

Students' Perceptions of Integrating Education for Sustainable Development into Undergraduate English Courses to Improve Sustainability Knowledge

Naureen Zaman¹ & Dr. Asma Shahid Kazi²

¹*Assistant Professor, School of Education, Department of Linguistics and TESOL, Beaconhouse National University, Lahore, Pakistan.*

PhD Scholar, Lahore College for Women University, Lahore, Pakistan.

E-Mail: naureen.zaman@bnu.edu.pk

²*Associate Professor, Chairperson, Department of Elementary and Teacher Education, FOE, Lahore College for Women University, Lahore, Pakistan, Email: asma.kazi@lcwu.edu.pk*

Abstract

This research explores the perceptions of English language learners at the undergraduate level regarding the integration of education for sustainable development into an English language course. The themes identified in Target 4.7 of Sustainable Development Goal 4, Quality Education, were embedded in a compulsory course offered to undergraduates at a private liberal arts university in Lahore. The course content, identified by the university under the Higher Education Commission guidelines, were taught through sustainability themes integrated in the course employing the Content and Language Integrated Learning (CLIL) framework that guides embedding subject matter into language instruction. Participants perceived the integration to be highly effective for developing their language proficiency in a meaningful manner through increasing their sustainability awareness and developing them as conscientious citizens. Therefore, it is recommended to teach the English language through sustainability topics, particularly at the undergraduate level, to empower youth to develop as sustainability advocates.

Keywords: Education for Sustainable Development, English Language Teaching, Sustainability Education, Sustainability Knowledge

Introduction

As the world continues to confront the rising challenges of climate change as well as social and economic inequalities, developing a safe and sustainable world appears increasingly challenging. While this places achieving Agenda 2030 at risk, meeting it becomes highly critical at the same time. The United Nations (2023) report recognizes this concern, describing Agenda 2030 as a “Promise in Peril”. The situation is especially alarming for Pakistan, a country that contributes less than one percent (almost 0.9%) of global carbon and yet ranks as the most climate-vulnerable country according to The Germanwatch Climate Risk Index, 2022 (Abubakar, 2025).

A major reason behind this ranking are the devastating floods of 2022 and 2025 that indicate the environmental and economic risks that the country faces (Abubakar, 2025). The World Weather Attribution (2025) has attributed around 12% contribution of human-induced factors to climate change rather than identifying it dues to purely natural causes. This highlights that people are generally unaware of the consequences that their actions can have on the environment, economy, and society. This lack of awareness indicates that there is an urgent need for including Education for Sustainable Development in the curriculum to ensure that youth has sustainable behaviour, which is defined as sustainability citizenship (Dobson, 2011). Learning about sustainability is important for people of all age groups. However, it is especially important for youth, who should be equipped with sustainability knowledge based on the crucial role they need to play as decision makers of the future, as they are the ones responsible for shaping a sustainable future at national as well as global level. The involvement of youth in sustainability issues, especially in their communities, is identified as one of the key priorities in the United Nations’ Global Action Programme (2014) on Education for Sustainable Development (ESD) (2015) that focuses on active youth participation in driving change. However youth involvement in sustainability citizenship is very low in Pakistan. This is also indicated by the results of Malik et al.’s (2025) study that show that almost 71% of youth do not know the term sustainability, identifying a significant gap in sustainability education provided to the youth. Given that tertiary education serves as a bridge

between learning and practice, universities provide a critical platform to equip students with sustainability knowledge, attitude, and skills that can develop students as sustainability advocates (Habib et al., 2021).

This indicates that integrating Education for Sustainable Development (ESD) into higher education is unavoidable. However, introducing separate courses on sustainability may not be a viable solution considering the increased work for designing and developing these courses, their inclusion in curriculum, and increased student workload, indicating that integrating sustainability themes into an already existing English language compulsory course can be a possible solution. The Higher Education Commission (HEC, 2023) has made it compulsory for all undergraduates to complete two English language courses as a part of their bachelor's degree requirements. Therefore, integrating sustainability themes in an English language course can provide an opportunity to reach a large student body to deliver Education for Sustainable Development.

This study explores the perceptions of undergraduates about embedding sustainability themes into a compulsory English language course in Pakistan to investigate learners' views on the effect of this integration for improving their sustainability knowledge, by integrating sustainability themes in an English language course titled *Functional English*. This research intends to suggest a useful approach for developing sustainability awareness among learners' at the higher education level.

