the language skills i.e., reading, listening, writing and speaking. Students will have the opportunity to read the articles about climate change and debate on the environmental policies in the classroom. Additionally, they can also create persuasive essays in support of sustainable practices and present a speech/debate on environmental issues in their classrooms. Language learning is fostered side by side through the activities, which extend learners' awareness of the environment and how to better take care of our resources. Students can also learn how to be responsible to leave our planet in a good state for the future generations.

Although Pakistan is a relatively low emitter of the greenhouse gases, it is one of the most climate change vulnerable countries in the world. (Qureshi & Sabir, 2020). The catastrophic floods in 2022, the heatwaves, as well as water shortage and poor air quality compels us to educate the young generation about these environmental issues and equip them with the skills to effectively resolve them.

Despite these facts, EE in the Universities of Pakistan is still in a state of misalignment as in most institutions, the environmental content is limited to special subjects i.e., environmental sciences, geography, agriculture or engineering while in English language courses, the focus is largely on grammar, academic writing, reading comprehension and preparation for examinations. Opportunities to link the learning of language to real issues in the environment are still not utilized effectively.

There are a number of benefits of incorporating EE in ELT. Through the use of authentic environmental content students can relate the classroom activities with the current environmental issues in the world. (Brinton, Snow, & Wesche, 2003). In addition as discussed earlier, debates on environmental problems promote communicative interaction, co-operative learning and critical thinking which are in accordance with communicative language teaching. Thirdly, interdisciplinary learning can be promoted by linking environmental themes with science, social studies, ethics, economics, and public policy. Last but not least, sustainability focused ELT can also enable students to engage in democratic decision making and environmental care.

The incorporation of EE into the ELT is not free of challenges. Khan and Ashraf (2023) state that a significant number of teachers of English have received less formal education in EE and may not be very confident in dealing with scientific or policy issues. Current educational programmes tend to be exam-centered with a focus on rote learning and do not provide for interdisciplinary creativity. The unevenly distributed resources among the universities further intensify these issues thus calling for the theme of justice in accordance to education and particularly environmental education. Every student of Pakistan has a right to gain quality education and learn via modern technology thus enhancing their critical skills and making them a responsible and well aware citizen of our country. Lack of resources are a contributing factor in keeping the individuals away from learning effectively. The institutes with modern resources provide students with a variety of exposure to relevant issues like environmental disaster via videos, movies and internet while the students of less privileged institutes have a limited knowledge overall and specifically about environmental degeneration.

Following are the main objectives:

- To explore theoretical aspects of the integration of EE in ELT.
- To explore the pedagogical opportunities of EL teaching for sustainability.
- To study the institutional and pedagogical issues of Pakistani Universities.
- To suggest feasible approaches towards curriculum development, teacher training, policy-making and teachers to foster ELT in relation to environment.

Literature Review

The increasing severity of climate change, biodiversity loss, pollution, and ecological degradation has transformed environmental sustainability into one of the defining educational concerns of the twenty-first century. Educational institutions are no longer expected merely to develop disciplinary knowledge but also to cultivate environmentally responsible citizens capable of addressing complex global challenges. Within this broader educational transformation, English Language Teaching (ELT) has gradually expanded beyond its traditional emphasis on linguistic competence to incorporate socially relevant themes that simultaneously promote language development and global citizenship. Environmental education has consequently emerged as one of the most productive interdisciplinary domains through which language learning and sustainability education can be integrated. Rather than treating language as an isolated system of grammar and vocabulary, contemporary ELT increasingly positions English as a medium for exploring authentic environmental issues, encouraging learners to communicate meaningfully while developing ecological awareness (Hauschild et al., 2012).

The theoretical foundation of integrating environmental education into ELT derives primarily from Content-Based Instruction (CBI) and Content and Language Integrated Learning

(CLIL). These pedagogical models argue that second language acquisition is enhanced when learners use language to understand meaningful content instead of memorizing linguistic forms in isolation. CBI promotes integrated language skills, extended exposure to authentic input, meaningful interaction, critical thinking, learner autonomy, and project-based learning, thereby enabling students to acquire both disciplinary knowledge and communicative competence simultaneously (Hauschild et al., 2012).

