INSIGHT MEETS INNOVATION: INTERDISCIPLINARY EXPLORATIONS IN LANGUAGE

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FOREWORD

Sustainability has emerged as a defining concept across education, language studies, and the humanities, extending far beyond environmental concerns to encompass ethical responsibility, pedagogical continuity, social inclusion, and cognitive durability. In language-related disciplines, sustainability is increasingly understood as the capacity to design learning environments, theoretical frameworks, and cultural interpretations that remain responsive to global challenges while supporting long-term educational and social development. *Insight Meets Innovation: Interdisciplinary Explorations in Language* brings together international scholars who approach sustainability as a multidimensional and interdisciplinary concept, explored through language education, linguistics, literature, translation, and educational studies.

The volume opens with **Aysima Aysın İNAN** and **Zerrin EREN's** chapter, *"Fostering Environmental Awareness through Picture Books Used in English Language Teaching,"* which examines how picture books employed in early ELT contexts can raise environmental awareness without provoking eco-anxiety. Drawing on ecocriticism and sustainability-oriented pedagogy, the authors analyse how nature, animals, and human–environment relationships are represented in selected picture books and demonstrate how carefully designed visual and narrative materials can simultaneously support language development and ecological consciousness.

In *"Beyond Sound and Speech: Integrating Orthography into Models of L2 Phonological Acquisition,"* **Canan DEVECİ** addresses sustainability from a theoretical and cognitive-linguistic perspective. Challenging auditory-centred models of second language phonological acquisition, the

chapter proposes the Orthography-Integrated Speech Learning Framework (O-SLF), arguing that sustainable pronunciation teaching requires recognising orthography as a core component of phonological development. By integrating psycholinguistic and literacy-based models, the study offers a more ecologically valid account of contemporary language learning environments.

Canan YOĞURT, in *"A Model for Sustainable Language and Culture Education through Premchand's Short Stories,"* explores sustainability through literary and cultural education. The chapter demonstrates how literary texts can function as tools for sustainable language and culture education by fostering ethical awareness, social responsibility, and intercultural understanding. By foregrounding culturally grounded narratives, the study highlights literature's role in sustaining cultural memory and human values within language education.

In *"Metacognitive Awareness and AI Integration in English Language Learning: A Mixed-Methods Study among Turkish Preparatory Students,"* **Ceren TEKER, Gülşah ÖZCAN,** and **Cihangir TUNCA** investigate how artificial intelligence can support sustainable learning when combined with metacognitive awareness. The chapter presents empirical findings on students' strategic use of AI tools, emphasising learner autonomy, reflective learning, and long-term academic development.

Ecem EKER UKA's chapter, *"Directed Motivational Currents in Turkish EFL Research: An Overview of Postgraduate Studies,"* offers a sustainability-oriented synthesis of motivational research. By analysing postgraduate studies conducted in Turkey, the chapter highlights how sustained motivation functions as a key factor in long-term language learning success and educational resilience.

In *"Evaluating the Reliability of AI-Assisted Writing Assessment: A Comparative Analysis of WritingGPT, ChatGPT, and Human Raters in EFL Contexts,"* **Emre ARTUT, Kübra ŞIK,** and **Yasin TURAN** examine the sustainability of assessment practices by comparing AI-generated and human writing evaluations. The chapter critically assesses the reliability

and pedagogical implications of AI-assisted scoring systems, addressing concerns related to fairness, consistency, and ethical assessment design.

The affective dimension of sustainable language learning is foregrounded in *"Exploring the Link between Foreign Language Enjoyment and Reduced Test Anxiety in EFL Settings"* by **Emre ARTUT, Merve GAZİOĞLU,** and **Beyzanur GÜNEŞ**. The study demonstrates how positive emotional engagement contributes to sustainable learning environments by mitigating anxiety and supporting learner well-being.

In *"Sustaining Student Motivation in Online Language Learning: A Self-Determination Theory Perspective,"* **Erguvan URAS EREN** employs Self-Determination Theory to explore motivational persistence in digital learning contexts. The chapter highlights how autonomy, competence, and relatedness function as pillars of sustainable online language education.

Eser ÖRDEM's chapter, *"Ideology in Translation Pedagogy,"* extends sustainability discussions into translation studies by examining how ideological positioning shapes pedagogical choices. The chapter argues for critically aware translation instruction as a means of sustaining ethical and reflective translator education.

Assessment sustainability is further explored in *"Interrater Reliability in Rubric-Based Essay Scoring: A Case Study in a Turkish EFL Classroom"* by **Esra DEMİRCİ**, which investigates scoring consistency in EFL writing assessment. The chapter underscores the importance of transparent and reliable evaluation systems for sustainable academic practices.

In *"Exploring Instructors' Perceptions and Practices of Mediation in the School of Foreign Languages,"* **Feride ACAR** and **Eda DURUK** examine mediation as a pedagogical practice that supports inclusive and sustainable language education by addressing learner diversity and communicative needs.

Güneş ÇOKAÇAR's chapter, *"Who We See and Who We Become: Gender Representation and Stereotyping in Secondary School EFL Coursebooks,"* analyses gender representation in secondary school EFL coursebooks. The study highlights how stereotypical portrayals undermine

social sustainability and argues for more inclusive and balanced representations in instructional materials.

Teacher education and professional sustainability are central to *"Transforming Teacher Preparation: The PEACE Framework for a Digital Age"* by **Hidayat ABU ELHAWA**, which proposes a framework integrating pedagogical, ethical, and technological competencies for future educators.

In *"Competency-Based English Training Module for Healthcare Professionals: A Needs Analysis Study,"* **İrem ERGİŞİ** and **Ülkü KÖLEMEN** address sustainability in professional language education by aligning language training with sector-specific needs, ensuring long-term applicability and effectiveness.

Kübra ŞIK, in *"Bridging Personalization and Inclusion: Integrating Artificial Intelligence in University-Level English Language Teaching,"* examines how AI integration in university-level ELT can support sustainable and inclusive teaching practices when guided by pedagogical principles rather than technological determinism.

The chapter *"When AI Robots Teach: Exploring the New Dynamics of Learning"* by **Meryem AKÇAYOĞLU** and **Azra TAJHIZI** explores emerging learning dynamics shaped by AI-driven instruction, critically evaluating its implications for learner agency and sustainable educational ecosystems.

Nouh ALAOUI MHAMDI's *"Staging Inclusion or Reinforcing Exclusion? UDL and Moroccan Assessment Cultures"* critically examines assessment cultures through the lens of Universal Design for Learning, questioning whether institutional practices genuinely support sustainable inclusion.

In *"Empowering Pedagogy with AI: Evolving Teacher Attitudes and Instructional Practices in EFL Contexts,"* **Pelin DERİNALP** analyses evolving teacher attitudes toward AI, highlighting how pedagogical agency and reflective practice are central to sustainable technology integration.

Environmental sustainability is explicitly addressed in *"The Impact of Sustainability-Focused English Instruction on Student Attitudes, Awareness, and Vocabulary Growth"* by **Rana SUAYİN** and **Merve GAZİOĞLU**, which demonstrates how sustainability-oriented content influences students' attitudes, awareness, and vocabulary development.

Digital competence is examined in *"A Closer Look at In-Service EFL Teachers' Digital Literacy Skills"* by **Selma ÇELİK** and **Ebru ŞİRE KAYA**, emphasising professional sustainability in rapidly evolving educational contexts.

In *"Investigating Leadership Profiles of Language Instructors through Metaphors: EFL Students' Perspectives,"* **Sezer Alper ZEREYALP** and **Cemile BUĞRA** explore leadership conceptualisations that shape sustainable institutional cultures.

Sinem ÇAPAR İLERİ's chapter, *"Ecosophy and the Neurodivergent Self: Reading Diary of a Young Naturalist through Næss, Guattari, and Bateson,"* offers an ecocritical and philosophical reading of *Diary of a Young Naturalist*, linking ecological thinking with neurodiversity and ethical selfhood.

Legal and disciplinary specificity is addressed in *"Law Students' Perceptions of AI-Generated Feedback in Legal English: Toward Sustainable Writing Support"* by **Stelina NDREU**, which examines sustainable writing support in Legal English through AI-mediated feedback.

Ümmügül MUTLU-KÖROĞLU, in *"Turkish EFL Teachers' Agency for Inclusive Education within Higher Education Context: Tensions and Resources,"* explores institutional tensions and resources shaping teacher agency within higher education, foregrounding sustainability as professional resilience.

Learner perspectives are central to *"The Pen Meets the Algorithm: Learners' Evaluation of AI Scoring and Feedback in EFL Writing Assessment"* by **Yusuf Emre YEŞİLYURT**, which investigates student evaluations of AI-based writing feedback systems.

In *"Constructing Teacher Effectiveness: Turkish EFL Teachers' Conceptualizations across Different School Contexts,"* **Zehra EREN** analyses how EFL teachers conceptualise effectiveness across educational contexts, highlighting sustainability as adaptability and reflective practice.

The volume concludes with *"Teaching across Cultures: Exploring Academic English Instructors' Intercultural Communicative Competence"* by **Zehra ERTAY** and **İlkay GİLANLIOĞLU**, which examines intercultural communicative competence among Academic English instructors, underscoring its role in sustaining global academic communication.

Taken together, the chapters in this volume demonstrate that sustainability in language-related disciplines is not a singular or prescriptive concept but a dynamic and interdisciplinary endeavour. By bringing together diverse methodological, theoretical, and pedagogical perspectives, *Insight Meets Innovation: Interdisciplinary Explorations in Language* offers a comprehensive exploration of how language education and research can contribute to sustainable futures grounded in inclusivity, ethical responsibility, and innovation.

December 2025

Editors

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Notes on the Editors

Prof. Dr. Yonca ÖZKAN is a full-time professor in the Department of English Language Teaching and the director of the School of Foreign Languages of Çukurova University, Adana, Türkiye. She teaches undergraduate and graduate courses in teacher education and second/foreign language teaching methodology. Her research focuses on pre-service language teacher education, language teaching methodology, and technology integration into language teaching and language teacher education. She is currently conducting a research study on translanguaging in EFL contexts.

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Fostering Environmental Awareness through Picture Books Used in English Language Teaching

Aysima Aysın İNAN[1] **Zerrin EREN**[2]

Sustainable education can be achieved in a sustainable environment. Individuals must be aware of the fact that human activities can cause air, water, and soil pollution, deforestation, climate change, and loss of biodiversity, and that each person is responsible for protecting the ecosystem. This is because water, air, and soil pollution have hazardous effects on human health. Furthermore, climate change may lead to mass migration, which is also called climate migration. Therefore, raising environmental awareness is of utmost importance. Environmental awareness refers to recognizing and preventing pollution caused by human activities (Takala, 1991). This awareness must be raised during childhood. Childhood is the period when a child attends school. Schools have a key role in shaping children's perspectives. At school, children may learn both the courses offered and develop awareness about such issues as environmental pollution. One of the courses offered at schools is English. English language teaching (ELT) extends beyond the teaching of grammatical structures, encompassing the development of new

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perspectives and the cultivation of awareness of global issues (Zahoor & Janjua, 2020). Therefore, textbooks and other teaching materials may help raise environmental awareness. Materials used in language education may be utilized to raise awareness about a sustainable environment, because language education not only involves teaching the grammatical structures of the target language but also developing students' language skills (Cates, 2002). These skills are developed within various contexts.

Besides the course books, there are picture books prepared for teaching English to young learners through both texts and illustrations. For example, illustrations in picture books can support students' speaking skills by encouraging them to describe what they see and express related ideas. Picture books generally fall into two categories—informational picture books and tales—and both types use visual and verbal elements that support children's language development. Informational picture books present factual knowledge about various issues, such as climate change, while fictional tales evoke empathy and foster values in children. Bland (2023) has shown that picture books have a significant role in providing relatable symbols by encouraging empathy in children. These features allow picture books to function as effective materials for ELT.

Nowadays, the world has witnessed rapid changes. These changes require people to realize the consequences of the environmental problems caused by human actions. Detecting the problems leads humans to be conscious of a better future, which provides environmental awareness. Environmental awareness is a never-ending responsibility that every human should uphold. This responsibility should be implemented from an early age since this period plays a crucial role in gaining values and learning the human-nature relationship. Introducing nature to children helps them become conscious individuals and sets an example for future generations. According to Pancheri-Ambrose and Tritschler-Scali (2013), "lessons that allow children to explore the natural world will help them build an authentic relationship with it" (p. 57). Therefore, in English classrooms, nature ought to be depicted as engaging and relatable, rather

than intimidating and something to be avoided. In this context, English classes function as places that introduce children to the natural world through stories and illustrations, allowing them to engage with it meaningfully. Through visual elements and texts that contribute to the learners' creativity, picture books help children improve their English skills while encouraging students to cultivate environmental awareness. Consequently, it is important to consider how nature is depicted in picture books used in English language classrooms because these materials may shape children's perspectives on environmental awareness and thoughts on natural phenomena around them.

Bekteshi and Xhaferi (2020) suggest that integrating sustainability into education enables young learners to think critically about globally important issues. To achieve this, material and curriculum designers draw on the United Nations framework of Sustainable Development Goals (SDGs) and sustainability principles (Arslan & Curle, 2024). Picture books are effective as materials since they motivate students to be environmentally conscious individuals by combining visual and narrative elements. The aim of this study is to examine how nature is presented in the selected picture books and whether these presentations help foster environmental awareness.

Literature Review

Being environmentally aware is a responsibility for humans because nature is affected by human activities. Environmental awareness includes comprehending ecological concepts and the effect of human activities on nature. Understanding the human-nature relationship and protecting the world we live in provides a sustainable future. A sustainable future is possible by raising children as environmentally aware individuals, since they need to be conscious adults to protect the ecosystem. To raise environmentally aware individuals and influence younger generations, people need to understand environmental problems. Environmental problems should not be introduced by evoking fear; instead, people should

be encouraged to produce solutions. It is necessary to know the world we live in to produce solutions to environmental problems. Integrating natural elements into education and literature is essential for introducing and presenting nature to children. Adapting natural elements into lessons and literary works enables children to learn ecological concepts. In this learning process, ecocriticism serves as a theoretical framework for comprehending the human-nature relation and fostering environmental awareness. Ecocriticism, an umbrella term, concerns nature, the representation of nature in literary works, and the human-nature relation (Nayar, 2009). By depicting natural elements, it reminds humans of their responsibility towards their surroundings. Ecocriticism connects literature and environmental studies by integrating ecology into literary analysis (Buell, 2009). Analysing nature representation in literary works fosters environmental awareness by highlighting ecological concepts and the human-nature relation. Whether intentional or not, the use of natural aspects in literary works shapes readers' perception of nature. As Glotfelty (1996) defines, ecocriticism connects literature and ecology, and this relationship enables people to be environmentally aware. When this perspective is adapted to a classroom atmosphere that uses picture books in language teaching, it is possible for teachers to teach students human-nature relations. Thus, ecocriticism functions as a framework for using picture books in English classrooms. Ecocriticism is fundamentally concerned with how nature is depicted in literary works, where the events in the work take place, and how the representation of nature is conveyed to people (Glotfelty & Fromm, 1996). When picture books are used in children's language education, ecocriticism functions as an effective tool for teachers since it may draw students' attention to learning how nature is presented in the works. How nature is represented in literary works is important, especially in picture books that are designed for children, because environmental awareness should be raised without causing eco-anxiety. Eco-anxiety is a negative feeling about climate change and the environmental problems it causes, and environmental education is critical to prevent it. Incorporating an ecological perspective into language

education contributes to teachers considering ecological values when selecting picture books, besides grammatical concerns. Furthermore, integrating global issues into language education improves young learners' critical thinking skills, creativity, and perspectives on sustainability.

Sustainability is one of the most important global issues of recent times. The United Nations has adopted the SDGs to address this problem and offer solutions. According to SDG 4 (Quality Education) and SDG 13 (Climate Action), sustainable education is essential for everyone, and its implementation is needed (United Nations, 2015a, 2015b). In this context, language education serves as a crucial tool for a sustainable future. Involving global issues such as climate change, biodiversity loss, and sustainable development in education promotes children becoming globally aware citizens with strong critical thinking skills (Yu et al., 2024). By doing so, students will engage with English, the lingua franca, to explore and discuss environmental issues within a meaningful context. Including ecology in ELT develops both language skills and environmental awareness. Picture books have a considerable impact on this process because they connect visual and written elements that support language learning and inspire students to be ecologically conscious.

Picture books, fictional or informational, are essentially designed to tell children stories through illustration and narrative elements (Kotaman & Tekin, 2019). Since fewer words are used in picture books compared to other literary works, they can be one of the most effective materials for teaching vocabulary to children. Illustrations are indispensable elements, since they function as reflections of reality by supporting the narration.

Fictional picture books prioritize plot and creating imaginative atmospheres rather than giving information (Northrup, 2012). As a result, the visuals used in these books do not have to reflect reality but serve well-written storytelling and expand readers' imaginations. Although fictional picture books may not directly be designed for education, teachers' roles are to guide children to think critically about the plot, interpret the hidden

meanings of the story, and encourage them to discuss the themes presented in the work.

Picture books are literary works that anyone can read, even though there is a misconception that they are designed for children. Picture books are used in many fields, including education, because they challenge people to rethink what they already know (Tan, 2006). Picture books are one of the important materials used in early education, thanks to their simple yet effective storytelling through illustrations and written elements (Sipe, 1998). If a picture book is designed for children, the target age group should easily understand the plot. According to the study conducted by Hsiu-Chih (2008), teachers tend to use picture books in their classrooms because children feel motivated if they learn English through picture books. Furthermore, the teachers in that study noted that good storytelling captures students' attention and that discussing the hidden meanings in the book both fosters specific values in students and contributes to language learning. The choice of visuals in picture books, depending on their intended classroom use, influences how children interpret the story, develop their critical thinking skills, and realize representations of nature and animals around them in real life. Children's capacity to understand the nature and environmental problems is elevated by the combination of written and visual elements (Kümmerling-Meibauer, 2018).