Embedding sustainability concepts into English language courses can be achieved through Content and Language Integrated Learning (CLIL). CLIL allows language to be taught through the desired content maintaining an equal focus on both language development and understanding of the content through which the language is taught (Coyle et al., 2010). In Pakistan, this approach can be considered particularly relevant. English enjoys the status of both an official and second language and is widely regarded as a class marker and a guarantee to academic achievement and upward socioeconomic mobility (Rahman, 2020). Thus using English courses as a medium for sustainability education can develop learners' language proficiency while also developing students' awareness of local and global sustainability challenges, while avoiding additional challenges of curriculum integration and designing a new course.

Rationale of the Study

Despite the growing recognition of ESD and its integration into various disciplines, there is limited research on integrating sustainability content into English language teaching, especially in the context of Pakistan. There is a lack of research that studies students' perceptions of integrating ESD integration in existing language courses, whereas such integration, if successful, can guide curriculum reforms for including education for sustainable development and can also guide Pakistan's policy for higher education. The empirical evidence on the use of CLIL-based language learning to develop university students' sustainability knowledge in developing countries, especially in Pakistan is also insufficient. Therefore, the present study investigates undergraduates' perception of integrating sustainability concepts in a compulsory English language course that offers a novel strategy to deliver sustainability awareness in higher education.

Research Questions

1. What are the participants' perceptions about understanding concepts of sustainability through English language learning?
2. How has learning about sustainability through an English language course influenced their understanding of sustainability concepts?
3. How do they perceive learning English language through sustainability content?
4. How do participants compare English learning through sustainability concepts and through existing instructional material for teaching English?

Literature Review

Education for Sustainable Development

Education for Sustainable Development (ESD), also referred to as Sustainability Education (SE), or Education for Sustainability (EfS) defined as a learning process that "equips learners with the knowledge, skills, values, attitudes and behaviors to live in a way that is good for the environment, economy, and society. It encourages people to make smart, responsible choices that help create a better future for everyone" (UNESCO, 2013, p.3). While all these terms are used literatures (Scottish Government, 2020) interchangeable, ESD is the most commonly found term in United Nations and UNESCO documents.

It is to be noted that the first element in UNESCO's definition of ESD is knowledge, which is followed by attitude and behaviour. This sequence is also found in Bloom's taxonomy (Bloom et al., 1956) where knowledge makes the foundation of learning. Schrader and Lawless (2004), conducted a meta-analysis of knowledge, attitude, and behaviour (KAB) and their results show that these three constructs are deeply interconnected. As sustainable behavior means sustainability citizenship (Dobson, 2011), it can be inferred that giving youth sustainability knowledge is extremely important for developing them as sustainable citizens, who are aware of the importance of a sustainable future and they possess the knowledge, attitude, and skill necessary to practice sustainable behaviour, so they can contribute to a safer and more sustainable world.

According to the Decade for Education for Sustainable Development (DESD) framework (UNESCO, 2005) education for sustainable development should develop higher order thinking skills such as critical thinking, empathy, and agency, in youth to develop them as active citizens and improvement in society.

Quality Education (SDG 4)

Education is fundamental to achieving the United Nations' Agenda 2030 for Sustainable Development, where Quality Education (SDG 4) is recognized as foundational to meet all the other goals. SDG4 seeks to ensure inclusive, equitable, and quality education for all and promote lifelong learning opportunities. Among its ten targets (4.1-4.7 and 4.a-4.c) target 4.7 particularly delivering Education for Sustainable Development (ESD). Marron and Naughton (2019) describe it as transformative, noting its potential to inspire action across all SDGs.

Target 4.7 states that "by 2030 all learners should acquire the knowledge and skills needed for sustainable development, including education for sustainable development, sustainable lifestyles, human rights, gender equality, and a culture of peace." It also focuses on global citizenship, appreciation of cultural diversity, and understanding the contribution of cultures to sustainable development. While the themes mentioned in Target 4.7 are already included in the Decade of Education for Sustainable Development (UNESCO, 2005), the repetition of sustainable lifestyle, human rights, gender equality, and a culture of peace highlights their importance to ensure sustainability education. Moreover, while the inclusion of both Education for Sustainable Development and Global

Citizenship Education (GCED), can be viewed as repetition, since both are overlapping in nature, their presence indicates the holistic nature of Target 4.7. GCED that is grounded in principles of human rights and gender equality (Marron & Naughton, 2019), reiterates the concept of ESD that focuses on developing empathy, tolerance, and civic engagement. Together they develop a holistic concept of education to develop promotes environmental responsibility, social justice and intercultural understanding among learners.