Within this framework, environmental topics provide particularly rich opportunities for authentic communication because they directly affect learners' lives regardless of cultural or national context. Issues such as climate change, biodiversity conservation, plastic pollution, water scarcity, renewable energy, and sustainable lifestyles encourage discussion, problem-solving, critical evaluation, and collaborative learning. Consequently, environmental themes naturally stimulate communicative language use while simultaneously fostering ecological literacy.

Jacobs (1993) was among the earliest scholars to argue that environmental education should become an integral component of second language instruction rather than an occasional classroom topic. He maintained that environmental issues offer authentic communicative contexts that promote meaningful interaction while developing learners' social responsibility. Later, Jacobs and Goatly (2000) demonstrated that ecological issues remained underrepresented in commercial ELT textbooks despite their educational significance. Their analysis revealed that only a very small proportion of English language teaching materials addressed environmental sustainability, highlighting a considerable mismatch between global educational priorities and classroom practice.

The expansion of environmental education within ELT gained further momentum following international initiatives such as UNESCO's Education for Sustainable Development (ESD) framework and the adoption of the United Nations Sustainable Development Goals (SDGs). Sustainable Development Goal 4 emphasizes quality education, while Goal 13 advocates climate action through education and awareness. These initiatives recognize language education as an important vehicle for promoting sustainability because English functions as the dominant language of international scientific communication, environmental policy, and global collaboration. Consequently, English classrooms increasingly serve as spaces where learners not only acquire communicative competence but also engage critically with pressing environmental challenges.

Hauschild et al. (2012) argue that environmental education offers several pedagogical advantages beyond language development. They suggest that integrating environmental topics increases learner motivation, enhances critical thinking, develops learner autonomy, promotes project-based learning, and encourages students to become informed global citizens. Their framework demonstrates how environmental themes can support all four language skills through reading authentic texts, participating in discussions, conducting environmental projects, writing persuasive essays, and engaging in community-based activities. Rather than requiring separate environmental courses, the authors advocate embedding sustainability across existing language curricula through carefully designed thematic units.

The relationship between environmental education and language learning has also been strengthened through ecolinguistics. Developed by scholars such as Halliday (1990) and later expanded by Stibbe (2015), ecolinguistics examines how language influences human relationships with the natural environment. Rather than considering language as value-neutral, ecolinguistics investigates how linguistic choices construct ecological worldviews,

shape environmental attitudes, and either reinforce or challenge unsustainable practices. This perspective has significantly influenced contemporary ELT by encouraging teachers to analyse environmental discourses critically while helping learners recognize how language shapes ecological thinking.

Stibbe (2015) argues that linguistic narratives influence human behaviour towards nature by constructing dominant "stories we live by." Educational practices informed by ecolinguistics therefore encourage learners not only to improve language proficiency but also to critically evaluate environmental discourse, media representations, political rhetoric, and public communication surrounding sustainability. Such approaches expand traditional communicative competence into ecological communicative competence, enabling learners to participate more effectively in environmental decision-making.

Recent scholarship has further extended this interdisciplinary perspective by integrating environmental education with digital technologies and artificial intelligence. Dass et al. (2025) propose a "Dual Learning Path" that combines environmental themes with AI-supported language learning. According to their conceptual framework, authentic environmental content provides meaningful contexts for communication, while AI-powered educational technologies personalise instruction, facilitate learner autonomy, and improve engagement. Drawing upon CLIL principles, the authors argue that environmental issues such as plastic pollution naturally stimulate discussion, argumentation, reflection, and collaborative problem-solving, thereby simultaneously improving linguistic competence and environmental literacy.