Language learning materials should be designed with sensitivity to young learners' psychology because they may cause eco-anxiety or ecophobia unless they exclude triggering content. For example, if there are some references about natural disasters, such books may unintentionally lead to eco-anxiety. By evoking students' emotions through illustrations, picture books enable them to consider their choices and values in life. While it is globally known that environmental issues as climate change and pollution are worrying issues, it is necessary to prioritize children's psychology and develop awareness of protecting the ecosystem in which they live without frightening them (Hickman, 2020). Love for nature should be fostered by introducing children to living entities and natural elements around them.

By doing so, children do not tend to avoid nature, and they are encouraged to protect the environment.

While concepts such as eco-anxiety and eco-concern about nature have gained importance in the field of education in recent years, questions have been raised about how nature is presented and how children face ecology-related problems. “Eco-anxiety,” a term derived from concerns about global warming, refers to worry regarding the future of the planet. Since anxiety is a psychological problem that varies its symptoms in every person, individuals may experience it through feelings such as fear, anger, depression, or shame (Kurth & Pihkala, 2022). Promoting environmental awareness in the elementary years of children is essential. Age-appropriateness and attracting the attention of students are critical in terms of the effectiveness of eco-friendly education.

Educators and families need to take responsibility in fostering awareness among children and in transforming eco-anxiety into a constructive force. According to Sobel (1996), children who cannot articulate their questions about nature tend to develop ecophobia. Children can be raised as environmentally conscious individuals by their parents without causing ecophobia. Parents should remain informed about environmental hazards and adopt behaviours that protect nature, enabling their children to model these attitudes. Simultaneously, families should closely nurture and support children’s curiosity about the environment.

According to research combining ecocriticism and ELT, picture books visualize and present complex nature-related topics to children through textual and visual elements (Sun et al., 2025). In this way, young learners not only learn nature representations in the target language but also gain environmental awareness. Although every picture book does not have the responsibility of fostering environmental awareness, children may develop eco-anxiety or ecophobia if the writer of the book does not take children’s psychology into account in the presentation of natural disasters or human-nature relations. Therefore, teachers should be environmentally aware individuals and should pay attention to how natural disasters and

human-nature relations are portrayed in the books in order to choose appropriate books for children. According to Hickman (2024), global issues such as climate change, environmental pollution, and animal extinction are subjects that children need to learn by digesting, but it is critical not to create fear while raising environmental awareness. Thus, in addition to fostering a love for nature, the representations in picture books should, if possible, focus on solutions to potential environmental problems.

Teachers have a crucial role in fostering environmental awareness and improving students' English language level using picture books. To achieve this effectively, it is essential for teachers to possess a comprehensive understanding of ecological concepts. Therefore, it is possible to say that teachers' duty is to select instructional materials that present nature positively, thereby cultivating an appreciation for the environment among young learners, rather than instilling fear or anxiety. Teachers must also be environmentally aware while choosing suitable materials.

The literature reviewed showed that the aim of language education is to teach students the structure of the target language as well as to foster values such as environmental awareness. Previous studies have proven that picture books contribute to the development of environmental awareness in children (Hsiao & Shih, 2016; Neupane, 2023; Aurélio et al., 2021). However, when nature is represented negatively through text and images in picture books, it may unintentionally cause ecophobia or eco-anxiety in children. Few ecocritical studies have concentrated on picture books that are specifically designed for early childhood English language teaching (Bland, 2023; Brock, 2024). Therefore, this study aims to fill this gap by examining how selected picture books used in English language teaching reflect nature and the relation between nature and humans.

Methodology and Data Collection

This study aims to conduct an ecocritical analysis of selected English

picture books used in early language education, focusing on how nature, natural events, animals, and the relationship between nature and humans are depicted. The books analyzed include Levels 1, 2, and 3 and are designed for children between the ages of 5 and 8. In this context, picture book versions of "*Hansel and Gretel*", "*Little Red Riding Hood*", "*The Happy Tree*", and "*The Magic Bag*", prepared for teaching English and frequently used in English language classrooms, were selected for analysis. These stories were analysed within the framework of ecocriticism, which focuses on the depiction of nature in literary works. Within the scope of this study, the analysis is limited to fictional picture books, tales, as they differ from informational picture books in that they are not explicitly intended to give information about ethical values such as environmental awareness and sustainability. This study does not include human participants since it only requires the analysis of published picture books. Thus, no ethical approval or participant information is required. Particular attention was given to the representation of nature and the affective responses it may elicit. The selected picture books were analysed using critical discourse analysis (CDA), a qualitative research method that examines the social context in which language expressions are used. Hence, CDA effectively uncovers the ecological messages hidden in the visual and written elements of the picture books.

This paper, which attempts to bring ecological studies and ELT together, argues that materials, such as picture books used in ELT, can raise awareness of the ecosystem and promote sustainability.

Findings

Little Red Riding Hood

The widely known tale *Little Red Riding Hood* is adapted for teaching English and retold by Jason Andrew Gots for the level 1. Similar to the original story, the mother asks Little Red Riding Hood to take the food to the grandmother. While walking through the forest, the picture book portrays the forest primarily as the place where the wolf roams and

disturbs other creatures. The representation of the wolf as a figure of fear is not solely shaped by lexical choices; the illustrations also depict the fear that the other animals experience when encountering the wolf. The wolf is portrayed as an ugly creature waiting to eat the grandmother and Little Red Riding Hood. The word choices used to describe the wolf construct it as an animal to be cautious of. The wolf is described as "scary" and "bad" (Gots, 2018, pp. 13-14). Different from the original one, the grandmother is not at the cottage, so the wolf cannot eat the grandmother. It is Little Red Riding Hood and her grandmother who defeat and punish the wolf, rather than a hunter. In this version, the wolf's punishment is represented in an alternative manner. The fact that the wolf does not eat either grandmother or Little Red Riding Hood and that there is no murder scene is the positive aspect of this tale. Little Red Riding Hood and the grandmother's punishment of beating the wolf can have a negative impact on children. Since this picture book is designed for elementary-level students, environmental education is also provided simultaneously during the language learning process. Details that evoke violence and negative feelings toward nature and its inhabitants can lead to ecophobia in children. Depicting violence as a system of punishment, accompanied by visual representations, conveys a negative and problematic perspective on the human-animal relationship. Furthermore, the fact that the wolf is defeated by two females, namely the grandmother and Little Red Riding Hood, can be considered as a positive message about gender equality. At the end, the fact that the grandmother and Little Red Riding Hood congratulate each other after punishing the wolf reinforces this message. Nevertheless, that the forest is presented as a place where a wolf is waiting to eat humans may cause children to regard the forest as a dangerous place. To raise environmental awareness, love for nature should be evoked in the picture books.

Hansel and Gretel

Similar to the presentation of the forest in *The Little Red Riding Hood*, in the tale titled *Hansel and Gretel,* adapted for the level 3, the forest is

presented as a dangerous place for children because it describes the forest as a maze where children may get lost, and the witches live. Furthermore, Hansel and Gretel are afraid of walking in the forest when something moves. Gretel thinks that there is a wolf wanting to eat them (*Hansel and Gretel*, n.d., p. 8). The forest is portrayed as a dangerous place inhabited by wolves and witches, and thus as an environment that children should avoid. Green (2023) noted that most children feel anxious in forests because of the common perception that forests are dangerous. This may cause or trigger "hylophobia". The other name given to this disorder is "xylophobia." "Hylophobia" or "Xylophobia" refers to the irrational fear of wooded areas. Lisewski-Hobson and Watkins (2018) suggested that when children have limited contact with nature, it may lead to the development of fear or anxiety toward forest environments. To avoid such problems, while choosing books, picture books in particular, teachers should take notice of the depiction of the forest.

In this version of *Hansel and Gretel*, unlike the original, the father goes to the forest to chop down trees to find money to provide food for his family (*Hansel and Gretel*, n.d., p. 4). Although this act is motivated by the desire to prevent his children from starving, tree cutting is normalized within the narrative. From an ecocritical perspective, trees are living entities and are necessary for a sustainable environment. Random felling of trees, which is also an illegal act, may cause deforestation. The fact that the father chops trees to find money may hint that trees are considered not living entities but commodities. Furthermore, the illegal act of random felling of trees is presented as legal. Moreover, the presentation of such a scene contradicts the promotion of a love for nature. Instead of normalizing tree felling, the tale could offer its target audience sustainable alternatives that encourage the more responsible use of natural resources.

In the picture book *Hansel and Gretel*, animals and plants in nature are presented through illustrations. Bats are illustrated as circling the witch and the cage in which Hansel is imprisoned. By depicting bats as the animals living in the house of witches who intend to eat children and

surrounding the cage, the story represents bats in a negative light (YDS Publishing, n.d., pp. 16-20). On the other hand, another animal depicted in the story, the squirrel, is in a positive light, being portrayed alongside Hansel and Gretel's happy family (YDS Publishing, n.d., p. 23). Categorizations such as the bat accompanying the evil witch and the squirrel placed beside the happy family result in animals being divided into 'good' or 'bad' categories.

The Happy Tree

The Happy Tree, retold by Leodil for the level 1, is a picture book that conveys what an apple tree can offer to nature and people. Laliena and Sala (2023) suggest that picture books reveal children's curiosity about nature and desire to know it, both through their visuals and narrative styles. In this tale, the tree is presented to children as a living entity that protects people from the cold, feeds them, and warms them. In this way, children may learn about the benefits of the apple tree. For instance, the tree is pictured as a happy man after protecting the boy from the rain (Leodil, 2018, p. 7). Thanks to the bird, the tree becomes aware of people who are wet, hungry, and cold, and helps them. The bird accompanies the apple tree and acts as an agent between humans and the tree. Therefore, emphasizing the forest as a habitat for living creatures such as birds fosters children's sense of wonder about nature. As the seasons change, the tree helps people by bearing fruit and providing warmth with its branches, bringing happiness. Since the winter is cold, the bird dies of cold. Unfortunately, the tree has been cut down. There may be a connection between the death of the bird and the felling of the tree. The tree may protect the bird from the cold. However, humans cut down the tree to meet their needs. By doing so, they may have caused the death of the bird and the tree. The fact that humans cut down the tree providing food may imply the anthropocentric attitudes of humans in the tale. Glotfelty (1996) points out whether the presentation of nature is anthropocentric in literary works or not since it directly affects humans' attitudes towards nature. If a teacher uses this tale to teach English, the teacher may point out the connection

between the death of the bird and the felling of the tree. By doing so, the teacher may draw the students' attention to the detrimental consequences of deforestation. As Hickman (2024) suggests, teaching facts of nature or presenting environmental problems to children should be implemented without causing fear.

When spring comes, an old man comes to visit the tree. The picture shows that the old man is sorry to see just the stump of the tree, then he becomes happy when he sees sprouts. It means that the tree is alive. The fact that the old man becomes happy when he sees the sprout may hint beautiful connection between the tree and the old man. It may imply that young generations are not aware of the value of the environment. Moreover, the stump that an old man sees raises a question about who cut down the tree. It enables students to improve their critical thinking skills by guessing why and who chopped the tree. In this way, the teacher may improve and develop students' critical thinking skills and speaking skills.

The Magic Bag

The other picture book studied in this paper is *The Magic Bag* designed for language teaching and retold by Jason Andrew Gots for level 2. The story is set in nature, introducing children to various natural elements such as the forest and the sea. Jeremy meets the old man and becomes rich in the forest. The village near the forest is depicted as a place filled with joyful children. The pictures show that people and children are happy in this village (Gots, 2021, pp. 8-9). In this regard, the visual portrays the forest as a peaceful, familiar, and safe environment rather than a dangerous or mysterious one. Different from the tales discussed above, the forest is not portrayed as a place to be avoided. Instead, the choice of colours for the representation of the forest is not dark. The forest is portrayed as a place of positive experiences. From an ecocritical perspective, the picture book does not encompass elements that would trigger anxiety towards the forest for young learners. For instance, Jeremey becomes rich thanks to the old man whom he meets in the forest. However, the illustration of the sea with darker colours and the depiction

of rough waves construct it as a destructive force. Contrary to the portrayal of the forest, the sea is depicted as a destructive and dangerous force through the use of dark colours. Cad et al. (2022) stresses that the use of colours and word choices in picture books about nature strongly influences children's perspectives. At the end of the story, Jeremy, who has become wealthy and has lost his sense of politeness, decides to travel by sea to sell salt in his pursuit of more money. However, he encounters misfortune when he loses both his salt and his boat to the waves. Despite this setback, Jeremy does not face a truly bad ending, as he swims to shore. The sea is depicted as a destructive force that can sink the ship, even though it is also imagined as contributing to the formation of sea salt.

Discussion

Considering the results of the analyses, one of the significant criteria in selecting picture books for children in language education should be that both the text and visuals represent nature without evoking fear of nature-related elements such as the forest or the sea. The ecocritical analysis in this study uncovers how anthropocentric and ecocentric narratives are important for presenting nature to children. Visuals and text can influence young learners to be environmentally aware individuals. Teachers should also pay attention to how nature is portrayed by encouraging students to cultivate positive perspectives on environmental problems through classroom activities. Moreover, the teacher must be aware of environmental issues and their role in raising a sustainable environment.

The findings show that representations of nature in picture books are related to visuals and word choices. For example, in *Little Red Riding Hood* and *Hansel and Gretel*, the forest is a place where characters encounter thrilling creatures and run away from them because it is a place where the wolf is depicted as dangerous and frightening. These depictions can cause fear of nature in children. Unlike *Little Red Riding Hood* and *Hansel and Gretel*, in *The Happy Tree* and *The Magic Bag*, the forest is portrayed as a safe place for wandering, where trees help people. These

picture books demonstrate how ecocentric perceptions can foster environmental awareness by stressing the utility of nature. Cooperation of living entities in nature takes part as an important symbol of natural order. Thus, it helps to encourage children to protect nature. Although these two picture books are not informational, they serve as positive representations of both living and non-living entities in nature. Especially, *The Happy Tree* visually demonstrates the benefits of the apple tree by depicting what an apple tree offers to human beings. Although the bird's death and the felling of the tree may be a negative example of facts of nature for children, teachers need to provide children with activities that help them think critically about environmental problems and how to handle these situations. An ecocritical approach enables teachers to compensate for triggering representations of nature to foster environmental awareness.

Incorporating an ecocritical perspective into language teaching contributes to sustainable education while teaching children English. In *The Magic Bag*, children can improve their English reading skills while also being exposed to the representations of nature. Similarly, in *The Happy Tree*, students learn what an apple tree is and how it protects people and develop critical thinking skills by regarding the consequences of cutting trees and the changes during different seasons. Besides enhancing reading skills, these picture books can also help improve speaking and writing skills through various activities. For example, students can rewrite the ending of *Little Red Riding Hood*, excluding the violent resolution, or discuss the representation of the animals in *Hansel and Gretel*.

Conclusion

While tales may not necessarily aim to give information about sustainability, places set in the works, such as the sea and the forest, should be portrayed to foster awareness and respect rather than fear, thus contributing to the development of environmentally aware individuals. Teachers and families provide materials for children; therefore, selecting appropriate materials for children is their responsibility. If books that

foster environmental awareness are not available, teachers should prepare appropriate materials. Material designers should also consider environmental values. Consequently, in the process of selecting picture books, careful consideration should be given to how nature is represented. Bridging environmental awareness to English language teaching contributes not only to sustainable education but also to a sustainable future. Experimental studies may be carried out to see the effect of the picture books on the cultivation of awareness about nature in young learners.

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Beyond Sound and Speech: Integrating Orthography into Models of L2 Phonological Acquisition

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Phonological acquisition in second languages (L2) has long been studied using auditory models such as Native Language Magnet Theory (Kuhl, 1993), Perceptual Assimilation Model (Best, 1995), and Speech Learning Model (Flege, 1995). Taken as a whole, these models highlight how articulatory mapping and perceptual similarity influence learners' ability to construct new phonetic categories. Regardless of the context, the main idea behind second language pronunciation development is that it is mostly an auditory-motor challenge. The learner is expected to differentiate and reproduce new sounds while relying on pre-existing L1 categories. An abundance of research on perceptual assimilation and production accuracy has resulted from this concentration, but a theoretical blind spot has been left behind: the idea that orthographic influence is a key component in second language phonology learning.

In modern English as a Foreign Language (EFL) classroom, written materials usually come first and have more of an impact than spoken ones. Words seen on a page rather than spoken help learners create phonetic representations of sounds that are shaped by their prior knowledge of spelling rules. Consequently, conventional theories of speech acquisition

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make significant assumptions about the mental operations that underlie second language phonological acquisition, when the reality is very different. The amount of evidence showing that orthographic information influences phono-lexical development in a systematic way is increasing. As an example, Bassetti (2008, 2017) demonstrated that Italian learners of English spelling tend to misunderstand the relationship between vowel quality and syllable structure. Similarly, Hayes-Harb et al (2010, 2018) discovered that exposure to orthographic spelling can cause learners to internalize phonemes that are present in spelling but not in the target pronunciation. Similar to what Simon and van Herreweghe (2010) and Escudero and Wanrooij (2010) found, grapheme-phoneme correspondences influence how learners map L2 vowels onto their L1 inventory through interacting with learners' perceptual categories.