Embedding these themes within compulsory English language courses through Content and Language Integrated Learning approach can therefore provide an effective pathway for developing undergraduates' sustainability knowledge while simultaneously enhancing their English language skills.

CLIL and English Language Education

Teaching English through a variety of contents is not a recent development; Native speakers of English language learned reading and writing through instruction in other school subjects in the 1970s. This led to the recognition that academic subjects provide meaningful and authentic context for language learning (Larsen-Freeman & Anderson, 2011). The emergence of Content Based Instruction (CBI) in the United States and Content and Language Integrated Learning (CLIL) in Europe, in the early 1990s marked a significant pedagogical shift, formally recognizing that language could be effectively taught through a range of disciplinary contents. indicated that language teaching can be done through a variety of contents. While both CBI and CLIL share several and features, Richards and Rodgers (2016) argue that CBI presents more focus on content teaching then language instruction. Coyle et al. (2010) define CIL as a “dual-focused, content-driven approach” that “extends the experience of language learning” while separating it from typical language learning approaches (p. 1). By merging language learning with subject knowledge, CLIL tends to go beyond traditional Communicative Language Teaching (CLT) approach and offers learners more contextualized, authentic, and cognitively demanding language learning experience. Through “complex cognitive processes” and “innovation” CLIL encouraging learners to use language as a tool for learning the content and language instead of simply practicing language structures (Graddol, 2006, as cited in Coyle et al., 2010, p. 6).

The interdisciplinary nature of CLIL makes it highly suitable for integrating sustainability education with English language teaching. Through CLIL, English can be taught through various sustainability topics identified in Target 4.7. This allows students to develop English language proficiency while learning about sustainability. Therefore CLIL makes language learning a meaningful, contextualized, and motivational learning experience that enables learners to understand local and global sustainability challenges while empowering them to propose effective solutions to combat these issues. Coyle et al. (2010) provided examples of CLIL where environmental science is combined with citizenship education such that learners learn the language while they also analyze their own roles and responsibilities for contributing to a sustainable future. Similarly, integrating the themes identified in Target 4.7 into English language courses can develop students' awareness of sustainability issues while reinforcing communicative and cognitive dimensions of language learning.

Integrating Sustainability Themes in English Language Teaching

Research on integration of ESD into English language teaching is in infancy as there are limited studies that have explored the implementation and effectiveness of this integration. Maley and Peachy (2017) wrote a book on integrating ESD into English language teaching. Kara (2020) proposed a framework for integrating Education for Sustainable Development in English language teaching; however, the framework has not been tested yet. Jodojin (2020) also studied the impact of teaching ESD material on participants' attitudes, norms, and beliefs towards sustainability. Moreover, their focus remained limited to the environmental domain only.

In Pakistan, research on the integration of ESD into English language teaching is scarce. Existing studies primarily analyzed higher-secondary school level text books (Jamil et al., 2024). However, these resources are not for university-level instruction.

Pakistani Higher Education Context

Pakistan adopted the sustainable development goals (SDGs) in 2016, making them a part of its national development agenda, a year after they were introduced by the United Nations. Consequently, these goals were included in the National Education Policy (2017) reaffirming Pakistan's commitment to meeting these goals. The education policy emphasizes SDG 4, Quality education outlining most of its targets, including 4.1

(achieving 100% enrolment at secondary literacy by 2030) 4.2 (Early Childhood Education), 4.3 (Technical, Vocational, and Tertiary Education), 4.5 (eliminate discrimination in education, mentioned as access to children with disabilities), 4.6 (achieving 100% literacy by 2030 among youth) are specifically mentioned. It can be noted that these targets focus on ensuring 100 percent enrolments at various levels of education; However, Target 4.7 that focuses on equipping learners with the knowledge, skill, values, and attitudes necessary for sustainable development is not explicitly mentioned. Although the definition of quality of education in the national education policy document appears to take guidance from Target 4.7 as it suggests inclusion of “The golden principles of peace, tolerance and human rights etc.” in the curricula, its inconsistent presence particularly in higher education curriculum remains a question.