Unlike earlier CBI approaches that primarily focused on thematic integration, AI-supported ELT introduces adaptive learning opportunities through intelligent tutoring systems, automated feedback, interactive discussion platforms, and personalised learning pathways. These technological innovations enable instructors to differentiate instruction according to learners' linguistic proficiency while maintaining authentic engagement with environmental content. Nevertheless, Dass et al. (2025) caution that successful implementation depends heavily upon teacher digital literacy, institutional support, curriculum flexibility, and appropriate professional development.

Research further indicates that environmental themes positively influence learner motivation because they establish immediate relevance between classroom learning and students' everyday experiences. Motivation theories suggest that learners participate more actively when educational content reflects authentic social concerns rather than decontextualized linguistic exercises. Environmental issues encourage debate, collaborative inquiry, project-based learning, and experiential activities that promote both intrinsic motivation and communicative confidence. Students are therefore more likely to employ English meaningfully while simultaneously developing environmental awareness and civic responsibility (Hauschild et al., 2012).

Despite substantial theoretical progress, several challenges continue to limit the widespread integration of environmental education into ELT. Many teachers report insufficient environmental knowledge, inadequate teaching materials, limited curriculum time, lack of institutional support, and uncertainty regarding interdisciplinary pedagogy. Earlier investigations by Brown (1991) and Cotton (2006) suggested that some educators avoid environmental topics because they perceive them as politically controversial or beyond their disciplinary expertise. Contemporary studies similarly identify limited teacher preparedness, technological constraints, and rigid curriculum structures as major barriers to effective implementation (Dass et al., 2025).

The integration of environmental education into English Language Teaching (ELT) has increasingly been influenced by broader developments in Education for Sustainable Development (ESD), Green ELT, and Content and Language Integrated Learning (CLIL). These complementary educational paradigms have shifted language education from a narrow focus on communicative competence towards a holistic model that simultaneously develops linguistic proficiency, critical thinking, environmental literacy, intercultural competence, and global citizenship. Rather than treating English as merely an academic subject, these approaches conceptualize language as a vehicle through which learners investigate authentic societal problems, construct knowledge collaboratively, and develop responsible attitudes toward sustainable development (Coyle et al., 2010; UNESCO, 2020).

Environmental Education (EE) emerged formally during the 1970s following growing international concern over ecological degradation and resource depletion. The Tbilisi Declaration (UNESCO-UNEP, 1977) established environmental education as a lifelong process designed to increase environmental awareness, knowledge, attitudes, skills, participation, and responsible behaviour. Unlike traditional science education, EE adopts an interdisciplinary orientation that combines ecological knowledge with ethical responsibility and practical action. Contemporary scholars argue that environmental education should empower learners not only to understand environmental problems but also to participate actively in solving them (Palmer, 1998; Stevenson et al., 2013).

The concept of Education for Sustainable Development (ESD) broadened this perspective by linking environmental protection with economic development, social justice, cultural diversity, and global citizenship. UNESCO (2020) defines ESD as an educational approach that enables learners to acquire the knowledge, competencies, values, and behaviours necessary for building sustainable societies. Instead of presenting sustainability as a purely scientific issue, ESD encourages learners to examine the complex interrelationships among environmental, economic, political, and cultural systems. This holistic orientation aligns naturally with language education because meaningful communication frequently requires learners to negotiate perspectives, evaluate evidence, and propose solutions to real-world problems.

The publication of the United Nations Sustainable Development Goals (SDGs) in 2015 further strengthened the relationship between sustainability and education. SDG 4 emphasizes quality education that promotes sustainable development, human rights, cultural diversity, and global citizenship, whereas SDG 13 specifically calls for improved education and awareness regarding climate action (United Nations, 2015). These international frameworks have encouraged educational institutions worldwide to embed sustainability across disciplines rather than confining it to environmental science courses. Consequently, ELT classrooms increasingly serve as important spaces for discussing climate change, biodiversity conservation, renewable energy, sustainable consumption, and environmental justice.