According to these results, orthography is the main input modality that causes phonological restructuring, and not just an add-on to learning spoken language. However, popular theories such as SLM, PAM, and NLM continue to focus primarily on the auditory aspect of language, disregarding or dismissing the written form as unrelated to the phonological system. Persistent second-language mispronunciations, particularly those resulting from grapheme-phoneme incongruence (e.g., colonel, debt, island), remain unfulfilled because of this theoretical void. The term used to describe these occurrences by Bassetti and Atkinson (2015) is orthographic fossilization. They contend that even proficient learners can fix inaccurate phonological representations using orthographic form. Conceptually, this gap can be filled with the help of recent multidisciplinary breakthroughs in literacy and psycholinguistics. Various models have been proposed to explain the interaction between orthographic and phonological codes in language processing. These models include the Orthographic Depth Hypothesis (Katz & Frost, 1992), the Lexical Restructuring Model (Metsala & Walley, 1998), the Grain Size Theory (Ziegler & Goswami, 2005), and the Triangle Model of reading (Seidenberg & McClelland, 1989). Despite their origins in reading acquisition theory, these frameworks now show how an alphabet's

statistical structure impacts how quickly and easily learners may build and revise phonological representations. Theoretically, these findings pave the way for a new approach to second language speech acquisition in which visual cues are central to phonological development rather than an afterthought.

Orthographic influence is amplified by the socio-cognitive realities of EFL learning on a worldwide scale. Early literacy experiences in many cultures instil high expectations of one-to-one letter-sound correspondences. This is particularly true in nations with transparent orthographies, such as Turkish, Spanish, or Finnish. These learners may make long-lasting pronunciation mistakes (such as pronouncing *busy* as /buːzi/) when they encounter English, a language with a very opaque spelling. Orthographic expectancies influence lexical encoding, perception, and the sequence in which learners acquire contrasts, according to research by Young-Scholten (2002), Rast (2008), and Hayes-Harb and Barrios (2021). This suggests that spelling acts as a mental barrier to second language phonological acquisition, since these effects endure even after thorough auditory instruction.

When considered as a whole, these findings highlight the need to rethink theories of speech acquisition by recasting orthography as a key component, rather than a superfluous one, in the process of phonological representation development. Therefore, this research contends that current models should be multi-modal frameworks that incorporate written information in addition to auditory perception and articulatory control, rather than being auditory-centric. This work presents a theoretical synthesis that takes into consideration the ways in which orthographic information influences the perception of speech, the encoding of lexical information, and the correctness of pronunciation. It does this by utilizing literacy-based cognitive models.

There are theoretical and pedagogical ramifications to this rethinking. It places second language pronunciation acquisition, from a theoretical standpoint, inside a larger cognitive-linguistic framework that

incorporates visual literacy procedures. As a matter of pedagogy, it proposes that to teach pronunciation in a sustainable way, teachers and learners alike should work on developing orthographic awareness, or the ability to discern when spelling is a false indicator of pronunciation and how to use orthography to their advantage. The aim of this chapter is to develop an orthography-integrated account of second language phonological acquisition that explains how spelling shapes the perception, storage, and production of L2 sounds. Rather than treating fossilization as learner failure, the chapter argues that many persistent pronunciation patterns are predictable outcomes of grapheme–phoneme mappings and input modality order. Drawing on established speech-learning theories and literacy-based cognitive models, the chapter proposes the Orthography-Integrated Speech Learning Framework (O-SLF) and outlines its pedagogical implications for pronunciation teaching, assessment, and teacher education.

Literature Review

Auditory-Based Models of L2 Speech Learning

The most influential frameworks for L2 phonological acquisition—Speech Learning Model (Flege, 1995), Perceptual Assimilation Model (Best, 1995; Best & Tyler, 2007), and Native Language Magnet Theory (Kuhl, 1993)—emerged from perceptual and articulatory research on bilingual speech. All three assume that speech learning is mediated by auditory sensitivity and the learner's ability to establish new phonetic categories within an existing L1 system.

According to SLM, learners compare incoming L2 sounds with the closest L1 categories. When cross-language similarity is high, a new category may fail to form, producing "equivalence classification". Conversely, highly distinct sounds can be acquired successfully. PAM extends this perceptual logic, predicting varying discrimination difficulty depending on whether two L2 phones map to one or two L1 categories. Additionally, NLM incorporates a neurocognitive component, as early exposure to

native speech distorts perceptual space, drawing focus to archetypal examples of the L1 and away from non-native contrasts.

Despite their differences in scope, all theories agree on one thing: that learners gain phonological knowledge primarily from acoustic input filtered through L1 perception. Production, in turn, is expected to mirror perception accuracy through sensorimotor feedback. In short, speech learning theories have been ear-centered, grounded in laboratory conditions where learners hear and repeat sounds, largely divorced from literacy. However, such assumptions are increasingly misaligned with the realities of EFL environments, where learners' first contact with a new word is typically written, not spoken. SLM, PAM, and NLM were developed in contexts where spoken input was dominant (e.g., immersion, bilingual exposure). They rarely consider that many L2 learners—particularly in foreign-language education—construct their initial phonological representations from grapheme-phoneme inferences. This omission limits their explanatory power for widespread classroom phenomena: stable spelling-based mispronunciations (e.g., [sʌlmə*n] for salmon* /sæmən/, [kolonə*l] for colonel* /kɜːnəl/), persistent epenthesis (e.g., [əspiːk] for *speak* /spiːk/), and fossilized vowel substitutions (e.g., [*buːzi] for busy* /bizi/).

Orthography as a Cognitive Variable in Phonological Acquisition

Beginning in the early 2000s, psycholinguistic research started revealing that orthographic input influences not only reading but also speech perception, lexical encoding, and articulation. Bassetti (2008) provided seminal evidence that Italian learners of English misrepresent vowel length and quality due to orthography: the spelling <ea> in *bread* was interpreted as /iː/ rather than /ɛ/ because learners generalized Italian transparent mappings. Further research by Bassetti (2017) and Bassetti and Atkinson (2015) built on this idea, introducing the concept of orthographic fossilization to explain how incorrect phonological representations can be reinforced by visual stimulation.

Concurrently, research by Hayes-Harb et al. (2010) showed that training Arabic language learners with new words that had misleading spellings led to "orthographic illusions" as they incorporated non-existent phonemes into their lexical memory. Even if participants are instructed to disregard spelling, it can still affect perception and recall, as shown in subsequent experiments by Hayes-Harb and Masuda (2008) and Hayes-Harb and Barrios (2021). Thus, before auditory refinement happens, spelling shapes phonological categories and enters the mental lexicon early.

In their study of Dutch ESL learners, Escudero and Wanrooij (2010) found that visual forms had a stronger impact on the boundaries of vowel perception than distributional clues in words. Similarly, Simon and Van Herreweghe (2010) observed that when French learners of English produced vowels, it was more in line with orthographic expectations than with auditory models. Together, these results lend credence to the idea that phonological acquisition is multimodal, incorporating data from both the visual and auditory domains.

Cross-Linguistic Interactions: Orthographic Transparency and Expectancy

A learner's first language (L1) writing system's depth is another factor that influences orthographic influence. The assumption of a one-to-one grapheme-phoneme link is fostered in languages with shallow orthographies, such as Turkish, Spanish, and Finnish. The very opaque spelling of English causes speakers of these languages to consistently alter pronunciation when they adopt transparent mapping methods to learn the language. According to Young-Scholten (2002), the ability to read and write in a system that is transparent limits the ability to decipher second language grapheme-to-phoneme links that are unclear. The findings with Polish and Czech learners of French were comparable to those with Rast (2008) and Rast and Dommergues (2003): consistent segmental mistakes despite significant auditory input were associated with early dependence on orthography. Consequently, phonological encoding biases particular to

a language are produced by an interaction between the orthography effect and L1 literacy background.

Evidence from visual-world and eye-tracking paradigms shows that spoken-word recognition automatically activates orthographic information (e.g., Veivo & Järvikivi, 2013). This cross-modal activation, observed even in fluent bilinguals, influences phoneme boundary judgments and highlights the integral role of orthography in lexical processing.

Limits of Current Theories and the Need for Integration

There has been a lot of agreement amongst researchers on orthographic effects, yet big speech-learning models still neglect them. Although the revised version of Speech Learning Model (SLM-r) considers many input modalities, text is still seen as unrelated to the process of phonetic category development (Flege & Bohn, 2021). To a similar extent, PAM-L2 (Best & Tyler, 2007) simulates patterns of auditory assimilation without defining the role that orthographic information plays in modulating these patterns. No model, not even the extended version of Kuhl et al.'s Native Language Magnet Model (NLM-e)(Kuhl et al., 2008), adds distributional and social aspects while keeping sound at its core. In a world where written material much outweighs spoken contact, this exclusion is becoming increasingly problematic as second language learning becomes more text-mediated, such as in online reading, vocabulary applications, digital classrooms, and subtitles. Theoretically, this means that models trained on spoken language data can only account for a limited range of possible input scenarios. Since orthography influences the phonetic information in lexical representations, it is necessary to reconsider perceptual assimilation, equivalence categorization, and category construction in a multimodal setting.

The inclusion of orthography in these systems necessitates the recognition that visual symbols are involved in phonological representation. Multicoded relationships between sound, spelling, and meaning are kept with phonemes, rather than just as acoustic-articulatory units.

Connectionist theories, such the Triangle Model (Seidenberg & McClelland, 1989), which proposes a two-way interaction between orthographic, phonological, and semantic units, are consistent with this concept. It is in line with the Lexical Restructuring Model (Metsala & Walley, 1998) as well, which states that literate learners invariably incorporate orthographic input into their process of expanding their vocabulary, which in turn refines phonological detail through lexical competition. A framework for teaching speech with an emphasis on orthography can be built upon these literacy-based models, which serve as a cognitive link between the visual and auditory domains.

Even though visual mediation is an integral part of contemporary language learning, traditional theories of speech learning have only shed light on the aural and articulatory processes behind second language phonological acquisition. As a result of a large amount of study in psycholinguistics, including studies by Bassetti (2008), Hayes-Harb (2006), Escudero (2015), Young-Scholten (2002), and others, it is now known that orthography has systematic and quantitative impacts on production, perception, and spelling memory. Based on these findings, a theoretical synthesis is required that incorporates orthography as a crucial component of second language phonological development. To lay the theoretical groundwork for this kind of integration, the following section presents literacy-based cognitive models.

Literacy-Based Cognitive Models as a Bridge

Traditional models of speech learning fail to account for the representational impact of written language, as was demonstrated in the previous section, even if these models are very helpful in understanding articulatory transfer and perceptual assimilation. The next issue to consider is the cognitive level interaction between orthographic information and phonological encoding and processing. Theorizing the symbiotic relationship between orthography and phonology for a long time, literacy-based models in reading research provide useful insight into this problem. By illuminating the ways in which written symbols shape,

limit, and even warp phonological representations, these frameworks provide strong conceptual tools for incorporating orthography into second language speech acquisition.

According to the Orthographic Depth Hypothesis, which was put forth by Katz and Frost in 1992, the way readers access phonological representations when word recognition is influenced by the transparency, or depth, of a writing system. Reading Turkish, Finnish, or Spanish, which have shallow orthographies and stable letter-sound correspondences, allows readers to depend significantly on phonological decoding. Readers in deep orthographies (such as French or English) are forced to depend more on morphological and semantic clues or direct lexical access due to uneven grapheme-phoneme mappings. This theory, when applied to second language acquisition, postulates that learners' background knowledge of reading and writing influences their approach to acquiring new orthographic systems. Segmental errors like mispronouncing silent letters (e.g., debt, island) or vowel digraphs (e.g., bread, meat) are common among learners with shallow orthographic backgrounds, as pointed out by Bassetti (2017) and Rast (2008). In contrast, learners with a deep orthographic background, such as native English speakers learning Italian or Spanish, tend to put whole-word recognition procedures, which impede accurate phoneme mapping, ahead of phonological clues. Thus, the ODH offers a psycholinguistic justification for orthographic effects that are not consistent across languages. Also, it foretells a difference in susceptibility to orthographic fossilization: learners whose first language (L1) orthography is shallower than their second language (L2) are more likely to make spelling mistakes that stick around because their brains are expecting consistency that English language does not provide. Bassetti (2008) and Hayes-Harb and Masuda (2008), who worked with Italian and Japanese learners, respectively, found that learners' mispronunciations follow patterns in writing rather than in listening.

To explain how the phonological representations of children's growing vocabulary become more segmental, the Lexical Restructuring Model

(LRM) (Metsala & Walley, 1998) was initially put out. The model proposes that initially; words' lexical forms are more general and less precisely defined. However, as the vocabulary grows, words with similar sounds start to compete for recognition, which forces the system to store more specific phonemic information to keep words different. Although it was not originally designed for bilinguals, this lexical rivalry process gracefully transfers to second language acquisition, particularly in literate learners for whom orthography mediates vocabulary development. Because it adds a visual element to competition, orthographic exposure speeds up lexical rearrangement in L2 situations. Take Turkish EFL learners learning the words *beat*, *bit*, and *bait* as an example. The orthographic forms <ea>, <i>, and <ai> offer further clues, but they can also lead to confusion if they use transparent rules from their L1 to understand them. Researchers Escudero and Wanrooij (2010) and Barrios and Hayes-Harb (2020) found that learners' phono-lexical representations are a combination of auditory and orthographic information. This integration can cause either over-differentiation (when learners mistakenly think that different vowels have different spellings) or under-differentiation (when learners mistakenly think that different vowels have the same spelling but different orthographic patterns). Therefore, cross-modal consistency between spelling and sound is more important than auditory resemblance when it comes to reconstructing the L2 vocabulary. Depending on the learner's decoding approach, the LRM offers a dynamic account of how orthography can either enrich or distort phonological representations.

Following on from ODH, Ziegler and Goswami's (2005) Grain Size Theory details the many "grain sizes" (i.e., phoneme, grapheme, syllable, rime, or complete word) at which readers access phonology. Readers process individual letters and phonemes in transparent orthographies, which feature small grain sizes. Because there are no regular phoneme-level mappings in opaque systems, bigger units like rhymes or morphemes are more efficient. This hypothesis suggests that second language (L2) phonology learners carry over their first language (L1) literacy

preferences regarding grain size. Aiming for constant one-to-one mappings, learners of English from transparent orthographies (like Turkish or Spanish) approach the language with the mindset of a small-grain decoder. This leads to consonant clusters containing vowels such as *film* becoming /filim/ or overpronunciation of orthographic clues, such as *walked* pronounced as /wɔlked/ instead of /wɔːkt/). On the other hand, learners coming from systems that are not transparent may use broad-brush approaches, ignoring phoneme-level decoding in favor of visual word forms, which can result in approximate complete words instead of precise segmental information. The behavior in question is seen by Bassetti and Atkinson (2015) as proof that the size of the grain of phonological awareness, a metalinguistic skill necessary for learning pronunciation, is influenced by orthography. Evidence from priming and naming tests has shown that bilinguals who are literate use orthographic information spontaneously while processing spoken words, which may indicate that reading methods permeate auditory phonological processing (e.g., Veivo & Järvikivi, 2013). Grain Size Theory connects reading and speaking by demonstrating that the clarity of an individual's orthographic experience determines the level of linguistic unit to which they pay attention: phonemes, syllables, or morphemes. What this implies for speech learning is that orthographic expectations can shape the parsing of L2 input before articulatory training even starts.

The Triangle Model, proposed by Seidenberg and McClelland in 1989, offers a computational framework that allows for bidirectional interaction between orthographic, phonological, and semantic representations. Repetition of activation across these three nodes in this connectionist system strengthens linkages across spelling, sound, and meaning, allowing for learning. In contrast to rule-based models, the Triangle Model takes into consideration English-specific features including irregularity, frequency effects, and unpredictability. The Triangle Model emphasizes the fact that phonological acquisition is multimodal and experience-dependent from a second language learner's point of view. Compared to auditory exemplars, orthographic-to-phonological mappings are encoded

earlier and with greater strength when learners primarily encounter L2 words in written form. Orthographic representations limit further auditory updating, leading to "lexical inertia," according to Hayes-Harb and Barrios (2021). In contrast, phonological categories maintain their flexibility and accuracy when auditory information comes first, as in immersion or child bilingualism. Because the orthographic-phonological relationship weights bias retrieval every time the word is encountered in text, once they are stable, the model also explains why orthography-induced mispronunciations remain despite aural correction. Longitudinal research has shown that visual exposure predicts the permanence of some pronunciation errors even after explicit teaching, and this mechanism is in close agreement with Bassetti's theory of orthographic fossilization.

A theory of second language speech acquisition that incorporates orthography can be built using the combined ideas presented by ODH, LRM, Grain Size Theory, and the Triangle Model. When taken as a whole, they demonstrate that:

1. ODH is influenced by orthographic transparency, which in turn impacts decoding technique.
2. Via orthographic mediation, lexical development improves phonological detail (LRM).
3. The unit of analysis in speech processing is determined by grain size (Grain Size Theory).
4. The Triangle Model predicts that multimodal mappings across phonology, semantics, and orthography will become more stable with time.

By outlining the role of textual input in the development and fossilization of phonetic categories, these principles expand upon the perceptual insights provided by SLM, PAM, and NLM. Once these are considered together, second language phonology may be seen as an information system that uses auditory, articulatory, and orthographic data in a dynamic way.

Cognitive models based on literacy help to close the theoretical gap

between reading studies and theories of speech acquisition. They lay out the ways in which orthography affects phonological development, including how it shapes decoding techniques, representational granularity, and cross-modal activation, all of which are supported by empirical evidence. These models highlight the importance of visual cues in second language acquisition, showing how visual cues are integral to the formation and maintenance of phonological information rather than an adjunct to spoken language. The next part presents a suggested framework for orthography-integrated speech learning, describing its main ideas and methods, and synthesising these findings.

Methodology

Study Design

This chapter employs a conceptual, narrative-synthesis design. It does not report new empirical data; instead, it integrates findings from psycholinguistics, literacy research, and L2 speech learning to develop a theoretical framework for understanding orthography as a core component of phonological acquisition. The goal is not to test a hypothesis but to construct a coherent model that connects auditory-based speech-learning theories with literacy-based cognitive accounts.