This lack of explicit focus on Target 4.7 in the National Education Policy (2017) tends to indicate restricted implementation of ESD principles in higher education while highlighting the need for more concrete inclusion this target Target 4.7 themes in tertiary education. The themes identified in in this indicate its close relevance to Pakistan, where there is environmental degradation, economic inequalities and social issues such as gender inequality, human rights violation, and religious intolerance, among others. According to the World Economic Forum’s Global Gender Gap Report, 2025 (Dawn, 2025), Pakistan is ranked the last in the world in gender equality, while the World Justice Project’s Rule of Law Index (2025) reports that there is increased discrimination and lack of civic rights. These circumstances increase the importance of Target 4.7 for Pakistan and emphasize the urgency of including these themes in higher education curricula. These measures can increase awareness of sustainability challenges faced by the country and prepare students as informed and responsible citizens who are capable of contributing to a more equitable and sustainable society.

Research Gap

Since sustainability is often viewed as associated with its environment domain only, it is generally considered a scientific area, whereas it is but is also comprises the economic and social domains in addition to the environmental aspect. For instance, issues such as gender inequality and intolerance concern both social and economic domains that affect sustainable development.

While research on education for sustainable development is growing at a global level as well as in Pakistan, integrating ESD into English language education remains largely unexplored. Existing studies (Kalsoom & Khanum, 2017) have mainly focused on teacher education while research on education seldom considers integrating sustainability themes into existing subjects that can reach students across disciplines. Especially, the integration of Target 4.7 themes into English language courses is an area that still awaits researchers' attention. Although some studies (Petkute, 2012; Mambu, 2023; Kalsoom and Khanum, 2017) have ESD integration in teacher education and textbook analysis, there is limited empirical research investigating how sustainability themes can be integrated into university level English language courses. To engage students from diverse disciplines.

Recognizing the importance of these themes and the need to equip undergraduates with the relevant knowledge, this research addresses this gap by integrating Target 4.7 themes into a compulsory English language course and exploring undergraduates' perceptions of learning about these themes through that course.

Significance of the Study

This study holds significance for education policymakers as well as curriculum developers as the findings can guide policy development for inclusion of ESD in education and its integration in existing curriculum of higher education. It can also be beneficial for English language teachers who can embed it in their courses and impart sustainability education through English language teaching and contribute to developing their students as advocates of sustainable development.

Methodology

Research Design

This study benefits from exploratory qualitative research design, commonly used in educational research, to explore students' perceptions of integrating sustainability content into English language learning. Qualitative research is particularly valued for its ability to provide an in-depth exploration of participants' experiences of a given phenomenon without reducing them to measurable variables and thus tends to be flexible and adaptive (Creswell, 2012). An exploratory research design is especially useful for investigating areas where limited prior research exists and where the aim is to obtain initial insights to understand a phenomenon

more deeply. Considering the paucity of research on incorporating sustainability themes in English language curriculum particularly at higher education level, both globally and within Pakistan, the present study addresses a novel context with limited prior understanding of students' perceptions in this context. Therefore, exploratory study design is most suitable for eliciting participants' views on learning about sustainability topics identified in Target 4.7 through an English language course in a context where English is taught as a second language.

Procedure

The compulsory English language course, offered to first-semester students is a foundational course designed to develop the four language skills (reading, writing, listening, and speaking) along with a strong focus on grammar and punctuation. The course is traditionally taught through material centered on a variety of general topics.

For the purpose of this study, sustainability themes identified in Target 4.7 were carefully integrated into the existing course, aligning sustainability-related content with specific language skills and grammar areas. The theme of sustainable development was introduced through speaking activities where the students practiced language function such as introductions, greetings, and asking for information. These language functions provided a suitable communicative foundation for introducing the concept of sustainable development. For the present study, several speaking activities were designed around the concepts of sustainable development where participants spoke to each other about issues such as climate change facing the world and our country.

After the foundational theme was established, subthemes of lifestyle (fashion, food, energy and water, and recycling) as suggested by Cohen (2017) were introduced mainly through reading texts and some grammar exercises. For example, skimming and scanning exercises comprised information on food and fashion footprint. This alignment was based on logical progression from introducing the concept of sustainability to recognizing participants' own responsibility towards contributing to sustainable development. Reading tasks were followed by discussions where participants reflected their own practices in the mentioned areas.