Within language education, Green ELT has emerged as a practical pedagogical response to these global initiatives. Green ELT advocates integrating environmental themes into language teaching so that students simultaneously develop English proficiency and ecological consciousness. Jacobs (1993) first argued that environmental topics provide authentic communicative contexts that enhance language acquisition while promoting social responsibility. Subsequently, Jacobs and Goatly (2000) criticized commercial ELT textbooks for giving minimal attention to ecological issues, demonstrating that environmental topics represented only a very small proportion of published classroom materials despite their increasing global significance.

Hauschild, Poltavtchenko, and Stoller (2012) significantly advanced Green ELT by proposing an integrated Content-Based Instruction model centred on environmental themes. They argue that environmental education enriches language learning by promoting integrated-skills instruction, project-based learning, learner autonomy, critical thinking, and meaningful communication. According to their framework, environmental issues such as global warming, water pollution, deforestation, biodiversity loss, and waste management naturally stimulate authentic interaction because learners recognize these problems from their own communities and everyday experiences. Environmental themes therefore become powerful vehicles for developing reading, writing, listening, and speaking simultaneously while fostering environmental responsibility.

One of the major strengths of Green ELT lies in its compatibility with learner-centred pedagogy. Unlike traditional grammar-focused instruction, environmental topics require students to investigate information, evaluate conflicting viewpoints, solve problems collaboratively, and communicate opinions using authentic language. Such activities support constructivist learning principles by encouraging learners to build knowledge through interaction rather than passive reception. Project-based activities—including environmental campaigns, recycling initiatives, debates, poster presentations, field investigations, and community awareness programmes—create opportunities for meaningful language use beyond classroom boundaries (Hauschild et al., 2012).

The pedagogical foundations of Green ELT closely correspond with Content and Language Integrated Learning (CLIL). According to Coyle, Hood, and Marsh (2010), CLIL refers to educational contexts where learners study subject matter through a second or foreign language, thereby achieving dual learning objectives involving both content mastery and language development. Unlike conventional foreign language instruction, CLIL treats language as the medium for acquiring disciplinary knowledge rather than the ultimate instructional goal. This dual-focus approach provides learners with extensive opportunities to use language for authentic purposes while developing higher-order thinking skills.

Coyle et al. (2010) conceptualize CLIL through the widely recognized 4Cs Framework, comprising Content, Communication, Cognition, and Culture. Content refers to disciplinary knowledge; Communication involves language learning; Cognition emphasizes critical thinking and problem-solving; and Culture promotes intercultural awareness and global understanding. Environmental education naturally complements each of these dimensions. Students acquire scientific and social knowledge regarding sustainability (Content), communicate ideas using English (Communication), analyze environmental problems critically (Cognition), and appreciate diverse environmental perspectives across cultures (Culture).

Environmental themes are particularly suitable for CLIL because they transcend disciplinary boundaries. Topics such as climate change, plastic pollution, biodiversity conservation, renewable energy, food security, sustainable cities, and water management integrate concepts from geography, biology, economics, sociology, ethics, and political science. Such interdisciplinary content encourages learners to employ English for authentic academic communication while simultaneously developing environmental literacy. Consequently, language learning becomes contextualized within meaningful intellectual inquiry rather than isolated linguistic practice.

Recent scholarship has extended CLIL through digital innovation and artificial intelligence. Dass, Shahabani, and Anuar (2025) propose a "Dual Learning Path" in which environmental content provides meaningful communicative contexts while AI-powered technologies

personalize language instruction. Their conceptual model argues that environmental issues such as plastic pollution naturally stimulate discussion, argumentation, reflection, and collaborative problem-solving. Simultaneously, artificial intelligence supports adaptive learning, individualized feedback, learner autonomy, and differentiated instruction, thereby increasing both language achievement and environmental awareness.