Literature Identification and Selection

Sources were identified through targeted searches in databases such as *Web of Science*, *Scopus*, and *ERIC* using keywords including *orthography*, *L2 phonology*, *phonological acquisition*, *speech perception*, *grapheme-phoneme correspondence*, and *orthographic fossilization*. Seminal theoretical models (e.g., Kuhl, 1993; Best, 1995; Flege, 1995; Katz & Frost, 1992; Metsala & Walley, 1998) were included due to their foundational role in shaping accounts of speech perception, lexical restructuring, and literacy development. Empirical studies were selected if they examined (a) the effects of orthographic input on L2 phonological processing, (b) cross-linguistic orthographic transparency, or (c) the persistence of spelling-based mispronunciations.

Analytic Approach

The analysis followed a thematic synthesis approach, grouping studies around recurring patterns: (1) how orthographic information modifies pre-lexical encoding, (2) how grapheme-phoneme expectancies shape lexical representation, and (3) how visual-auditory interactions influence long-term pronunciation accuracy. These themes were then mapped onto existing auditory-based models to identify theoretical gaps. Based on this synthesis, the chapter develops the Orthography-Integrated Speech Learning Framework (O-SLF)**,** which integrates literacy-based models with speech-learning mechanisms. The pedagogical implications were derived by translating theoretical constructs into instructional principles grounded in classroom realities.

Toward an Orthography-Integrated Speech Learning Framework

Theoretical and empirical research on the topic of speech learning has so far reached a fundamental consensus: it is not an auditory process alone. For the majority of literate L2 learners, orthographic exposure precedes, accompanies, and in many cases outweighs auditory input. However, three prominent theories - SLM, PAM, and NLM - suggest that acoustic-articulatory experience is the sole source from which categories are formed. This section presents an Orthography-Integrated Speech Learning Framework (O-SLF) to meet the demands of modern second language acquisition, which involves several modalities. The model goes beyond the conventional explanations of speech learning by including orthographic processing in the perceptual, lexical, and articulatory networks that support the phonological acquisition of second languages.

1. A synthesis of auditory and literacy-based ideas provides the four foundational elements upon which the O-SLF is based: Multimodal Input: L2 learners build their mental representations of phonetics through a combination of auditory and visual (orthographic) inputs.
2. Bidirectional Activation: As demonstrated in studies by Veivo and Järvikivi (2013) and Ziegler and Ferrand (1998), when the

orthographic and phonological versions of a word are linked, the activation of one code immediately activates the other.

3. Orthography-Driven Stabilization: "Orthographic fossilization" (Bassetti & Atkinson, 2015) occurs when visual exemplars of spelling and phonetics are repeatedly shown, which can reinforce orthography-phonology mappings even more than auditory exemplars.
4. Contextual Modulation: Read-aloud, shadowing, and spontaneous speech are the three types of tasks that have the most impact on a learner's first language (L1) orthographic depth and proficiency, according to Escudero and Wanrooij (2010).

The O-SLF suggests the following three interdependent representational systems: visual-orthographic, phonological-auditory, and articulatory-motor. These systems interact with each other through the proposed reciprocal pathways:

- Visual-orthographic pathway: Written input activates grapheme nodes, which map onto phonological nodes through pre-existing L1 decoding rules.
- Phonological-auditory pathway: Phonological nodes are activated when auditory input is regarded as being comparable to categories in the L1. The stability and precision of a lexical representation are determined by the co-activation of orthographic and phonological nodes in the mental lexicon, which forms an integrative lexical interface.
- Articulatory-motor pathway: When reading or practicing new words, orthographic imagery partially mediates the retrieval of phonological plans via production.

This structure defines the incorporation of grapheme-phoneme connections into the acquisition of phonological categories. If the mappings between phonetics and spelling are similar, like when learning Italian from Spanish, then orthographic input speeds up the acquisition

process. Orthographic input causes conflicting signals that skew category development and pronunciation when they are incongruent, as in the case of Turkish learners of English.

Stages of Orthography–Phonology Interaction

The model breaks down second language phonological acquisition into three interdependent steps:

1. Pre-lexical Encoding Stage: Learners use orthographic decoding to make educated guesses about the sounds in the target language. Pronunciation attempts are guided by grapheme-phoneme correspondences from the first language (<*a*> → */a/*, <*e*> → */e/*). Similar to SLM's "equivalence classification" but mediated visually, these inferred phonemes function as the initial category seeds if auditory experience is limited. For instance, because <u> maps to /u/ in Turkish, Turkish learners of English may pronounce *busy* as /ˈbuːzi/.
2. Lexical Integration Stage: As one's vocabulary grows, lexical memory stores both orthographic and auditory traces together. More precise phonemic specification is driven by lexical rivalry, as stated in the Lexical Restructuring Model. The learner's vocabulary gets firmly grounded in orthography when steady but deceptive cues are provided by orthography, which inhibits restructuring. Evidence that orthographic linkages are resistant to restructuring was provided by Hayes-Harb and Barrios (2021), who showed that written exposure preserved incorrect vowel contrasts in memory even after auditory retraining.
3. Stabilization and Fossilization Stage: The connections between orthography and phonology are automated through practice and literacy-based rehearsal (reading and writing). It is common for production routines to start retrieving phonological plans from orthographic representations, particularly when visual cues are present. This process is similar to how the Triangle Model fortifies the weights of connections between phonological and orthographic nodes. The end result is a collection of regular

pronunciation patterns that are evident across levels of ability and are based on spelling (e.g., /t/ in *often*, /l/ in *salmon*).

Extending Speech Learning Models

Through the O-SLF lens, each classical model can be reinterpreted:

- Speech Learning Model (SLM): Orthographic similarity functions analogously to acoustic similarity. Visual forms that appear similar to L1 graphemes invite "visual equivalence classification," inhibiting new phonetic category formation.
- Perceptual Assimilation Model (PAM): Orthography provides an additional assimilation dimension; mismatched grapheme–phoneme mappings yield *orthographic assimilation types* that interact with auditory assimilation (e.g., one-to-many mapping between grapheme <e> and /i/, /ɛ/, /ɜː/).
- Native Language Magnet Theory (NLM): Regular exposure to orthographic forms the impression of the most prevalent grapheme-phoneme coupling, even if they are sonically incorrect, due to the "visual magnet" effect.

Incorporating orthographic effects, these theories can explain why some pronunciation errors persist after perceptual training and why learners sometimes "hear" sounds that align with the spelling rather than the acoustic input, as shown in Escudero and Wanrooij (2010) and Bassetti (2008).

Empirical Predictions

Future experimental research can be guided by the testable predictions produced by the O-SLF:

1. Modality Order Effect: A stronger orthography-driven deviation will be observed in learners who are exposed to written forms before to hearing the words, as compared to those who receive auditory input first (Hayes-Harb & Barrios, 2021).
2. Transparency Effect: There will be more orthography-induced mispronunciations displayed by learners whose first language is

shallow-orthography than by those whose first language is deep-orthography.

3. Task Effect: Orthographic activation will be robust in reading-aloud and word-repetition tasks but relatively weak in spontaneous speech (Bassetti, 2017).
4. Persistence Effect: The persistence of orthography-consistent pronunciations during literacy activities after receiving corrective auditory feedback indicates that these skills have been stabilized over time.

By putting orthography at the core of speech learning processes, these predictions pave the way for controlled testing with eye-tracking and longitudinal methods.

Pedagogical Interface

The O-SLF has practical implications for education beyond its theoretical merit. A request for "orthography-sensitive pedagogy" was made by Bassetti (2017), and these interventions are in line with the views of Hayes-Harb and Masuda (2008), who argue learners should be taught to recognize orthographic traps instead of just memorizing lists of pronunciations. If phonological representations are shaped by orthographic mappings, then spelling-sound incongruence should be addressed clearly in pronunciation teaching. Orthographic awareness can be fostered by instructors through:

- comparing patterns of inconsistent and regular spelling (e.g., *though / through / thought*),
- using visual-phonetic mapping exercises to separate graphemes from typical first-language pronunciations, and
- teaching new words in an audio-first sequence so that learners can focus on developing their auditory memory first, before moving on to visual reinforcement.

Rethinking second language phonological acquisition as an interactive multimodal system is the goal of the Orthography-Integrated Speech

Learning Framework. Traditional models' perceptual and articulatory mechanisms are still there, but orthography is included as a cognitive factor that influences production, lexical representation, and category construction. By modelling visual and auditory pathways as interdependent, the framework explains why spelling-induced pronunciations are robust, why orthographic transparency modulates learning outcomes, and why pedagogical sequencing of modalities matters. Finally, the O-SLF advances the area toward a more ecologically sound theory of speech acquisition, one that mirrors the multimodal literacy contexts in which contemporary EFL learners function.

Orthography-Integrated Speech Learning Framework (O-SLF) reinterprets second language pronunciation as a literacy-mediated cognitive process rather than an aural ability alone. Pedagogy, evaluation, and teacher education are all profoundly affected by this change. Teaching strategies that disregard spelling-sound links unintentionally promote incorrect pronunciation if orthographic forms are involved in phonological representation. As a result, teachers of pronunciation need to start paying more attention to orthography and purposefully controlling the context in which their learners encounter written material.

Traditional classrooms still use the written word to introduce learners to new terms, either before or at the same time as they learn how to pronounce them. Since accurate auditory mapping follows orthographic decoding, O-SLF argues that this "visual-first" sequencing poses pedagogical risks. According to research by Hayes-Harb and Barrios (2021), learners who were given written words to read before hearing them made more orthography-consistent mistakes than learners who were given auditory input first. Listening to and mimicking the target word before seeing its spelling is an effective strategy for audio-first sequencing. The introduction of orthographic forms and the explicit discussion of spelling inconsistencies can be done once auditory categories have been established. Learners are encouraged to prioritize auditory cues during early learning and this sequencing helps minimize orthographic

entrenchment. The same idea can be used to influence interface design in computer-assisted or mobile learning environments, making sure that audio plays before text is displayed.

Evidence from studies like Bassetti and Atkinson (2015) suggests that learners who actively consider orthographic ambiguity are able to build more adaptable phonological representations. Like phonological awareness in early reading, orthographic awareness helps learners intentionally, rather than instinctively, navigate irregular mapping systems. To further the multimodal premise of the O-SLF, pronunciation teaching should include dual-coding techniques. These techniques guide the interplay of the auditory and visual channels. Useful task types include:

1. Colour-coded grapheme–phoneme mapping: using consistent colour schemes for vowel sounds across word sets (e.g., /iː/ = blue, /ɪ/ = green) to visually disambiguate irregular spellings.
2. Phoneme highlighting in subtitles: having learners annotate film captions or lyrics to mark discrepancies between sound and spelling.
3. Dictation with delayed orthography: learners first transcribe phonetically, then compare to standard spelling, noting deviations.
4. Orthography-aware shadowing: reading aloud while tracking mismatches between expected and actual sounds.

These practices exploit orthography's mnemonic benefits without allowing it to dominate phonological encoding. They also align with Escudero and Wanrooij's (2010) finding that cross-modal training improves discrimination accuracy when learners attend to both auditory and visual forms under guidance.

The effectiveness of orthography-aware pedagogy depends on teachers' understanding of spelling–sound dynamics. However, pronunciation pedagogy courses rarely address orthography explicitly. Bassetti (2017)

and Hayes-Harb and Masuda (2008) both emphasize that many instructors underestimate how strongly learners rely on written cues. Teacher training programs should therefore incorporate modules on:

- cross-linguistic orthographic depth and transparency,
- common L1-specific orthographic transfer patterns, and
- designing materials that separate auditory and visual exposure strategically.

Assessment practices likewise require revision. Traditional pronunciation tests that rely on reading-aloud tasks may overestimate orthographic influence and underestimate auditory competence. To obtain a fuller picture of intelligibility, evaluations should include listening-based elicitation (e.g., picture description, repetition, or spontaneous dialogue). Studies by Bassetti and Atkinson (2015) and Hayes-Harb et al. (2018) show that learners often pronounce words more accurately when spelling is absent. A balanced assessment model would thus triangulate performance across modalities, providing diagnostic information about both auditory and orthographic interference. Table 1 presents a curricular integration of the O-SLF.

Table 1

A Progressive Modality-Integration Model for the O-SLF

Stage	***Focus***	***Example Classroom Practice***
Auditory grounding	Build phoneme perception through minimal-pair training and phonetic coding before introducing spelling	Listening discrimination, IPA awareness, visual spectrogram exercises
Controlled orthographic exposure	Introduce common spelling patterns with explicit discussion of exceptions	Sorting tasks: *regular vs. irregular* spellings, visual mnemonics
Orthography-phonology integration	Combine text and audio with reflective analysis	Pronunciation journals comparing perceived vs. written forms

Literacy-based production	Transfer awareness to reading and writing tasks	Annotated reading aloud, peer correction of spelling-based errors

Writers of textbooks and designers of digital platforms can make these steps a reality by marking objects that are crucial for pronunciation, offering clickable IPA guides, and adding remarks about orthographic anomalies to glossaries. By incorporating these features within the design, orthography is turned from a confusing factor into an explicit learning variable.

The promotion of equity and inclusion in global EFL contexts is further enhanced by the use of orthographic awareness. Learners of languages with transparent orthographies, like Turkish, Korean, or Finnish, will inevitably struggle when they encounter the irregular spelling in English. In the absence of individualized guidance, their "errors" could be mistaken for aptitude deficiencies instead of artifacts of processing driven by orthography. The O-SLF shifts the focus from individual failures to systemic learning restrictions. Teachers can promote metalinguistic empathy and normalize orthography-based variation by discussing spelling irregularity in their lessons. Also, instead of focusing solely on acoustic mismatch, digital pronunciation tools and feedback systems powered by AI should be programmed to identify orthography-consistent mistakes and provide remedial comments that pertain to spelling-sound relations. Proposals for long-term, student-focused speech evaluation are consistent with this technological integration of linguistic knowledge.

The Orthography-Integrated Speech Learning Framework has revolutionary and practically useful pedagogical implications. Educators can improve intelligibility results and reduce orthography-induced fossilization by rearranging the sequencing of modalities, increasing orthographic awareness, and teaching themselves to notice the impact of literacy on speech. This method rethinks teaching second language pronunciation as a type of multimodal literacy education, which helps learners not only sound out words correctly but also comprehend the mental and visual components of the sounds they make. By viewing

reading and speaking as complementary modalities of language acquisition, this paradigm takes into account the socio-cognitive reality of contemporary EFL instruction.

Conclusion

This study has claimed that second language speech acquisition should be rethought as a multimodal, literacy-mediated process rather than an auditory-only endeavour. The analysis has demonstrated that written language is not an ancillary factor in pronunciation learning, but rather a primary cognitive force that shapes how learners perceive, store, and generate L2 sounds by analysing the interaction between orthographic and phonological representations. A thorough explanation of the interplay between visual and auditory modalities in second language phonological development is provided by the proposed Orthography-Integrated Speech Learning Framework (O-SLF), which combines theories based on auditory processing (SLM, PAM, NLM) with literacy-based cognitive models (ODH, LRM, Grain Size Theory, Triangle Model). The role of perceptual similarity, articulatory limitations, and input frequency in the creation of second language categories has been elucidated using traditional speech learning models. Orthographic exposure consistently changes these articulatory and perceptual dynamics, as shown in the review of Bassetti (2008, 2017), Hayes-Harb et al. (2010, 2018), and Escudero and Wanrooij (2010). By directly integrating orthographic processing into the voice learning architecture, the O-SLF may contribute to the phonological development of learners. It reframes input as innately multimodal, with visual, articulatory, and auditory components that interact in tandem during lexical encoding. This integration clarifies some long-standing empirical uncertainties, such as why some people still mispronounce words even after hearing corrections, why there are linguistic asymmetries related to orthographic transparency, and why perceptual training programs have different levels of effectiveness depending on the task at hand. Through the inclusion of orthography as a

dynamic variable, the O-SLF encourages a more expansive rethinking of the meaning of phonological input for proficient second language learners.

Beyond the realm of theory, recognizing the significance of orthography changes the way teachers perceive student progress. Rather than being caused by a lack of desire or auditory perception, systemic orthography biases are typically to blame when pronunciation "errors" persist. This, once acknowledged, allows for a fairer assessment of EFL learners hailing from a variety of writing-system origins. The goals of the O-SLF in the classroom include increasing learners' orthographic awareness, addressing spelling-sound discrepancies head-on, and expanding the use of evaluation beyond reading-based tasks. When seen in this context, fossilization is less of an indictment of one's abilities and more of a natural consequence of the text-rich environment in which second language acquisition takes place nowadays. This shift in ethics is in line with a larger trend in applied linguistics, which is questioning deficit framings of learner variation and bringing attention to the role of context in acquisition.

Through the integration of phonological theory and literacy research, this work rethinks the landscape of pronunciation acquisition. Rather of seeing orthography as an unseen but ever-present factor influencing the spoken output of millions of English as a foreign language (EFL) learners throughout the globe, the Orthography-Integrated Speech Learning Framework casts it in the role of a cognitive echo. In addition to improving theoretical models, adopting this viewpoint will encourage pedagogies that account for the multimodal, literacy-based reality of language acquisition in the modern day.

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A Model for Sustainable Language and Culture Education through Premchand's Short Stories

Canan YOĞURT[1]

Hindi, the major Indo-Aryan language written in the Devanāgarī script, is spoken by more than 600 million people worldwide. It is also one of the official languages of the Republic of India, as defined in the Official Languages Act (1963). Alongside English, Hindi functions as a key language of administration and education in India. According to the official *C-16: Population by Mother Tongue* and *C-16 City: Population by Mother Tongue (Town Level)* datasets from the Census of India (2011), Hindi is spoken by nearly half of India's population. More than 528 million people identify it as their mother tongue, and an additional 139 million speak it as a second language (Census of India, 2011a; Census of India, 2011b). In total, over 660 million people speak Hindi, placing it among the world's most widely used languages, alongside English, Mandarin, and Spanish.