Once they understood their role, themes of human rights, gender equality and culture were blended with grammar and punctuation areas following the sequence of the Functional English course outline. For example gender

equality was taught through simple present tense and human rights were taught through punctuation exercises on comma. Writing lessons focused on the concept of global citizenship, encouraging students to express their understanding of sustainability issues and propose feasible solutions. For example, in application and letter writing they were asked to interview people in their community, identify a problem that people face, and write an application to the relevant authorities suggesting a viable solution to the problem.

Selection of Participants

The study was conducted in a private liberal arts university in Lahore, purposively selected for its emphasis on interdisciplinary teaching. This institutional context provided a conducive environment for blending sustainable development themes with English language instruction.

Typically, each department at the university enrolls students studying the same discipline in sections, resulting in the development of homogenous groups in which students have similar characteristics such as age, their educational background, and the discipline that they are enrolled in. For the current study, a heterogeneous group was created that comprised undergraduates studying in the first-semester but enrolled in different programmes at the university. This group was purposively created to ensure representation of students from all the departments of the university. The sample comprised 36 students, aged 18-20, who had completed 12-13 years of their education and were at a comparable level of English language proficiency. Since all the participants were interviewed for data collection, census sampling that comprises the entire population was implemented.

Data Collection

Data were collected through six semi-structured focus-group interviews each group comprising six participants. The group size aligns with Creswell's (2012) recommendation of 4-10 participants for effective discussion. Focus group interviews were chosen as they allow for participant interaction that generates multiple perspectives. Discussion amongst participants during focus group interviews may result in the emergence of unexpected topics for the researcher yielding richer data than individual interviews (Stewart & Shamdasani, 2015).

These interviews (with each comprising 30-45 minutes) were conducted at the end of the course at the university ensuring participants' comfort and

privacy. These interviews were recorded with the participants' permission to be transcribed later. The interview questions were developed in alignment with the research questions to explore participants' perspectives on learning English through sustainable development content and its comparison with other English language courses studied earlier. The questions also asked about the extent to which the course developed participants' knowledge of sustainable development.

Data Analysis

The interviews were analyzed using the six-step framework presented by Braun and Clarke (2006) which well-known for providing a thorough analysis for being flexible and suitable for the identification and organization of the themes in qualitative data. As the first step of this framework is to gain familiarity with the data, the transcriptions of the interviews were repeatedly read to understand the data thoroughly. In the next step codes were assigned to the sections that were identified as relevant to the study. Following this the codes were grouped together to identify the themes. Once the themes were obtained, a co-researcher reviewed and verified them for their correctness. Finally, title were given to the themes (discussed below) and the final report was written.

Findings

The two overarching themes that were obtained through the analysis were i) Sustainable Development and ii) English Language Learning. Both of these themes comprised sub-themes that revealed participants' perceptions about learning sustainability through English language classes, their learning experiences, and their views on embedding sustainability content into their English course. To maintain anonymity, participants are coded as P#-G# where P represents the participant number assigned during transcription and G represents the group number to which the participant belonged. For instance P3-G5 refers to participant 3 in group 5.

Sustainable Development

This theme addresses research question 1 and 2 by showing participants' understanding of the sustainability concepts both prior to and after studying the English language course.

Initial Lack of Awareness of Sustainable Development Concepts

Many participants reported that they had very limited understanding of sustainable development concepts identified in Target 4.7 prior to studying this course. Several acknowledged beginning with almost no foundational

knowledge, noting that “We had zero knowledge of sustainability before classes” (P3-G1) and that they possessed only a “bare minimum idea” (P2-G2). One student explained that they had “heard the terms but did not know what they meant” (P2-G2).

Participants also acknowledged unawareness of the specific sustainability themes introduced in the course. In discussing sustainable lifestyle and consumption patterns, one student expressed surprise at learning about the environmental cost of everyday items, saying, “I was surprised to know a T-shirt takes tons of water to make” (P5-G6), while another observed, “We didn’t know food had a footprint” (P1-G6). Similar gaps emerged in their awareness of other Target 4.7 themes. For example speaking of human rights they explained, “We didn’t know we had rights” (P6-G4). Misconceptions were also evident in the domain of gender equality as one participant reported, “I though feminism is about women-supremacy” (P5-G3).