Pakistan is suffering from serious environmental problems such as climate change, water scarcity, air pollution, deforestation etc. (Ali & Khan, 2018; Qureshi & Sabir, 2020) Despite all this, as mentioned earlier, EE is not uniformly being implemented in Pakistani Universities. The teaching of environmental content is mainly found in the Environmental sciences, Geography, Agriculture, Forestry and Engineering programmes. Sustainability initiatives tend to focus lesser on disciplines of the humanities and language. The typical focus of the English language course is usually grammar, learning skills and syllabus completion.

Theoretical Framework

The study is mainly based on two complementary theories which can facilitate the integration of EE into ELT, which are Content Based Instruction (CBI) and Communicative Language Teaching (CLT). Brinton, Snow, & Wesche (2003) argue that students need to learn language in meaningful contexts and topics, and that language learning is more effective if students are exposed to authentic and intellectually relevant language. Environmental sustainability is a fertile field for developing English that allows students to learn the language while studying real-life topics like climate change, pollution, biodiversity and resource management. (Snow & Brinton, 2017). The use of environmental themes allows students to improve their vocabulary, reading comprehension, academic writing, and critical thinking skills, and connect their classroom learning with real-world challenges. CLT also reinforces this approach by focusing on the importance of real, relevant communication and use of language (Richards & Rodgers, 2014). The topics related to the environment naturally inspire speaking, debate, presentation, research project, and group problems solving activities. Students apply their knowledge of English to express opinions, analyze information and suggest solutions to sustainability issues. Inclusion of EE in the ELT program is not only to aid in the development of language skills but also to foster environmental awareness, critical engagement, and responsible citizenship. This mixed approach can be adopted in the Pakistani context of higher education to develop learner centered classrooms in English language education and also to achieve sustainable development education. (Wiek, Withycombe, & Redman, 2011)

Research Methodology

This study adopts a qualitative exploratory research design to examine the opportunities and challenges involved in integrating environmental education into English Language Teaching (ELT) classrooms in Pakistani higher education. A qualitative approach is appropriate because the study aims to explore educational practices, pedagogical perspectives, institutional conditions, and contextual factors rather than quantify relationships between variables. The research is situated within an interpretivist paradigm, which considers educational experiences and practices as socially constructed through the interactions of teachers, learners, institutions, and cultural environments. The study is guided by the theoretical perspectives of Communicative Language Teaching (CLT), Content-Based Instruction (CBI), Critical Pedagogy, and Education for Sustainable Development (ESD), which provide a foundation for analyzing the role of environmental themes in language learning and sustainability education.

The study uses qualitative document analysis as the primary method of data collection. The data sources include scholarly research articles on environmental education and ELT, publications related to sustainable higher education, UNESCO documents on Education for Sustainable Development, higher education curriculum documents, environmental policy documents in Pakistan, and studies focusing on language education in developing-country contexts. The selected documents were reviewed according to three criteria: their relevance to environmental education, sustainability, and ELT; their academic credibility; and their contribution to understanding sustainability practices in higher education. Through analysis of these sources, the study identifies existing approaches, challenges, and research gaps related to incorporating environmental education into Pakistani ELT classrooms.

The collected documents were analyzed using thematic analysis based on the framework proposed by Braun and Clarke (2006). The analysis involved systematic reading, coding, categorization, and interpretation of recurring ideas within the selected literature. Initial codes were developed around key concepts such as environmental awareness, sustainability literacy, language skill development, teacher preparedness, curriculum integration, institutional support, and assessment challenges. These codes were organized into broader themes, including environmental education as meaningful ELT content, sustainability-oriented pedagogy, teacher and curriculum challenges, institutional opportunities and barriers, and the development of a sustainable ELT framework for Pakistan. The identified themes were interpreted through the study's theoretical framework to understand how environmental education can contribute to innovative, learner-centered, and socially relevant English language teaching practices.

Results

The thematic analysis of the literature, educational policy documents, and contemporary pedagogical scholarship reveals five interrelated themes concerning the integration of Environmental Education (EE) into English Language Teaching (ELT) in higher education in Pakistan: (1) the pedagogical potential of ELT as a platform for sustainability education, (2) curricular and institutional constraints, (3) teacher preparedness and professional development, (4) learner engagement through interdisciplinary pedagogies, and (5) policy implications for Education for Sustainable Development (ESD).