These numbers show how central Hindi is across northern and central India. It works not only as a mother tongue but also as a lingua franca that

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links many different cultural and regional communities. Because Hindi is used so widely and connects people from diverse backgrounds, its literature becomes a meaningful space for exploring how language carries shared memories, values, and ways of understanding the world.

Hindi also shares close linguistic ties with Urdu. While both languages have nearly identical grammatical structures, they differ in script and reflect distinct cultural orientations. Beyond its linguistic form, Hindi carries deep cultural, ethical, and philosophical meanings that mirror the Indian worldview. In recent years, the Government of India has intensified its efforts to promote Hindi globally, including within international forums such as the United Nations (Government of India, Ministry of External Affairs, 2023). These initiatives show that learning Hindi is not only about acquiring a language. It also means engaging with the cultural and moral values that have shaped Indian civilization for centuries.

This study explores how Hindi literature can support both the teaching of Hindi as a foreign language and the development of cultural understanding in the classroom. It focuses on using Premchand's short stories as a teaching tool to encourage sustainable and reflective forms of learning. When students engage with these stories, they are invited to think about social, ethical, and emotional issues that go beyond grammar and vocabulary (Okyar, 2017). In this way, literature becomes a meaningful bridge that helps learners build empathy, strengthen their cultural awareness, and reflect on moral questions—skills that are central to holistic and sustainability-oriented education (Özçelik, 2024; Hossain, 2024).

When Hindi is taught as a foreign language, lessons often emphasize grammar and accuracy, leaving little space for meaning, ethical reflection, or deeper cultural engagement. Hindi literature—especially the short stories of Munshi Premchand (1880–1936) —offers a strong alternative to this approach. His narratives help connect language learning with social, cultural, and moral awareness.

Literary texts encourage students to build empathy, develop intercultural understanding, and think reflectively—skills that UNESCO identifies as central to Education for Sustainable Development (UNESCO, 2017). Recent research in India further demonstrates that postcolonial literature can support Freirean critical pedagogy in Hindi-medium classrooms by prompting students to interrogate social hierarchies, relate textual themes to their lived experiences, and engage in dialogic learning practices (Deb, 2020). Similarly, studies on value-oriented language teaching suggest that Hindi language teaching can foster learners' moral and social growth, not just their linguistic abilities.

In his reflections, Premchand (1986) notes that life belongs to the divine and is therefore endless, while literature, as a human creation, is limited. Even so, he argues that literature has a clear purpose: to shed light on truth, beauty, and happiness, and to guide people toward moral growth. For him, real happiness comes from living in harmony with what is good and beautiful, and it is literature that helps reveal this harmony. Because of this, writers cannot remain separate from the moral and social realities around them; when ethical or cultural values begin to break down, literature must respond. This humanistic view forms an important philosophical basis for sustainable and reflective approaches in language education (Premchand, 1986; Takahashi, 1990; Yoğurt, 2025).

Munshi Premchand is widely regarded as a key figure in modern Hindi prose and social realism. His stories often explore themes such as empathy, poverty, justice, and human dignity, showing his deep concern for people who are marginalized or oppressed (Govind, 2020; Yoğurt, 2025). By writing in clear and accessible Hindustani[2], he made complex social issues understandable to a broad audience. This also makes his works valuable resources for students learning Hindi as a foreign language

[2]Hindustani is a widely used colloquial language that forms the foundation of both Hindi and Urdu. It appears in everyday speech across much of Northern India and Pakistan, and it is the language commonly heard in Bollywood films, popular music, and informal conversation. It is also the linguistic register that frequently appears in Premchand's works, where he employs its simplicity and accessibility to reach a broad and diverse readership.

(Gupta, 2018). His narratives encourage ethical thinking and intercultural understanding, and they reflect sustainable, human-centred values that support socially responsive and value-based education (Govind, 2020).

E. M. Forster (2016) reflects on literary form by noting that:

> among all literary forms, the short story is the simplest and the most primitive. What the short story does is to narrate life as it unfolds over time… Yet in every novel, there exists a clock — and the novelist may not always be fond of that clock (p. 63–67).

His observation highlights the directness and compression of the short story, a form that captures human experience without the structural and temporal constraints typical of the novel. In a similar way, Premchand (1986, as cited in Yoğurt, 2025) draws a metaphysical distinction between life and literature, arguing that life, belonging to the divine realm, is infinite, while literature, being a human creation, is necessarily finite (p. 58). Together, these reflections suggest that literature—particularly the short story—serves as a distilled mirror of life, simultaneously bounded by human creativity and illuminated by the infinite vitality of lived experience.

Literature Review

The teaching of Hindi as a foreign language (HFL) has traditionally been shaped by structural and communicative paradigms that prioritize grammatical form and functional fluency over cultural depth and ethical reflection. Most HFL curricula emphasize linguistic accuracy while neglecting the moral and aesthetic dimensions of the language. This limitation has led scholars to argue for pedagogical reform grounded in cultural literacy and literature-based approaches (UNESCO, 2017; Sterling, 2010). Within this context, Hindi language education increasingly recognizes the value of literature as a means of developing intercultural competence, empathy, and sustainability-oriented reflection.

Premchand and Hindi Social Realism

Munshi Premchand is widely regarded as a central figure in Hindi literary

modernism and social realism. This ethically grounded realist outlook makes his works particularly valuable in Hindi as a Foreign Language classrooms, where language learning can be paired with moral and social reflection. As Yoğurt (2025) notes, Premchand's realism reflects a deeply humanistic strand within Indian literary thought. Through his stories, learners gain not only access to the Hindi language but also opportunities to explore values such as justice, empathy, and equality. In this way, his works form a strong bridge between communicative practice and ethical education, supporting pedagogical aims aligned with sustainability.

Sustainability and Reflective Pedagogy

The integration of sustainability and ethical awareness into language learning has gained increasing attention in recent years. Freire's idea of dialogic education positions learners as active co-creators of meaning rather than passive receivers (Andrade, 2024). Building on this view, Sterling (2010) and McLaren (1998) highlight the importance of education in nurturing ecological awareness, empathy, and social justice.

Although such perspectives are still developing within Hindi pedagogy, they align closely with the ethical and philosophical spirit of Premchand's works. When applied to Hindi literature, these approaches encourage what may be called sustainable learning—a process in which language development and moral reflection support and enrich each other.

Although Premchand's realism has been widely studied, his short stories have rarely been examined as practical tools for teaching Hindi as a Foreign Language. One early attempt was *A Premchand Reader*, prepared by the South Asia Language and Area Center at the University of Chicago. Edited by Zide et al. (1963), the volume includes nine short stories with explanations and a glossary to support comprehension for Hindi learners. This resource was helpful for language learning, yet its focus remained largely linguistic. It did not explore the reflective, ethical, or sustainability-oriented dimensions that this study seeks to highlight.

Most work in Hindi pedagogy still prioritizes communicative or structural approaches, giving limited attention to value-based or ethically grounded

teaching (Deb, 2020). For this reason, the present study aims to fill that gap. It introduces the Literature-Based Sustainable Language and Culture Education (LSLCE) Model, proposed here as a new conceptual framework that blends literary interpretation, reflective dialogue, and moral inquiry. By combining principles from Task-Based Language Teaching (TBLT) (Ellis, 2003; Nunan, 2004) with literature pedagogy and critical reflection, the model offers a holistic approach that supports linguistic, cultural, and ethical development at the same time.

Methodology

The study began by choosing short stories with strong themes and clear pedagogical value. Preference was given to works that blend cultural richness, moral reflection, and accessible language so that they could be used effectively in Hindi as a Foreign Language classrooms. Once the stories were selected, each text was explored through close reading. This method involves slow, careful analysis and helped reveal symbolism, cultural nuance, and deeper layers of meaning in Premchand's narratives. It also made it possible to identify which elements could contribute to a sustainable language and culture education model.

The broader aim of the study is to integrate sustainability, empathy, and intercultural awareness into Hindi language teaching. For this reason, a qualitative and interpretive research design was used. This approach prioritizes understanding, reflection, and contextual awareness rather than numerical measurement. The proposed model draws on three complementary frameworks. Literature pedagogy encourages meaningful engagement with authentic texts. Reflective pedagogy supports ethical thinking and critical self-awareness (Ayers, Bryant, & Missimer, 2020). Sustainable education connects language learning with wider global and moral responsibilities (Yu, Guo, & Fu, 2024; Chang & Nkansah, 2024). Together, these frameworks provide a holistic foundation for a values-based and socially responsive approach to Hindi language education.

Stage 1 — Text Selection and Contextualization

LSLCE model begins by selecting literary texts that meaningfully connect language learning with social and ecological awareness. At this stage, teachers introduce the socio-historical context of stories such as *Kafan* or *Idgah* and relate their themes to broader issues like poverty, gender, justice, and moral responsibility (Cordova, 2024; Kazazoğlu, 2025; Manyasi, 2024). Learners are guided to make use of their prior knowledge through short discussions, visual materials, and pre-reading tasks that invite them to think more deeply about the story (Mutaliani et al., 2023; Hossain, 2024). Drawing on Freire's view of dialogic learning as a tool for questioning social hierarchies (Shih, 2018), this stage combines his problem-posing approach with Carter and Long's Cultural Model. Together, they encourage students to connect personal experiences with collective ethical concerns. In doing so, the first stage lays the groundwork for empathy, ethical reflection, and critical engagement, aligning language learning with the broader aims of Education for Sustainable Development (Cordova, 2024; Kazazoğlu, 2025). The phases and pedagogical foundations of the LSLCE model are outlined below:

In the input phase, teachers introduce the chosen literary text—such as *Kafan* or *Idgah*—by situating it within its socio-historical and ethical context. This step emphasizes the connection between literature, culture, and sustainability, allowing learners to understand the text not only as a linguistic artifact but as a reflection of moral and social realities (Carter & Long, 1991; Cordova, 2024; Manyasi, 2024). Teachers facilitate this process through historical and cultural introductions, discussion of core themes such as poverty, gender, ethics, and social justice, and pre-reading activities that foster interpretive curiosity.

The process phase centres on activating learners' prior knowledge and encouraging critical engagement before reading. Through classroom discussions on values like *justice*, *community*, and *responsibility*, learners begin to bridge their personal experiences with the textual world (Mutaliani et al., 2023; Hossain, 2024). Supplementary multimedia

materials—such as photographs, short clips, and maps—further enhance comprehension, while reflective writing on moral or ecological issues encourages deeper ethical reasoning and empathy development.

Finally, the output phase focuses on cultivating cultural awareness and preparing learners for more advanced interpretive tasks in the next stage of the model. Activities in this phase emphasize moral and empathic engagement, contextual understanding, and readiness for task-based interaction. Drawing upon Freire's dialogic, problem-posing pedagogy and Carter and Long's (1991) Cultural Model, this stage promotes ethical literacy and critical consciousness within the broader framework of sustainable education (Kazazoğlu, 2025; Yu et al., 2024; Bağatur, 2017). Altogether, Stage 1 creates a dynamic learning environment in which literary study becomes a dialogic process—linking language learning with intercultural empathy, ethical reflection, and sustainability-oriented awareness.

Stage 2 — Task-Based Interaction

The analysis now turns to the second phase of the LSLCE model, namely Task-Based Interaction, where the focus shifts from contextual exploration to active learner engagement and dialogic interpretation. In this stage, students work in small groups to carry out reading and analytical tasks that integrate both linguistic form and moral substance: they examine character motivations, language patterns, and ethical tensions, while negotiating meaning through sustained interaction. Guided reflective questions—such as "How does language express empathy or power?" and "Which social hierarchies are challenged or reinforced in the narrative?"—promote a critical awareness of language as a medium of ideology and transformation. To deepen communicative competence, empathy, and intercultural sensitivity, learners then engage in project-oriented or creative tasks such as role-plays, alternative endings, or multimedia storytelling. This framework aligns with the principles of TBLT (Ellis, 2003; Nunan, 2004), and is framed by Critical Pedagogy,

positioning learners as active co-creators of understanding rather than passive recipients of knowledge.

Task-Based Interaction is structured around three dynamic phases that guide learners from preparation to critical production.

In the input phase**,** teachers prepare learners for interactive engagement by introducing guiding questions related to ethical dilemmas, social hierarchies, or cultural contrasts present in the literary text. Students are organized into small collaborative groups and provided with contextual linguistic input that supports comprehension and participation. This phase follows the principles of TBLT (Ellis, 2003; Nunan, 2004), emphasizing purposeful communication and meaning negotiation rather than mechanical accuracy.

The process phase centres on collaborative reading, interpretation, and open dialogue. In this stage, learners work together to build meaning as they examine linguistic choices, symbolism, and character motivations. Peer-led discussions and shared note-taking tasks support this process. These activities help students explore questions such as "Who holds power in the story?" or "What ethical tensions shape the narrative?".

This phase reflects the principles of Lazar's (1993) literature-in-language approach and Collie and Slater's (1987) dialogic engagement model. Both frameworks encourage learners to view literature as an active and evolving conversation rather than a fixed text. Freire's dialogic pedagogy reinforces this idea by framing the classroom as a space for questioning, reflection, and shared inquiry.

The output phase then shifts the focus toward creative and critical expression. Role-plays, dramatizations, alternative endings, and multimedia storytelling allow students to reinterpret the narrative while applying linguistic skills and ethical understanding. Group presentations and reflective discussions create further opportunities to link language learning with empathy, cultural awareness, and social consciousness. Through these activities, learners become active participants in shaping

meaning, rather than passive recipients, and they engage with literature within a sustainability-oriented framework.

The final stage of the model turns attention to reflection, assessment, and integrative synthesis. Students take part in metacognitive dialogue, peer feedback, and sustainability-focused self-evaluation. Reflection journals, discussion debriefs, and guided writing tasks help them consider how the stories have influenced their understanding of community, empathy, and responsibility.

Assessment in this phase covers four interconnected areas: linguistic competence, interpretive depth, ethical and empathic awareness, and sustainability literacy. This structure ensures that progress is measured not only through language proficiency but also through broader values and a sense of global responsibility (Paran, 2008). Guided by Freire's humanistic philosophy, the final stage places learners at the centre of the process and presents literature as both a reflective and socially meaningful practice.

Stage 3 — Critical Reflection

The final stage of the LSLCE model—Critical Reflection—encourages learners to absorb and reinterpret the moral, cultural, and linguistic insights they have gained from literature. In this phase, students keep guided journals, join group conversations, and create personal responses. These activities help them consider how themes such as justice, empathy, and social responsibility in Premchand's stories connect to their own lives and cultural experiences.

As this process unfolds, comprehension begins to deepen into awareness. Learners move beyond interpreting the text and start relating it to contemporary social issues and personal reflections. Such work supports the development of self-awareness, intercultural sensitivity, and a view of language as a tool for ethical action.

Ultimately, this stage links linguistic learning with moral growth. It turns literature from something simply read into a catalyst for meaningful, sustainability-oriented education.

Data Collection Instruments and Procedure

The primary literary corpus for this study was drawn from *Premchand ki Sampurn Kahaniyan: Mansarovar Bhag 1* (2015) and *Bhag 2* (2016), published by Manoj Publications, Delhi. Together, these volumes offer a rich and comprehensive selection of Premchand's short stories, maintaining both the authenticity of his language and the moral depth that defines his work. Texts such as *Idgah, Kafan, Poos ki Raat, Shatranj ke Khiladi, Bade Ghar ki Beti, Thakur ka Kuan, Vidvans, Algyojha, Duniya ka Sabse Anmol Ratan,* and *Satyagraha* were selected for their thematic richness, ethical resonance, and linguistic accessibility, providing a culturally grounded corpus for Hindi as a Foreign Language pedagogy.

Selection Criteria

1. Linguistic Accessibility: All ten stories are written in standard, comprehensible Hindi, making them suitable for learners between B1 and above levels on the Common European Framework of Reference for Languages (Council of Europe, 2020).
2. Literary Clarity and Expressive Depth: The stories combine expressive literary depth with clear and accessible language, which makes them particularly suitable for advanced learners of Hindi as a foreign language.
3. Thematic Diversity: The selection represents a wide moral and cultural spectrum — *empathy, poverty, justice, gender, and social reform* — illustrating Premchand's pluralistic vision of Indian society and supporting values-based learning.
4. Pedagogical Potential: Each story invites dialogic exploration through debates, reflection, and creative writing, fostering communicative competence, ethical reasoning, and sustainability-oriented critical thinking.

Table 1

Thematic and Pedagogical Overview of Selected Premchand Stories

Story Title	***Core Theme(s)***	***Pedagogical Focus***
Idgah	Empathy and childhood innocence	Compassion and moral imagination
Thakur ka Kuan	Caste and social justice	Power, purity, and resistance
Duniya ka Sabse Anmol Ratan	Ethical self-realization	Moral awareness and self-reflection
Poos ki Raat	Economic struggle and survival	Rural hardship and sustainability
Bade Ghar ki Beti	Gender and family values	Patriarchy and emotional integrity
Shatranj ke Khiladi	Colonial politics and irony	Historical critique and cultural decline
Vidhvans	Corruption and moral integrity	Governance and ethics
Alagyojha	Forgiveness and human conflict	Empathy and reconciliation
Kafan	Poverty and moral responsibility	Moral paradoxes of survival
Satyagraha	Gandhian ethics and activism	Civic responsibility and ethical action

Table 1 presents the rationale behind the selection of ten short stories by Munshi Premchand, organized around their thematic diversity and pedagogical relevance within the LSLCE framework.

Conceptual Basis and Model Development

This study does not involve empirical data collection. Instead, it develops a pedagogical model through conceptual analysis, drawing on literary theory, sustainability education, and task-based language teaching. This approach offers an original contribution by proposing a literature-based pedagogical model for teaching Hindi as a Foreign Language, integrating authentic literary texts with sustainability-oriented and values-based education. The model treats Premchand's short stories as active, classroom-ready resources that help students strengthen their language

skills while deepening their intercultural awareness. In doing so, it creates a meaningful link between interpreting literature and using language in real communication.