Exposure to the themes of culture and global citizenship also revealed gaps in their knowledge as one participant reflected, “I learnt about other cultures in this course” (P4-G5), and “I didn’t know I had an impact on society” (P2-G4)

Together these responses indicated a significant lack of sustainability awareness among participants. This highlights a clear need for teaching sustainable development to youth.

Increase in knowledge

Participants reported increase in their sustainable development knowledge and understanding after studying the course. They recognized that the course had been useful in teaching them about sustainable development and expressed positive views towards. Noting that the course had brought a significant change, one participant said, “Miss, we have gone from zero knowledge to hundred in these classes” (P3-G5). Some participants spoke about specific areas in which, according to them, their learning had occurred, such as increased knowledge in environmental concepts. One of them mentioned, “I now know what carbon emission is” (P3-G4). One of the participants spoke about lifestyle, and said, “Now I know which clothes are better and what to prefer. I didn’t know these things before” (P1-G6).

Participants reported that their understanding of the social domain of sustainability improved after studying this course. This domain as

represented in Target 4.7 includes the themes of human rights, gender equality, culture, and global citizenship. They reported that they learnt about human rights. One of the participants said, “now I know about the freedom of speech” (P2-G4). They also acknowledged learning about gender equality, and one of them said, “now we know the difference between gender and sex” (P4-G5). Another participant noted “We know feminism is for equality of men and women” (P1-G1). Speaking of the influence of learning about culture, a participant added, “We learnt about other cultures and respecting them” (P4-G3). They also reported learning about global citizenship, and a participant mentioned, “Now we realize that our actions have consequences” (P2-G2).

These responses indicate that the participants felt that they achieved a high level of awareness of sustainability concepts after studying this course, showing that the course helped them to understand the several important aspects of sustainable development.

Personal Growth

Participants also reported that the course contributed to their personal growth, and several explained that sustainability content had positively influenced their thinking and behaviour. One participant noted that they had “grown to some extent and cared more about sustainability too” (P4-G5). Another participant expressed having developed as a better individual, and said, “In fact we are better human beings now” (P1-G3). One associated the course with self-improvement, observing that it had “helped me a lot as a person to improve myself” (P5-G3). They linked their improvement to behavioural change with a participant expressing, “I will not be adding to the waste” (P4-G6).

These responses indicate that participants thought that the course developed self-awareness in them as well as the ability to analyze themselves, and this led to pro-sustainability behaviour in them. This implies that they viewed the course to go beyond learning about the language and sustainability content. It influencing their personal values and everyday practices in favour of sustainability.

English Language Learning

This theme addresses RQ3 and 4 and captures participants’ perceptions of learning English through sustainable development concepts

Interest Development

Participants reported enjoying the course and found it different from other courses that they had studied earlier. They mentioned that English was a boring subject to them and they were not happy to enroll in this course as they thought it would be equally boring too. However, in this course they found the content to be relevant and more relatable than earlier courses. Explaining that they had enjoyed studying the course, one participant noted, “It wasn’t boring” (P4-G6), and another shared similar views saying, “It was actually fun” (P5-G1). They acknowledged the integration of sustainability in English language teaching to be the reason for developing their interest. One participant expressed, “we were switching between sustainability and language and sustainability and language. So this switching actually made it very interesting and not boring” (P2-G1). Overall participants’ views demonstrate a change in their attitude towards English language learning due to the integration of sustainability themes. These perceptions indicate that content integration may play a key role in increasing learners’ engagement in language learning.

Meaningful Learning

Participants reported that learning English through sustainable development content supported better learning by incorporating authentic and relevant content. They identified studying this course to be useful and a meaningful experience for language learning. As one participant expressed, “I think this is the English that will be useful in practical life” (P6-G5). They also valued the instructional material explaining that “the worksheets helped us learn a lot” (P3-G1) and that reading the handouts enabled them to “understand and realize that yes, these things are important” (P3-G1). Thus presenting language in context made participants view language as meaningful and connected to real-world issues.

Improvement in Language Learning

Participants perceived improvement in their language skills and reported better performance across language skills and grammar and comprehension. For example, one participant explained their confidence in speaking had improved, stating, “Definitely improved. I don’t feel nervous at all” (P6-G5). Similarly, another noted, “My speaking has improved” (P4-G5). They also reported improvement in their reading habits with one saying, “that made us enjoy reading and we are now more

fond of reading than earlier” (P2-G1). Improvement in writing skills was also mentioned, with one participant reflecting, “Before [earlier] I used to write without thinking. Now I have to think before I write” (P3-G4).