ELT as a Platform for Environmental Education

The analysis indicates that English language classrooms provide an appropriate interdisciplinary space for integrating environmental education because language learning inherently involves authentic communication, critical thinking, and discussion of contemporary global issues. Unlike traditional approaches that emphasize grammar and examination-oriented language instruction, communicative language teaching (CLT) encourages learners to negotiate meaning through socially relevant topics. Environmental issues such as climate change, biodiversity loss, pollution, water scarcity, sustainable consumption, and renewable energy offer authentic communicative contexts that simultaneously develop linguistic competence and environmental literacy.

The literature consistently demonstrates that integrating environmental themes improves students' motivation because learning tasks become connected with real-world challenges. Reading authentic environmental texts, debating climate policies, writing argumentative essays on sustainability, and delivering presentations on local environmental problems enable learners to practice all four language skills while developing ecological awareness.

Consequently, ELT serves not only linguistic objectives but also broader educational goals aligned with Education for Sustainable Development (ESD).

Curriculum Remains Examination-Oriented

A dominant finding emerging from the reviewed literature is the continued emphasis on examination-driven curricula in Pakistani higher education. English language courses generally prioritize grammatical accuracy, vocabulary acquisition, academic writing, and examination preparation, leaving limited opportunities for interdisciplinary themes.

Existing syllabi rarely include environmental topics as core instructional content. Where environmental texts appear, they are often treated simply as reading passages rather than vehicles for critical discussion or problem-solving. Consequently, language learning remains largely disconnected from students' social and ecological realities.

The analysis further suggests that curriculum developers frequently perceive environmental education as the responsibility of science disciplines, thereby overlooking the potential contribution of language education to sustainability. This disciplinary separation restricts opportunities for holistic learning despite international recommendations advocating cross-curricular approaches to sustainability education.

Teacher Preparedness as the Central Challenge

Another recurring theme concerns teachers' preparedness for implementing EE within ELT classrooms. The literature indicates that many English language teachers possess strong linguistic expertise but have limited formal preparation in environmental education or sustainability pedagogy.

Three major dimensions of teacher-related challenges emerge.

First, teachers often report insufficient knowledge regarding environmental issues and sustainable development.

Second, limited professional development opportunities reduce teachers' confidence in integrating interdisciplinary content into language lessons.

Third, existing teacher education programmes continue to prioritize language pedagogy without incorporating Education for Sustainable Development competencies.

These factors collectively discourage innovation despite teachers' generally positive attitudes toward sustainability education.

Discussion

The analysis indicated that there are great opportunities as well as many challenges in incorporating EE into ELT classrooms in Pakistani HEIs. The results show that sustainability-oriented ELT can be used to promote language development, critical thinking and environmental citizenship, but institutional and pedagogical changes are needed for this to be achieved. The most important discovery is that the environment offers very rich contexts for meaningful language learning. Traditional English courses tend to focus on language without linking it to real-life knowledge, leading to low engagement with the learners. The limitation is overcome by environmental topics, which link classroom activities to issues students may face in their communities.

Analysis shows that all four language skills i.e., listening, speaking, writing and reading can be fostered by environmental themes: writing essays and reading reports on sustainability

issues, conducting discussions and speeches and listening via real-world media. Major topics could include: air pollution, water scarcity, climate migration, and waste management. The findings support content-based principles that language learning is more effective if the learner is exposed to language to explore meaningful content (Brinton, Snow, & Wesche, 2003). Therefore, EE is not about having to set aside the language goals; it is about enriching language goals.