Through the integration of TBLT principles (Ellis, 2003; Nunan, 2004) and reflective pedagogy grounded in Freire's concept of dialogic education, the framework fosters communicative fluency while simultaneously promoting ethical awareness and critical reflection. Engaging with these stories becomes more than a language activity; it allows learners to step into an ethical space where they can think through the moral questions, cultural dynamics, and social or environmental issues woven into Premchand's narratives.

By bringing these elements together, the study creates a meaningful link between literature, ethics, and sustainability, broadening how Hindi can be taught and understood in today's classrooms. It aligns with recent perspectives that view language learning as a transformative act of consciousness-raising and global citizenship (Paran, 2008; Yu, Guo, & Fu, 2024). The LSLCE model thus contributes to both Indological studies and international language pedagogy by demonstrating how literary study can cultivate empathy, intercultural competence, and sustainability-oriented worldviews.

Model Description and Proposed Framework

This study introduces the LSLCE model, which uses Munshi Premchand's short stories to bring together language learning, cultural understanding, and ethical awareness in a unified approach. Drawing on TBLT (Ellis, 2003; Nunan, 2004) and Critical Pedagogy (McLaren, 1998), the model situates language learning within the framework of Education for Sustainable Development (ESD) (UNESCO, 2017; Sterling, 2010). UNESCO (2017) explains that ESD aims to help learners develop the knowledge, skills, values, and attitudes needed to contribute to a more sustainable and responsible future.

Informed by the cultural model of literature teaching (Carter & Long, 1991; Lazar, 1993; Collie & Slater, 1987), this approach treats literary

texts not merely as linguistic artifacts but as pedagogical ecosystems—dynamic spaces where learners explore empathy, justice, and sustainability. Premchand's social realism, particularly in stories such as *Kafan*, *Idgah*, *Poos ki Raat*, and *Shatranj ke Khiladi*, provides fertile ground for connecting linguistic development with social and moral consciousness (Dubey, 2020).

The LSLCE model reflects Sterling's view of sustainable education as a transformative process—one that goes beyond technical skills and encourages learners to think reflectively, act with resilience, and understand relationships within social and ecological systems. It also resonates with Freire's idea of dialogic education, where learners take an active role as co-creators of meaning, and understanding develops through participation, questioning, and shared inquiry rather than simple transmission.

The model draws on the rich social and moral themes in his work to connect language learning with broader cultural and value-based understanding.

Informed by the cultural model of literature teaching (Carter & Long, 1991; Lazar, 1993; Collie & Slater, 1987), this approach frames literary texts as meaningful sites for reflective engagement. As Premchand observed, "The fundamental purpose of life is to attain happiness. Throughout life, human beings continuously seek the means to achieve it. To express and to create that happiness constitutes the essential aim of literature" (Yoğurt, 2025, p. 58). His words illuminate the humanistic essence of his writing and highlight literature's potential to cultivate ethical awareness and emotional depth.

To strengthen the conceptual grounding of the model, the theoretical contributions of both critical pedagogy and task-based learning are brought into clearer alignment with its aims. Freire's perspective highlights the importance of dialogue, reflection, and learner agency in fostering transformative educational experiences, while Nunan's task-based framework provides a procedural structure in which learners

develop meaning through interaction and purposeful communication. Together, these perspectives justify the LSLCE model's emphasis on ethically engaged, communicative, and culturally grounded language learning.

Building on this foundation, the LSLCE model is organized into three connected stages for learners at the B1 level and above.

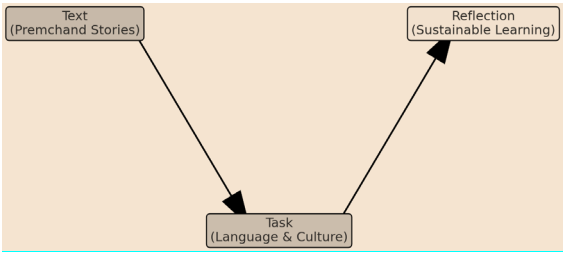


Figure 1 *Structure of the LSLCE model*

Figure 1 illustrates the core structure of the LSLCE model. The process begins with the literary text—in this case, Premchand's short stories—which provides the thematic and cultural foundation for learning. These stories are then explored through tasks that integrate language practice with cultural interpretation. Finally, learners move into a stage of reflection, where they connect linguistic insights with ethical, social, and sustainability-oriented understandings. Together, the three components create a continuous cycle that links text, task, and reflection in a meaningful and learner-centred way.

Table 2 below offers a clear pedagogical overview of ten selected short stories by Munshi Premchand, showing how their literary, linguistic, and ethical dimensions are integrated in this study. Each story highlights a different social or cultural issue. *Idgah* focuses on empathy and filial care, while *Kafan* raises questions about moral responsibility and survival. *Poos ki Raat* reflects the relationship between humans and nature, and *Shatranj ke Khiladi* along with *Thakur ka Kuan* encourages critical thinking about colonial power and caste-based injustice. Other stories, such as *Bade Ghar*

ki Beti and Alagyojha, explore family dynamics and gender roles, offering opportunities for meaningful cultural discussion. The strength of these narratives lies in their ability to promote moral reflection, intercultural awareness, and sustainability-oriented thinking while supporting Hindi language development. Through vocabulary work, guided dialogue, and critical interpretation, this collection creates a balanced learning experience that connects language growth with ethical and social understanding.

Table 2

Thematic, Narrative, and Pedagogical Analysis of Selected Premchand Stories

Story	***Plot Summary***	***Theme***	***Pedagogical Potential***
Idgah (The Eid Ground)	Hamid buys tongs for his grandmother at the Eid fair instead of toys.	Empathy, family responsibility, sacrifice	Values education, everyday vocabulary, language of abstract concepts
Kafan (The Shroud)	Ghisu and Madhav spend the burial shroud money on food and liquor after Budhiya dies in childbirth.	Poverty, moral collapse, social critique	Moral dilemmas, discussions on social justice
Poos ki Raat (A Winter Night)	Halku tries to guard his field on a freezing winter night, but the crops are destroyed by frost.	Rural life, human-nature relationship, labor	Discussions on environment and sustainability, descriptive language of nature
Shatranj ke Khiladi (The Chess Players)	Two aristocrats are obsessed with chess, ignoring the British annexation and social turmoil.	Colonialism, aristocracy, cultural identity	Historical context, metaphorical language, cultural discussion
Bade Ghar ki Beti (Daughter of a Wealthy Family)	Anandi keeps her family united through patience and devote herself to her husband's family.	Female figure, family values, sacrifice	Social roles, women's studies, family-related vocabulary
Thakur ka Kuan (The Thakur's Well)	Dalit woman Gangi risks fetching water from the upper-caste Thakur's well despite the prohibition.	Caste system, social inequality	Sociolinguistic awareness, discussions on cultural hierarchies

Vidvans (Destruction)	Landlords' greed undermines solidarity and destroys the social fabric of the village.	Social corruption, economic exploitation	Language of economy and society, discussions on modernization
Alagyojha (Mother-in-law vs Daughter-in-law)	Conflict between daughter-in-law and mother-in-law eventually transforms into understanding.	Domestic conflict, women's roles	Family vocabulary, cultural roles, gender discussions
Duniya ka Sabse Anmol Ratan (The World's Most Precious Gem)	It is emphasized that the most precious thing is not wealth but human life. It is seen that martyrdom is emphasized in the story.	Value of human life, critique of colonialism	Abstract values, philosophical debate, conceptual vocabulary
Satyagraha	Villagers resist unjust taxes through Gandhi's principle of satyagraha (non-violent resistance).	Gandhian influence, non-violence, quest for justice	Historical awareness, critical pedagogy, abstract concepts

Discussion

The table below illustrates how literary texts can be systematically integrated into language and sustainability education through clearly defined objectives, outcomes, and activities. Each story is paired with learning goals that encourage empathy, social justice, sustainability, and intercultural awareness. *Idgah*, for instance, nurtures emotional intelligence and compassion through reflection and creative writing, while *Kafan* opens space for moral questioning through drama and role-play. *Poos ki Raat* introduces learners to ecological awareness and rural realities, prompting them to explore human–nature relationships, and *Shatranj ke Khiladi* supports critical thinking about colonialism and the formation of cultural identity. Together, these examples illustrate how the LSLCE model turns literary study into an active, dialogic, and ethically grounded process—one that connects language learning with sustainable and reflective ways of understanding the world. A detailed pedagogical mapping is presented in Table 3.

Table 3

Pedagogical Framework Linking Themes, Objectives, and Learner Activities

Story	***Theme***	***Pedagogical Objective***	***Student Learning Outcome***	***Suggested Activity***
Idgah	Child's perspective, empathy, poverty	Developing empathy and social awareness	Cultivates sensitivity toward diverse socio-economic experiences	Discussion: "Do you recall similar experiences from your own childhood?"; Creative Writing: short reflective piece
Kafan	Poverty, death, social justice	Encouraging critical thinking and moral inquiry	Analyzes different perspectives on social justice issues	Drama / Role Play: Short performance from characters' points of view
Poos ki Raat	Rural life, labor, human–nature relationship	Fostering sustainability awareness and rural labor consciousness	Interprets literary representations of nature and agrarian life	Group Discussion: "How are the problems of agricultural workers similar across cultures?"
Shatranj ke Khiladi	Colonialism, cultural identity, historical consciousness	Promoting cultural-historical awareness and global citizenship	Critically evaluates the relationship between colonialism and cultural identity	Essay: Write a short reflection on "How does colonialism transform cultural identity?"
Bade Ghar ki Beti	Family values, gender roles, moral integrity	Exploring social expectations and women's agency within traditional families	Develops awareness of gender norms and ethical decision-making	Debate: "Does social status define virtue?"; Reflective journal on family and morality
Thakur ka Kuan	Caste, purity, social inequality	Understanding social hierarchies and human dignity	Encourages empathy for marginalized voices and critiques caste discrimination	Group reading and discussion: "Whose water is pure?"; Visual storytelling on equality

Vidvans	Industrialization, moral decay, human greed	Examining modernity and its ethical consequences	Recognizes links between progress, exploitation, and moral responsibility	Project: Compare Premchand's vision of progress with current sustainability issues
Alagyojha	Generational conflict, moral confusion, urbanization	Investigating conflict between traditional and modern values	Learners reflect on generational values and empathy in moral dilemmas	Role play: Family dialogue between old and new generations
Duniya ka Sabse Anmol Ratan	Patriotism, self-sacrifice, moral virtue	Linking ethical courage with civic responsibility	Cultivates appreciation for sacrifice, empathy, and national ethics	Writing task: "What makes a person truly valuable?"
Satyagraha	Non-violence, truth, social reform	Connecting Gandhian philosophy with moral literacy	Demonstrates understanding of ethical resistance and peaceful change	Group discussion: "Can truth change society?"; Poster on non-violent action

Through Premchand's stories, learners are encouraged to see language not only as a tool for communication but also as a way of engaging with social responsibility, empathy, and sustainability-focused values. The pedagogical design supports dialogic inquiry, creative interpretation, and moral reflection, transforming the classroom into a space where cultural understanding and ethical dialogue mutually develop.

Building on this transformative approach, the assessment and evaluation criteria created for Premchand's stories reflect the holistic spirit of the model. The four-level performance framework moves beyond traditional language assessment by incorporating elements such as cultural awareness, critical thinking, and meaningful participation. In this way, students are assessed not only for their linguistic skills but also for how thoughtfully they respond to ethical, ecological, and social issues raised in the texts. This multidimensional approach allows assessment itself to become part of the learning process. Table 4 presents a summary of the Assessment and Evaluation Criteria for Premchand's Short Stories.

Table 4

Assessment and Evaluation Criteria for Premchand's Short Stories

Category	*Excellent (4)*	*Good (3)*	*Developing (2)*	*Inadequate (1)*
Text Comprehension	Analyzes the character's emotions and social context in depth	Identifies the central idea of the text and articulates the character's feelings in a coherent and meaningful way	Provides only a simple description of the plot without deeper interpretation or detail	Has trouble grasping the meaning of the text
Language Use	Uses language fluently, accurately, and creatively	Uses generally clear language despite minor errors	Grammar and vocabulary errors occasionally hinder communication	Expression is unclear and difficult to follow
Cultural Awareness	Makes comparisons and builds deep cultural connections	Understands cultural aspects but provides limited commentary	Partially recognizes cultural references	Restricted to surface-level observations or fails to recognize cultural connections
Critical Thinking	Develops strong and original interpretations and discussions based on the text	Provides interpretation, though limited in originality	Offers basic commentary	Unable to develop discussion or provides no commentary
Participation and Interaction	Actively contributes to group work with creative ideas	Participates but offers limited contribution	Participates only at a minimal level	Passive or does not participate

Ultimately, the LSLCE model treats Hindi literature as a bridge between language learning and sustainable human values. It reshapes the classroom into a dialogic and reflective environment where students develop not only communicative skills but also empathy, a sense of justice, and ecological awareness—qualities needed for global citizenship in the twenty-first century. To ensure that these values are not only discussed but genuinely

supported, the study includes an assessment framework closely aligned with the model's goals.

This framework uses a four-tier analytic scale that measures both linguistic accuracy and ethical–cultural understanding. As shown in Table 4, each criterion is rated from Excellent (4) to Inadequate (1), emphasizing growth rather than simple grading. "Excellent" indicates strong and nuanced control; "Good" shows solid performance with minor gaps. "Developing" suggests partial understanding, while "Inadequate" reflects an early stage that requires more support. By framing assessment in this gradual and reflective way, the LSLCE model reinforces its focus on learning as an ongoing, thoughtful journey.

These assessment criteria examine how learners interpret Premchand's stories, how they demonstrate empathy toward the themes, and how clearly they express their ideas. The criteria are flexible and can be applied to all ten stories in the study.

Conclusion and Contribution

Premchand's short stories significantly contribute to the development of advanced-level Hindi language learners by enhancing their command of complex sentence structures**,** figurative expressions**,** and contextual vocabulary**,** while simultaneously deepening their understanding of the historical and cultural dimensions of Indian society.

Through this approach, learners are encouraged to reflect not only on linguistic form, but also on global and ethical themes such as social justice**,** environmental awareness**,** and intercultural dialogue**.**

In this sense, the study proposes a pedagogical model that fosters sustainable learning**,** where students do not merely acquire linguistic competence but also develop a lifelong cultural and moral consciousness through literature.

The LSLCE model offers an innovative synthesis of language education, literature pedagogy, and sustainability learning. By grounding linguistic practice in the ethical universe of Premchand's short stories, it transforms

the classroom into a microcosm of global citizenship — a reflective space where students read to understand and reflect to transform.

By working with language and literature in ways that encourage empathy and cultural awareness, students gradually become more attentive to the ties that connect people and communities. This growing sensitivity helps them appreciate the importance of care, balance, and responsibility, fostering a mindset that supports a more sustainable and humane future.

Within this framework, literature ceases to be supplementary; it becomes the heart of transformative education, empowering learners to connect linguistic growth with ethical awareness and global responsibility.

To sum up, this study underscores that a literature-based pedagogy can be both sustainable and transformative, integrating language learning with ethical and cultural reflection. The proposed LSLCE model links Hindi teaching to broader values of empathy, ethics, and intercultural awareness**,** allowing learners to experience language as a living expression of human responsibility. Its adaptable framework offers potential applications across other languages and educational settings**,** fostering global citizenship and critical literacy. Through the moral and social realism of Premchand's stories**,** students engage with questions of justice, compassion, and sustainability in ways that transcend linguistic boundaries. In this sense, teaching Hindi through its literature ultimately becomes a way of teaching humanity itself.

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Metacognitive Awareness and AI Integration in English Language Learning: A Mixed-Methods Study among Turkish Preparatory Students

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Artificial intelligence (AI) tools have gained attention for their potential to personalize learning, provide immediate feedback, and support self-regulated learning processes. Among these tools, *ChatGPT* has emerged as a widely used platform that offers learners opportunities to clarify concepts, receive explanations, and obtain feedback across diverse educational contexts. While much of the existing literature has focused on the affordances and limitations of AI in education, fewer studies have examined its role in fostering higher-order cognitive processes such as metacognitive awareness in foreign language learning.

The concept of metacognition was first introduced by James H. Flavell during the 1970s (Flavell, 1979). In his foundational article, he characterized it as "knowledge and cognition about cognitive phenomena" (Flavell, 1979, p. 906). Since then, the term has generally been interpreted

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in a more concise way, namely as *thinking about thinking*. Metacognition plays a crucial role in successful language learning. It involves learners' ability to plan, monitor, and evaluate their own learning processes (Schraw & Dennison, 1994). In the field of English language teaching (ELT), metacognitive awareness has been shown to enhance learners' autonomy, improve academic performance, and strengthen problem-solving skills. As AI tools have become increasingly integrated into language classrooms, an important question arises: to what extent do learners use such tools to support and expand their metacognitive practices? Understanding this relationship is particularly important in EFL contexts like Türkiye, where learners often face limited exposure to authentic English input outside the classroom.

The present study addresses this gap by investigating Turkish preparatory class students' metacognitive awareness and their use of *ChatGPT* in their English language studies. Drawing on a mixed-methods design, it explores how learners employ *ChatGPT* for planning, monitoring, and evaluating their learning, as well as the challenges they face in doing so. By examining the intersection of metacognition and AI-supported learning, this study contributes to the growing body of research on digital technologies in ELT and provides insights into the pedagogical potential and limitations of AI tools in promoting learner autonomy.