These findings demonstrate that participants not only improved their language proficiency but also developed deeper understanding and reflective skills as an outcome of the integrated content.

Overall, results of the present study illustrate that students engaged with both the language and sustainability content, indicating growth across linguistic, cognitive, and personal domains.

Discussion

This study explored undergraduates’ views on learning about sustainable development (Target 4.7 themes) by integrating it in a compulsory English language course offered to undergraduates. Findings of this study showed that participants perceived the course to be useful for improving their understanding of sustainability concepts. Moreover they also reported improvement in themselves by as they understood the concept of sustainability and realized that their behaviour with regards to ensuring sustainability needs to improve. They also reported improvements in their English language proficiency.

Enhancing Awareness of Sustainability Concepts

Participants’ responses indicated that they viewed the course to have brought improvement in their sustainability knowledge and understanding of Target 4.7 themes, as many participants reported that integrating sustainability content with English language learning was very useful in making them aware of their sustainability concepts. Similar findings are reported by Petkute (2012), who found that ESD integration in the English curriculum for Engineers was effective for developing participants’ sustainability awareness and skills of learners. Similar findings were also reported by Makarova (2020) who found that sustainability knowledge and understanding of the concepts of participants improved after studying an English language course in which content on environment was incorporated. Khattak et al. (2022) conducted a study in Pakistan and reported that higher levels of sustainability awareness were found in learners who received sustainability education as compared to those who did not receive education on sustainability. These findings show that there is a need to incorporate sustainability education in university curriculum for two very important reasons. The first reason is that it effectively equips

youth with sustainable development knowledge, and secondly it addresses the gap in Pakistan where many young people currently lack the understanding required to contribute effectively to sustainable development efforts. Thus delivering education for sustainable development through English classes can empower them to advocate sustainable development in Pakistan.

Personal Growth and Social Responsibility

As the participants found the course to be effective for developing the sense of responsibility in them and encouraging them to improve their behaviour and become responsible citizens of the country, they described it as their personal growth, and mentioned that they were now more conscientious of their impact on the environment as well as those around them than they were before joining this course. The current study did not directly assess the development of critical thinking skill in the participants as a result of studying the integrated course; however, participants' responses suggested enhanced self-awareness and a developing capacity to critically evaluate their role in promoting sustainable development. These findings are similar to the results of Mambu's (2023) study. Mambu reported that participants in his study developed a greater awareness of sustainability issues as a result of studying a course with SDG-integrated into critical English language teaching, which is inspired by critical pedagogy.

These findings also indicate that the integration of ESD into English language teaching was very useful, as educating participants about sustainability knowledge enhanced their awareness and developed analytical thinking in them while developing an understanding of their personal and social responsibilities in them at the same time. As Dobson (2011) considers sustainable behaviour to be the same as sustainable citizenship, participants' analysis of their own actions and their realization that there is a need to improve their behaviour demonstrates the effectiveness of studying sustainability themes in an English language course. Their acceptance of improving SD themes is an indication that the outcome of the course aligns with UNESCO's Global Action Program (2015) that encourages involving youth in community engagement and sustainable development.

Meaningful Language Learning

Participants reported that they found the course to be meaningful. They viewed the sustainability topics as relevant to them and therefore considered English language learning useful as compared to the earlier English language courses in which general topics and themes were employed for learning the language. Participants also mentioned that they found several tasks such as grammar exercises and writing tasks to be more useful when connected with sustainability themes, as they acknowledged these themes to be directly relevant to them. As they discussed real world issues in the class, they viewed that language was learnt with a real purpose. Aligned with the philosophy of CLIL for language learning, participants in the present study did not view language as a subject but as a communication tool. This aligns with the essence of CLIL for learning language.

As CLIL is content-driven, it enhances the language learning experience (Coyle et al., 2010). The 4C framework of CLIL (content, communication, cognition, and culture) emphasizes the significance of integrating subject matter with language learning. Content provides context and communication supports practical use of language. It also underscores the development of higher order thinking skills (cognition) such as analytical and critical thinking within the learners' sociocultural context in which language learning is taking place.