The results also reveal the effect of environmental themes in the context of higher order thinking skills. Environmental issues are multifaceted and are not easily solvable. They need students to examine causes, assess the implications, examine viewpoints, and suggest solutions for their own institutions and then globally. Students learn skills of critical literacy through debates, problem solving activities, research projects, etc. (Thomas, 2000; Stoller, 2006) Examples of relationships that students should consider include the following when talking about climate change policies: economic development, social inequality, environmental protection, resources, economic factors and government responsibility. This is consistent with Critical Pedagogy, which focuses on the process of learning, whereby learners actively engage in important discussions and examine the social realities. Giroux (1988)

Another challenge is Teacher Preparedness in Pakistani universities. Limited teacher preparation is identified as a big challenge. While teachers of English feel that the topic of sustainability is important, they do not feel confident in incorporating sustainability into their language courses. Teachers might need assistance in choosing suitable environmental materials, simplifying technical information and designing sustainability-based tasks. A professional development program is needed to successfully guide teachers. Sustainability should be integrated into teacher training in addition to innovative approaches to language teaching. If teachers lack confidence and support in environmental education, it can be only a superficial component, not a successful pedagogical strategy.

Curriculum rigidity, as mentioned in the study is another challenge. There are many university level English courses in Pakistan that are still exam-centered, grammar-based and textbook-based. For the purposes of sustainability oriented ELT, however, flexibility is needed to incorporate authentic materials and learner centered activities in the syllabus. It is essential to have institutional support to take a practical step towards changing the syllabus. The universities can help by revising course objectives; encouraging interdisciplinary teaching, supporting teacher development and utilizing innovative teaching methods. The results show that it is not possible for environmental ELT to be solely reliant on individual teacher enthusiasm. It demands a commitment from institutions with regard to sustainability.

Additionally there is the possibility of the project-based learning model to relate learning in the classroom with environmental action. Projects enable students to explore real-life problems. Examples include campus sustainability surveys, environmental awareness campaigns, recycling projects, community interviews and making / analyzing sustainability reports.

The results indicate that a successful model of ELT for sustainability in Higher Education in Pakistan should have 5 interdependent components: 1-English curriculum Integration with environment related themes. 2-Teachers to be trained in sustainability education & implementing innovative strategies. 3-Learner-Centered Practices i.e., pupils should be involved by means of projects, discussion and collaborative activities. 4. The universities should provide support to sustainability efforts by promoting policies and resources. 5. Continuous evaluation and analysis of the efforts to improve the strategies further. This

model enables ELT to become a powerful source to develop environment awareness in learners rather than just as a language-learning subject.

Conclusion

The growing environmental challenges around the world have created a need for new approaches to education. Students need to develop the ability to understand and respond to complex global issues. This study has explored the opportunities and challenges of integrating Environmental Education (EE) into English Language Teaching (ELT) in higher education in Pakistan. The discussion showed that ELT can play an important role in promoting sustainability because language learning develops communication, critical thinking, interpretation, and awareness of real-life social issues. Environmental topics also provide meaningful contexts for developing students' reading, writing, speaking, and listening skills while improving their environmental literacy.

Several educational theories support the integration of EE into ELT, including Communicative Language Teaching, Content-Based Instruction, Critical Pedagogy, and Education for Sustainable Development. Together, these approaches show that English language classrooms can become spaces where students build their knowledge about environmental sustainability, think critically, and develop responsible citizenship via analyzing the issues and solving them. However, successful implementation also requires addressing several challenges. These include limited teacher preparation, curriculum restrictions, a lack of teaching materials, examination-oriented assessment systems, and limited institutional support. These challenges highlight the need for educational reforms rather than only classroom level changes.

Integrating EE into ELT provides an important opportunity for Pakistani universities to connect language education with current global challenges. Curriculum innovation, teacher training, project-based learning, interdisciplinary teaching, and environmentally friendly institutional policies can strengthen this integration. Sustainable ELT should not be treated as an approach that connects language learning with real-life issues. By integrating environmental perspectives into English classrooms, higher education institutions in Pakistan can help develop environmentally aware and socially responsible citizens who are prepared to contribute to a more sustainable future.

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