Literature Review

The concept of metacognition was first introduced by Flavell (1970) in his study on children's memory development. He observed that as children grow older, they not only recall more information but also become aware of how their memory works, predicting what they can remember and recognizing when they are ready to recall. This early idea evolved into the formal definition of metacognition as "one's knowledge concerning one's own cognitive processes and products" (Flavell, 1979, p. 906). Building on this foundation, Brown (1977) described metacognition as the knowledge and control of one's cognitive activities. She emphasized that

effective learners plan, monitor, and evaluate their own thinking processes, defining metacognitive activity as "predicting, checking, monitoring, and coordinating deliberate attempts to learn or solve problems" (p. 3). Brown further argued that the "essence of intelligent activity" lies in the ability to evaluate and control one's own learning routines (p. 8).

In the field of language education, meta-cognitive awareness has been widely explored as a key factor in successful learning. Anderson (2002) explained meta-cognition simply as "thinking about thinking" (p. 1) and proposed five core skills: planning, selecting and using strategies, monitoring strategy use, orchestrating strategies, and evaluating learning. He argued that explicit teaching of metacognitive skills empowers learners to take control of their learning process. Similarly, Öz (2015) found that pre-service EFL teachers with higher metacognitive awareness managed their own learning more effectively and modelled these skills in their classrooms. He concluded that teacher-education programs should explicitly integrate metacognitive training. In the Turkish context, Cihanoğlu (2012) examined teacher candidates and found no significant gender or GPA differences in metacognitive awareness but emphasized that students should engage in activities requiring them to plan, monitor, and evaluate their own learning. The measurement of such awareness is often based on the Metacognitive Awareness Inventory (MAI) by Schraw and Dennison (1994), which distinguishes between knowledge of cognition and regulation of cognition. This framework aligns closely with the present study, which examines learners' ability to plan, monitor, and evaluate their English learning processes with AI support.

The use of AI in language education has grown rapidly, transforming traditional teaching and learning practices. Zawacki-Richter et al. (2019) note that while AI applications in higher education have expanded, particularly in prediction, assessment, and adaptive learning, the pedagogical and human dimensions of AI use remain underexplored. They highlight the need to study how learners and educators interact with AI

tools in authentic educational contexts rather than focusing solely on technical design. A recent systematic review by Lai and Lee (2024) examined 32 studies published between 2013 and 2023 on conversational AI tools in ELT. They found that research in this area has increased sharply after 2022, showing strong evidence of improved motivation, engagement, and communication skills. However, most studies were conducted in Asian EFL contexts, emphasizing the need for more diverse samples, such as Turkish learners. Complementing these findings, Apriani et al. (2024) used a mixed-methods design to study the effects of AI-powered chatbots on EFL students' writing performance, self-efficacy, and self-regulation. Participants' writing scores and self-regulatory behaviours improved significantly, although some students expressed concerns about plagiarism and over-reliance on AI. Likewise, Poláková and Klimová (2024) conducted a pilot study with university learners and reported significant language gains and positive attitudes after one month of chatbot use. From a broader perspective, Zhao (2023) emphasized that AI technologies such as adaptive learning systems, virtual tutors, and automated feedback tools enable personalized learning paths, immediate feedback, and flexibility. However, Zhao cautioned about ethical issues and the reliability of AI feedback, echoing students' concerns about trust and data privacy observed in many recent studies. Earlier work by Golonka et al. (2012) also found that technology can significantly enhance foreign-language learning, especially through tools such as automatic speech recognition and chat platforms. Yet, they noted that many studies lack robust experimental design and do not fully address how learners regulate their cognitive processes. Overall, these studies collectively indicate that AI can support both affective and cognitive outcomes such as motivation, fluency, and self-regulation, but research still lacks focus on the behavioural and metacognitive dimensions of AI-supported language learning.

The intersection of metacognitive awareness and AI in English language learning is a developing research area. Koç and Savaş (2024) conducted a meta-synthesis of 57 studies (2010–2024) on AI chatbots in English learning and found that most implementations include structured prompts,

task-based scenarios, and scaffolds that encourage learners to plan and monitor their communication. Students commonly reported improved speaking and listening skills, increased motivation, and reduced anxiety. However, challenges such as limited corrective feedback and unnatural chatbot interaction sometimes impede learners' ability to monitor and self-correct their performance. These findings demonstrate that AI tools, when designed pedagogically, can naturally engage learners in metacognitive behaviours, such as planning prompts, monitoring responses, and evaluating feedback. The review also suggests that the effectiveness of AI tools depends on the learner's awareness of how to use them strategically, linking back to Brown's (1977) and Anderson's (2002) frameworks of metacognitive control. Collectively, the literature shows that AI technologies offer new ways for learners to exercise metacognitive skills in real-time contexts. Yet, as Zawacki-Richter et al. (2019) emphasize, there remains a strong need for research connecting pedagogical theory with technological practice. The present study responds to this gap by examining how Turkish preparatory students use *ChatGPT* to plan, monitor, and evaluate their English language learning, thereby exploring the intersection between AI-supported learning and metacognitive awareness.

Methodology

This study employed a mixed-methods exploratory design. Quantitative data provided a descriptive overview of students' metacognitive awareness, while qualitative data offered deeper insights into how learners employed *ChatGPT* in their language learning. To measure students' general metacognitive awareness, the Metacognitive Awareness Inventory (MAI), which was developed by Schraw and Dennison (1994), was administered. The study employed convenience sampling, and it was conducted with 35 university students who are currently studying in the preparatory program at Çukurova University. The sampling size was considered to be sufficient for the purposes of descriptive and reliability

analysis of the MAI, and for the thematic analysis of open-ended questions.

Data Collection Instruments and Procedure

There is currently no validated quantitative scale that specifically explores the influence of AI tools like *ChatGPT* on metacognitive processes in language learning. Therefore, open-ended questions were developed to explore this relationship qualitatively. The open-ended questions were developed by the researchers based on reviews of current literature on AI in foreign language education. While the MAI measured students' general metacognitive awareness, open-ended questions were developed to explore students' perceptions of AI's influence on their learning strategies and self-monitoring. No inferential or comparative statistical procedures were conducted. Item 52 of the MAI was excluded from the reliability analysis due to a lack of variance in participant responses. This item showed no variation, which prevented the software from calculating internal consistency. The remaining 51 items showed a Cronbach's alpha of 0.861, which indicates the scale's high internal consistency. *Jamovi* (Version 2.6) was used to perform descriptive and reliability analysis to examine the overall metacognitive awareness scores and internal consistency of the MAI before the qualitative analysis.

Data Analysis

The qualitative data indicated that students primarily employed AI tools for purposes such as metacognitive monitoring, detecting errors, and receiving feedback. Nevertheless, several challenges were commonly noted, including restricted access to *ChatGPT*, instances of the tool misinterpreting students' prompts, and students' lack of trust in *ChatGPT*. For qualitative data analysis, the MAI has been employed. The inquiry demonstrated strong internal consistency ($\alpha > .85$; Schraw & Dennison, 1994). In the present study, Cronbach's alpha was calculated for the full 52-item scale to confirm its reliability within this specific context and sample. The MAI showed high internal consistency (Cronbach's $\alpha =$

0.861), which indicates that the items measured metacognitive awareness among participants reliably.

Results

Descriptive statistics were calculated for each item of the Metacognitive Awareness Inventory (MAI) to provide an overview of students' self-reported metacognitive awareness. As shown in Table 1, mean scores across items ranged from 0.23 to 0.97, which indicates that most students reported high levels of agreement with the statements that reflect metacognitive awareness. Standard deviations ranged between 0.17 and 0.50, showing moderate variability among responses. The internal consistency of the scale was measured via Cronbach's alpha. As presented in Table 1, the MAI demonstrated high reliability (α = 0.861). Items Q7, Q17, and Q48 correlated negatively with the total scale, which indicates that they likely require reverse coding. However, excluding these items did not significantly alter the overall reliability. The descriptive and reliability analyses indicate that participants generally possess a high level of metacognitive awareness, particularly in comprehension monitoring and planning-related dimensions.

Descriptives

Descriptives

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18
N	35	35	34	35	35	35	35	35	35	34	35	35	34	35	35	35	34	35
Missing	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0
Mean	0.829	0.914	0.941	0.771	0.743	0.629	0.571	0.829	0.771	0.618	0.629	0.686	0.971	0.600	0.714	0.686	0.588	0.714
Median	1	1	1.00	1	1	1	1	1	1	1.00	1	1	1.00	1	1	1	1.00	1
Standard deviation	0.382	0.284	0.239	0.426	0.443	0.490	0.502	0.382	0.426	0.493	0.490	0.471	0.171	0.497	0.458	0.471	0.500	0.458
Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Reliability Analysis

Scale Reliability Statistics

	Cronbach's α
scale	0.861

Note. items 'Q7', 'Q17', and 'Q48' correlate negatively with the total scale and probably should be reversed
[3]

Figure 1 *Descriptives & Reliability Analysis (Cronbach's α) were run respectively through Jamovi (Version 2.6; Jamovi Project, 2024) and R (Version 4.4; R Core Team, 2024).*

Table 1

Qualitative Findings: First Open-Ended Interview Question.

Q1: How do you decide what kind of help to seek when using AI tools like *ChatGPT* in your English studies?

Theme	***Description***	***Codes***	***Frequency***
Strategic Planning & Goal-Setting	Learners use AI by aligning it with their academic goals and learning plans.	goal-setting, planning help, task planning, goal alignment, process guidance, topic selection, instruction-based use	7
Metacognitive Targeting	Students reflect on their knowledge gaps, weaknesses, or test errors to decide when to get help.	self-awareness, knowledge gap use, gap-focused strategy, diagnostic thinking, error analysis	6
Clarification & Example Seeking	Learners seek simplified explanations, examples, or deeper understanding of a topic.	simplification, examples, clarification, in-depth explanation, concept clarification	6
Feedback & Monitoring	AI is used to receive feedback, confirm correctness, or evaluate performance.	feedback-driven need detection, confirmation, self-checking, problem-solving, writing correction	5
Efficiency & Resource Supplement	AI is chosen due to its speed, access to multiple resources, or when traditional sources fall short.	time efficiency, task-based use, translation help, vocabulary support, sentence check, example-seeking	4

Task-Specific Support	Learners use AI for particular task like essay writing, presentations, translation, or vocabulary.	writing support, task-based use, translation help, vocabulary support, sentence check, example-seeking	8
Emergency Use	AI is used in spontaneous, urgent, or time-pressured situations where immediate help is needed.	emergency use, instant help	1

The participants were asked how they decide what kind of help to seek when using AI tools like *ChatGPT* in their English studies. The responses revealed several recurring themes that reflect their metacognitive processes. The common theme was strategic planning and goal-setting. Students reported that they use *ChatGPT* based on their study goals, exam needs, or to structure their tasks. For example, one participant explained: *"I first determine my goal, then think about what kind of help I need"*. Similarly, task-specific support emerged as a frequent pattern, particularly related to writing, presentations, or translation activities. Many students mentioned that they use *ChatGPT* specifically for essay guidance or grammar feedback.

Another prominent theme was metacognitive targeting, where students identified their weaknesses and sought help. One participant noted: *"I act based on my weaknesses. I focus on what I don't know rather than what I do"*. Others emphasized clarification and further examples when using *ChatGPT*. They mentioned that *ChatGPT* simplifies difficult concepts or gives illustrative examples in order for them to contextualize the concepts. Some students also used *ChatGPT* for feedback, monitoring, submitting their own responses to correct their mistakes, or checking their understanding. A participant shared: *"I first understand the problem, then I check with ChatGPT if I'm on the right track"*.

Additionally, a number of students highlighted efficiency and resource supplementation as key reasons for using *ChatGPT*, especially when time

was limited or conventional sources fell short. Lastly, a few participants reported emergency use of *ChatGPT*; namely, they only used *ChatGPT* when they were confused or stuck, without having a specific strategy. Overall, the responses indicate that students approach *ChatGPT* with varying degrees of metacognitive awareness that align their interaction with *ChatGPT* to their needs, goals, and knowledge gaps.

Table 2

Qualitative Findings: Second Open-Ended Interview Question

Q2: Do AI tools such as *ChatGPT* help you recognize what you did or did not understand during your learning process?

Theme	***Description***	***Codes***	***Frequency***
Formative Feedback & Error Awareness	Participants use AI to identify and correct their mistakes that are related to grammar, writing, or test performance.	error feedback, grammar error awareness, writing feedback, test-based awareness, performance checking	8
Clarification & Guided Explanation	AI is used to explain unfamiliar content or provide detailed, step-by-step guidance to aid understanding.	clarification seeking, guided understanding, detailed explanation, question resolution	6
Monitoring & Understanding	Learners seek simplified explanations, examples, or a deeper understanding of a topic.	reflection via exercise, post-lesson self-check, vocabulary confirmation, pre-task checking	7

Metacognitive Realization	AI is used post-task or during practice to confirm understanding, check comprehension, or highlight weak areas.	realization through transfer, discrepancy-based reflection, misconception detection, self-questioning	6
Personalized Learning	Participants realize what they do or don't know, often through comparison, reflection, or transfer of learning.	adaptive feedback, test-feedback cycle, self-assessment tools, personalized error-based learning	4
Intentional Targeting of Weaknesses	Learners already aware of their gaps use AI to focus on specific weaknesses or known trouble areas.	focused practice, known weakness, targeted research, gap identification	3
Over-reliance or No Perceived Impact	AI is perceived as ineffective, overly memorization-based, or used without deep reflection; overdependence noted.	overdependence, no impact perceived, planning use only	5

In response to whether AI tools such as *ChatGPT* helped learners recognize what they did or did not understand during their learning process, participants expressed a variety of experiences. The majority reported that *ChatGPT* supports their error awareness and gives formative feedback, and helps them identify gaps in knowledge through corrections and suggestions. For instance, one student noted: *"I ask it to create a test, then I send my answers. It summarizes my mistakes and gives new questions to reinforce the topic"*. This shows how *ChatGPT* is used to identify misunderstandings and reinforce weak areas.

Another common theme was monitoring understanding. Participants used *ChatGPT* to verify if they had truly understood a topic. One shared: *"When I think I understood something but get it wrong in an exercise, I realize I didn't learn it properly"*. Similarly, clarification and guided explanation emerged as another helpful function of *ChatGPT*; learners

relied on *ChatGPT* for step-by-step explanations, especially in grammar or vocabulary-related topics.

Some students had deeper metacognitive realizations, discoveries of misconceptions or gaps when *ChatGPT* responses in a way that contradicted their prior knowledge. A participant explained: *"If what ChatGPT says doesn't match what I know, I realize I didn't understand it"*. Other participants also mentioned the use of *ChatGPT* in their personalized learning process and asked for it to generate mini-tests. They reviewed their mistakes and studied again based on the feedback provided by *ChatGPT*.

However, a smaller group expressed limited impact or over-reliance issue. One student commented: *"It just promotes memorization. I don't really learn from my mistakes"*. These responses indicate that while AI tools are broadly seen as helpful for self-monitoring and feedback, their impact may vary depending on the learner's metacognitive awareness and how purposefully learners use the tools.

Table 3

Qualitative Findings: Third Open-Ended Interview Question

Q3: Have your studying or problem-solving strategies changed after using AI tools such as *ChatGPT*?

Theme	***Description***	***Codes***	***Frequency***
No Impact on Study Habits	Participants report no change in their study habits or strategies.	no change, no impact, preference for own method	16
Adoption of AI-Suggested Methods	Participants adopt new study methods or strategies suggested by AI.	new strategy adoption, method change, affirmed change, effectiveness-driven change	6
Supplementing Existing Strategies	Participants add AI support to their existing study habits without replacing them.	method extension, strategy enhancement, self-directed use	3

Improved Focus on Weaknesses	Participants report increased awareness and targeting of weaknesses.	targeted adjustment	1
Cognitive Flexibility via AI	Participants revise their ideas or approaches due to AI input.	idea revision	1
Efficiency or Simplification-Based Shift	Participants shift study strategies toward efficiency or simplification with AI help.	simplification, improved efficiency, time-saving	3
Over-Reliance / Resistance	Participants express resistance to change or over-reliance on AI.	confidence in current strategy, no impact, overdependence, tentative change, delayed adaptation	4

When the participants were asked whether their study or problem-solving strategies had changed after using AI tools such as *ChatGPT*, their responses varied significantly. The most common theme was no impact on study habits. Many students stated that their methods remained the same. Some also expressed confidence in their own learning styles. One participant said: *"I trust my own methods. I already know how I learn"*. Nevertheless, a notable number of students mentioned the adoption of the methods that *ChatGPT* suggested. It offered new strategies that participants had not considered before. One student stated: *"The solutions it suggested had never occurred to me, and they actually worked"*. This highlights how some learners were open to adjusting their approaches based on AI suggestions.

Several participants reported that they supplemented the already existing strategies; namely, they integrated *ChatGPT* as a tool to enhance their strategies, but they did not replace their preferred methods. For example, one said: *"I didn't change my method, but I added new techniques through ChatGPT"*. Others shared that AI tools helped them focus more on their weaknesses, and they shifted their study habits accordingly.

Cognitive flexibility and efficiency-driven strategy shifts also emerged as themes. Students mentioned that they changed their ideas or approaches

after *ChatGPT* challenged their prior assumptions, or because it allowed faster access to useful content. One participant noted: *"I save time by accessing information faster, so my method naturally changed"*.

Finally, a few responses hinted at resistance or over-reliance. Learners either preferred not to change their style or expressed concern of becoming too dependent on AI. Overall, while many students reported no change in their habits, a meaningful number of them acknowledged the influence of AI in shaping and enhancing their learning approaches.