In line with the principles of 4C framework, findings demonstrate that integration of sustainability content into English learning can simultaneously develop language skills, analytical thinking, and awareness of societal issues. The relevance of content and the recognition of the significance of sustainability challenges facing the world, provided a new lens on English enabling learners to think, critique, and act in relation to global issues. Language became relevant beyond classroom exercises as participants reported developing an increased sense of social responsibility by referring to it as "personal growth" and "becoming better human beings". This suggests that the experience of learning language in context connected it to personal and societal concerns.

Interest in Language Learning

Participants reported viewing this course as interesting, contrary to the earlier ones that they had found to be boring because the relevance of sustainability topics increased their interest and motivation to learn

English. Participants' perceptions of English learning as a boring was also reported by (2025) who noted learning grammar is often perceived as uninteresting, due to boring activities and a focus on memorization. On the other hand, the relevance of sustainability topics developed participants' interest as language learning was not viewed in isolation and consequently not boring. As participants reported enjoying learning and looking forward to classes where they learnt new concepts, this implies that when learners perceive something as important, their interest and consequently motivation for learning it increases. In the present study as well, the perception of participants of sustainability topics as significant and relevant to them increased their interest and motivation to learn English. This finding aligns with Krashen's (1985) Affective Filter Hypothesis that interest is a key factor that enhances language learning. It suggests that as integrating sustainability themes in language curricula creates relevance of the content and language for them, this relevance increases learners' interest and consequently aids language learning.

Considering that boredom hampers learning (Liu et al., 2022), the fact that English learning is considered boring is an issue that needs researchers' and academics' attention. As findings of this study show increased interest due to relevance of material is critical for higher education as it identifies the need to improve English language pedagogy by incorporating content that is relevant to learners to enhance their interest for improved learning. Moreover, in the context of Pakistan context where English language is viewed as a class marker and learning it guarantees professional and academic success (Rahman, 2022), it is essential to make learning English interesting. A recent research by Aashiq and Zahid, (2024) shows that even after studying English throughout their academic lives, students in Pakistan cannot speak it accurately and confidently. Under these circumstance, this two-pronged approach may serve the purpose of making language learning interesting for learners in Pakistan's context as integration of sustainable development in English language learning enhances learners' interest, resulting in improved language learning while increasing their sustainability knowledge.

Conclusion

Integration of sustainability into English language teaching was well-received by participants. They acknowledged that this integration increased their awareness about sustainability students and improved their

language proficiency without compromising their learning in either of these domains. Aligned with the 4C framework of Content and Language Learning, sustainability content contextualized language learning and made it a meaningful experience. As suggested by the framework, this integrated learning extended beyond language acquisition and awareness of sustainability concept to the development of higher order cognitive skills. Students demonstrated critical thinking, reflection, and increased self-awareness viewing themselves as responsible and conscientious citizens.

This contextualization and relevance of the content also resulted in creating students' interest in language learning, which is identified as important for improved language learning and one of the key variables in Krashen's (1985) *Active Filter Hypothesis* for language learning. Similarly, in the present study as well, the participants identified the course to be interesting and viewed the integration of sustainability content in language learning as a positive approach.

These findings are especially important for Pakistan which is a country that face several environmental, societal and economic challenges. Pakistan adopted the United Nations Sustainable Development Goals in 2016, and included them in its National Education Policy in 2017. As participants admitted that they lacked sustainability knowledge before they studied this course, this illustrates that youth in Pakistan is not fully prepared to deal with the sustainability challenges that the country faces. This indicates that there is an urgent need for educational reforms, where sustainable development is fully integrated in the university curriculum. Considering the need for enabling youth to overcome the challenges that Pakistan faces, it is critical to equip them with sustainability knowledge, so they can identify the causes behind these challenges, understand the seriousness of the situation and present effective solutions to ensure a safe future.

These findings are also valuable for the education system in Pakistan where English is taught throughout the students' academic lives for being the official language and is integral to upward mobility. As enhancing students' language proficiency can increase their chances to academic and professional success, developing their interest in necessary for improved language learning, and ESD integration in English language learning can effectively serve this purpose.

Suggestions for future research include exploring the extent to which participants' sustainability knowledge and language skills improve as a result of integrating sustainability themes into English language learning. Moreover, there can be research on exploring if the change in participants' views affects their behaviour or not.

In conclusion, it is highly beneficial to integrate sustainability themes in English language learning at university as students can become aware of sustainability issues and suggest their solutions while learning English language that is essential for their success. Thus, this integration due to its two-pronged approach is highly beneficial and should be integrated in English language curriculum across the universities in Pakistan.

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