Table 4

Qualitative Findings: Fourth Open-Ended Interview Question

Q4: Do AI tools such as *ChatGPT* help you plan, monitor, or evaluate your own learning?			
Theme	***Description***	***Codes***	***Frequency***
AI-Supported Planning	AI helps learners plan study schedules, manage time, and create personalized learning plans.	personalized planning, time management, plan creation, task planning, presentation planning, guided study, study support, planning assistance, step-by-step guidance, customized planning, adaptive support, efficient learning support, assignment support	11
Metacognitive Monitoring	Learners use AI feedback and monitoring to track understanding, identify errors, and support learning awareness.	confusion resolution, learning facilitation, speaking support, self-improvement, constructive feedback, learning monitoring, helpful in studying, error identification, self-monitoring, personalized feedback, comprehension support, writing enhancement, structured explanation, gap detection, content awareness, general support, error recognition	17

Discovery of New Strategies	AI introduces learners to new study methods, learning strategies, and flexible ways to access knowledge.	method discovery, personalized strategy, flexible access, learning efficiency	2
Mixed or Partial Help	Learners partially rely on AI, mainly for monitoring or tentative support rather than full planning help.	self-planner, AI monitoring help, potential value	2
No Help / Preference for Own	Learners prefer their own planning or study strategies, show skepticism, or report no AI help.	no support perceived, no perceived support, failed planning, limited impact, lack of self-awareness, personal planning, self-reliance, no impact, reluctant usage, low trust, skepticism on planning, information access only	15

When the participants were asked whether AI tools such as *ChatGPT* help them plan, monitor, or evaluate their own learning, participants gave varied responses. The majority reported positive experiences. A prominent theme that emerged was metacognitive monitoring, where learners used *ChatGPT* to check their understanding, recognize their mistakes, or reflect on their progress. One student noted: "*It gives feedback based on my answers, and this helps me understand the topic"*. Others emphasized that they could identify and correct errors independently, without relying on a teacher or peer.

Another frequently mentioned theme was AI-supported planning. Several students reported that *ChatGPT* helped them create schedules or decide which steps to take while doing assignments or preparing for exams. For instance, a participant shared: "*I tell ChatGPT my available hours and exam schedule, and it prepares a great plan"*. Some learners mentioned that they discovered new strategies, which was one of the benefits of using

ChatGPT. They stated that *ChatGPT* introduced them to new learning methods they weren't aware of before. These students highlighted its ability to personalize learning, and offer a variety of approaches, which allow them to select what suited their style the best.

On the other hand, a few participants expressed mixed or limited impact. They acknowledged that while *ChatGPT* was helpful for feedback and monitoring, they preferred to handle their planning by themselves. A smaller group expressed scepticism or resistance. They believed that planning is too personal or that *ChatGPT* cannot replicate human thinking. One student remarked: "*AI shouldn't do planning for humans because it doesn't think like us"*. In summary, not all learners relied on AI for metacognitive regulation; however, a significant number of participants found *ChatGPT* to be a useful tool for monitoring their learning and planning, and strategy development.

Table 4

Qualitative Findings: Fifth Open-Ended Interview Question

Q5: What are the challenges you have experienced while using AI tools to support your learning?			
Theme	***Description***	***Codes***	***Frequency***
Limited Access / Financial Barrier	Participants report challenges due to premium requirements, limited usage rights, or cost-related access issues.	access limitation, cost barrier, subscription restriction, high cost, usage cap, internet dependency	13
Miscommunication / Comprehension Issues	Participants struggle with AI misunderstanding prompts, requiring multiple attempts or detailed instructions.	misinterpretation, comprehension issue, prompt burden, unnecessary complexity, nonverbal limitation	10

Lack of Trust / Reliability Concerns	Concerns about misinformation, over-simplification, or risk in relying fully on AI.	trust issue, reliability concern, misinformation, error risk	4
Content Limitations / Gaps	Participants note certain topics or areas where the AI is insufficient or underdeveloped.	content limitation, insufficient detail	2
Learner Misuse / Misalignment	Learners acknowledge over-reliance on AI or struggle when suggestions are impractical to apply.	shallow learning, dependence, implementation gap	2
No Difficulty Reported	Participants explicitly state that they do not experience challenges using AI tools.	no challenge, no difficulty	9

When participants were asked about the challenges they experienced while using AI tools to support their learning, several common themes emerged. The most frequent issue was limited access and financial barriers. Many learners mentioned restrictions related to daily usage limits, premium subscription requirements, or the high cost of premium access. One participant said: *"The biggest problem is how expensive it is; this reduces how much we can learn"*.

Another significant theme was miscommunication or comprehension issues. Some students noted situations where *ChatGPT* misunderstood prompts, provided off-topic or overly detailed responses, or required them to clarify their input multiple times. One participant mentioned: *"Sometimes, I have to explain too much; it doesn't understand what I mean"*.

Several participants also expressed concerns about reliability and trust when *ChatGPT* provided incorrect or misleading information. For example, a student shared: *"Although it's fast, I don't think it's reliable"*. Some students emphasized that over-reliance on *ChatGPT* could lead to misinformation, especially if they don't recheck the outputs. In addition, a small number of students mentioned the content limitations. They stated

that *ChatGPT* was not sufficiently developed or accurate in some specific academic areas. A few also noted difficulties regarding the users, such as struggling to apply *ChatGPT*'s suggestions when the recommended tools or strategies were not available in their context.

Despite these challenges, a small number of students reported no significant difficulties while using AI tools. They described their experiences as smooth and even easier than using other digital tools. Overall, while most learners found *ChatGPT* helpful, its effectiveness was often affected by technical, financial, and contextual factors, which shaped how students could benefit from it.

Discussion

This study aimed to explore how Turkish preparatory students at Çukurova University School of Foreign Languages used *ChatGPT* to plan, monitor, and evaluate their English language learning in relation to their overall metacognitive awareness. The quantitative results indicated generally high levels of metacognitive awareness among the participants, particularly in comprehension monitoring and planning, confirming that these learners were able to regulate their own learning to a significant extent. These findings align with earlier research by Anderson (2002) and Öz (2015) who emphasized that learners with strong metacognitive skills tend to plan and evaluate their learning more effectively.

The qualitative findings expanded these results by illustrating how students applied their metacognitive knowledge when engaging with *ChatGPT*. Most participants reported using *ChatGPT* to monitor their understanding, detect errors and receive feedback, suggesting that AI tools can serve as effective mediators for metacognitive monitoring. Similar to the outcomes reported in recent studies by Apriani et al. (2024) and Poláková and Klimová (2024), learners in this study perceived AI-generated feedback as immediate and constructive. However, their reliance on *ChatGPT* remained largely instrumental rather than strategic,

indicating that not all students were equally capable of transforming AI support into deeper metacognitive engagement.

Interestingly, while many learners benefited from *ChatGPT* in planning or self-evaluation, a substantial portion stated that their general study habits did not change. This reflects a selective integration of AI tools into existing learning strategies rather than a complete transformation. The fact that students combined AI feedback with their own study routines supports the view of Lai and Lee (2024) who argued that AI tools are most effective when used to complement human learning processes. Moreover, the participants' awareness of their weaknesses and their tendency to check their understanding via AI demonstrate a growing sense of learner autonomy, a central outcome of metacognitive development.

Nonetheless, the findings also revealed notable challenges. Limited access due to premium restrictions, miscommunication with AI responses and trust concerns affected the quality of engagement. These issues echo the ethical and technical limitations highlighted by Zhao (2023) and Zawacki-Richter et al. (2019). Such constraints may prevent learners from fully leveraging the metacognitive potential of AI tools. Furthermore, over-reliance on AI or superficial use for quick answers rather than reflective engagement could hinder long-term metacognitive growth.

Conclusion

The results suggest that *ChatGPT* can function as a valuable scaffold for metacognitive awareness, particularly in monitoring and feedback processes, yet its effectiveness largely depends on learners' existing self-regulatory skills and digital literacy. Therefore, incorporating explicit metacognitive training into EFL programs could help students learn how to use AI tools strategically and critically rather than passively.

The findings revealed that students used AI tools mostly for metacognitive monitoring, error identification and feedback. However, challenges were frequently reported, such as limited access to *ChatGPT*, its misunderstanding of students' prompts and a lack of student trust towards

ChatGPT. Limitations of the study include the small sample size and homogeneity of participants' backgrounds, which may affect generalizability. In addition, this is not a longitudinal study. Therefore, future research could focus on larger and more diverse groups and explore the long-term impact of AI on metacognitive development in language education.

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Proportion of Authors' Contribution

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Author 3: Abstract, Introduction

Directed Motivational Currents in Turkish EFL Research: An Overview of Postgraduate Studies

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Motivation in English Language Teaching (ELT) and English Language Learning (ELL) has been extensively researched, encompassing diverse theoretical and empirical perspectives (Oh & Kim, 2024). Aligned with these studies, as a novel phenomenon, the term Directed Motivational Currents (DMCs) was introduced by Dörnyei and his colleagues (Dörnyei et al., 2016). DMCs is mostly defined as a high-level of motivation and long-lasting involvement, including effort and positive emotions, to achieve a specific long-term goal or vision (Ibrahim, 2016). These high and intense motivational surges also include Complex Dynamic Systems Theory (CDST), the self and identity, Flow Theory (Csikszentmihalyi, 1988) and dynamic concepts during teaching and learning English in today's world.

Directed Motivational Currents can be considered as a goal-directed process for individuals to succeed, or achieve a specific goal in which they demonstrate remarkably high-level of motivational energy (Muir, 2020). In other words, a clearly defined goal or vision is combined with a pathway to achieve it, and that pathway includes subgoals and self-checks by the individual. As a result of this journey, this long-lasting motivational

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behaviour brings success or achievement. It is important to note that all motivated behaviours cannot counted as DMCs. An individual experience Directed Motivational Currents in extreme situations or particular moments and they also need to be beyond the standard level of motivation (Muir & Ibrahim, 2014). In 2016, Dörnyei et al. mentioned main characteristics of DMCs by emphasizing the importance of them. It is vital to witness these dimensions for individuals to name an exact and correct DMCs experience. The main features of DMCs are; goal/vision orientedness, a salient facilitative structure, triggering stimuli and positive emotionality.

Literature Review

DMC theory evolved from process-oriented and dynamic-systemic views of motivation (Dörnyei et al., 2014; Muir & Dörnyei, 2013). Early foundational works established that DMCs are vision-driven, feedback-rich, and context-sensitive motivational pathways leading to intense and sustained effort (Muir, 2016). DMCs integrate goal-setting theory, self-regulation, and positive emotionality within a CDST lens (Larsen-Freeman & Cameron, 2008). By highlighting the complexity, dynamism, and process-oriented nature of motivation globally, Directed Motivational Currents (DMCs) fill the gaps in earlier studies (Chang & Zhou, 2023; Zarrinabadi & Tavakoli, 2017). Simultaneously, other research demonstrated the important impact of DMCs on cognitive and motivational processes, wellbeing, and success in second language acquisition (Safdari & Maftoo, 2017; Shen et al., 2025). Research on directed motivational currents is still in its infancy, with both theoretical and empirical studies having only been initiated in 2013 (Muir, 2016), despite the publication of numerous theoretical articles about DMCs (Dörnyei et al., 2014; Muir & Dörnyei, 2013). Numerous studies focus on L2 learners (Muir, 2016; Ibrahim, 2016; Henry et al., 2015; Sak, 2021), while research on L2 teachers or pre-service teachers is limited (Zarrinabadi & Tavakoli, 2017; Peng & Phakiti, 2022).

Directed Motivational Currents (DMCs), first introduced by Zoltán Dörnyei et al. (Dörnyei, Ibrahim, & Muir, 2014), refer to intense, goal-directed motivational surges that carry individuals towards long-term outcomes with high levels of engagement and productivity. Since their emergence, DMCs have attracted significant scholarly attention in the fields of second language acquisition (SLA) and applied linguistics due to their potential to explain periods of sustained motivation. Early foundational works such as Dörnyei et al. (2014), Muir (2016), and Henry et al. (2015) established key characteristics and triggers of DMCs, such as salient future visions, the presence of triggering stimuli, and structured pathways with feedback mechanisms. DMCs have been conceptualized as dynamic and context-sensitive processes that unfold within Complex Dynamic Systems Theory (CDST), aligning them with longitudinal and qualitative methodologies in motivation research.

Despite the increasing theoretical development, DMC studies still show a lack of consensus on operationalization and measurement tools, with researchers employing diverse data sources such as interviews, reflective journals, learning logs, and longitudinal case studies. Most notably, the Directed Motivational Currents Disposition Questionnaire (DMCDQ) (Muir, 2016) has been used in a limited number of quantitative studies, while qualitative approaches dominate the field due to the complex and individualized nature of DMC experiences.

Türkiye has a strong tradition of L2 motivation research, yet DMC-focused postgraduate work emerged only in the past six years. The seven available theses (Gümüş, 2019; Sak, 2020; Abi, 2021; Demir Ayaz, 2023; Eker Uka, 2025; Kapısız, 2025; Kulaksız, 2025) reveal an evolution from learner-focused qualitative exploration toward mixed-method, intervention-based, and teacher-centered studies. Key variables—vision, self-regulation, mindset, gamification, and mentoring—mirror global theoretical debates while addressing local EFL dynamics. Although motivation studies in Türkiye have long investigated constructs such as integrativeness, instrumentality, and self-efficacy, the dynamic, long-term

perspective offered by DMCs theory is still emerging (Eker Uka, 2025). Over the past six years, a small but growing body of postgraduate research has begun to examine DMCs among Turkish EFL learners and teachers. When investigated, there have been only seven postgraduate studies (five of them are PhD dissertations and two of them are MA theses) on DMCs, as indicated by the database of the Higher Education Council National Thesis Center (Yükseköğretim Kurulu - Ulusal Tez Merkezi) (September, 2025). These studies employ diverse methodological frameworks—ranging from mixed-methods and retrodictive qualitative modelling to single-case design—and offer rich, context-sensitive insights into the motivational trajectories of language users in Türkiye. Overall, Turkish postgraduate studies have consistently employed qualitative or mixed-method designs, with a strong preference for thematic analysis and longitudinal data collection. Common data sources include weekly logbooks, interviews, open-ended questionnaires, and mentoring session transcripts. Vision-related constructs, personal/professional goal alignment, and the emotional trajectory of motivation are recurring themes across these studies.

Given the increasing scholarly interest and the methodological diversity in this area, there is a need to systematically review and synthesize existing postgraduate research on DMCs conducted within the Turkish context. Such a review can help illuminate:

- dominant themes and research orientations,
- theoretical and methodological trends,
- key findings and emerging areas, and
- underexplored dimensions that warrant further inquiry.

Methodology

Aim and Scope of the Review

This study aims to conduct a systematic literature review of seven postgraduate theses (both master's and doctoral) conducted between 2019 and 2025 in Turkish universities, all of which explore the construct of

Directed Motivational Currents (DMCs) in the context of English as a Foreign Language (EFL). The review includes all postgraduate theses (master's and doctoral) completed at Turkish universities between 2019 and 2025 that explicitly examined DMCs in EFL teaching/learning contexts and were publicly accessible in full text. Given the limited but coherent pool, no exclusion was applied by sample size, method, or institutional type; instead, all eligible studies were retained to preserve breadth and allow pattern detection across methods and foci. Due to the limited number of studies conducted in this specific area in Türkiye, a complete inclusion approach was adopted rather than traditional purposive or criterion-based sampling techniques. In other words, all accessible and thematically relevant postgraduate theses on DMCs listed in the Council of Higher Education Thesis Center (YÖKTEZ) were included in the analysis. No exclusion was applied beyond thematic relevance and accessibility.

By mapping the landscape of DMC-focused postgraduate research in Türkiye, this review seeks to contribute to the global understanding of motivational dynamics in language learning while offering insights into context-specific patterns observed in Turkish EFL teacher and learner motivation. It is anticipated that this synthesis will not only highlight common theoretical frameworks and methodologies used but also inform further empirical work and mentoring-based interventions in language learning and teacher development.

Considering the aforementioned statements, the purpose of this systematic review is to examine all accessible postgraduate theses conducted in Turkish universities between 2019 and 2025 that explore Directed Motivational Currents (DMCs) in English as a Foreign Language (EFL) context. Given the limited number of studies available, the review adopts a comprehensive inclusion strategy to synthesize findings, identify methodological and thematic patterns, and provide insights into how DMCs have been conceptualized and investigated in Turkish EFL research. This study aims to offer a structured overview that informs both

national and international researchers about emerging trends, gaps, and potential directions for future research on DMCs in language education. To guide the synthesis and interpretation of the data, the following research question was formulated:

- What are the methodological and theoretical characteristics, key findings, and contextual patterns of postgraduate theses on Directed Motivational Currents (DMCs) in Turkish EFL settings between 2019 and 2025?

Data Collection Process

The review was conducted through a systematic search and manual screening of postgraduate thesis records in the National Thesis Database (YÖK Ulusal Tez Merkezi). The keywords used in the search process included "*Directed Motivational Currents*", "*DMC*", "*DMCs*", "*language motivation*", and "*motivation in EFL*". Records were screened at title/abstract and then at full text to determine explicit engagement with the DMC construct in an EFL setting. Seven theses met all criteria, spanning qualitative, mixed-methods, structural-equation–based, interventionist, and single-case designs. Retaining the full set enabled to track how theoretical emphases (vision, mindsets, self-regulation, gamification, mentoring) have evolved within Turkish EFL scholarship over time. The search was conducted until September 2025, and as a result, a total of seven postgraduate theses were identified, all of which aligned with the scope and thematic focus of the current study.

The following criteria were employed to include the studies in the review:

- The thesis must focus explicitly on Directed Motivational Currents in EFL teaching or learning contexts.
- The study must be a master's or doctoral thesis completed in a Turkish university between 2019–2025.
- The full text of the thesis must be publicly accessible via the YÖK database.

Given the limited number of studies that met these criteria, no further

filtering based on sample size, methodology, or year of publication was performed. All relevant studies were fully included for detailed analysis.

Analysis Procedure

Each thesis was subjected to in-depth document analysis using a structured extraction protocol (Schmidt et. al., 2025) that captured the author/year, institution and degree level, research aims and questions, participants and sampling, theoretical framework(s), instruments and data sources, research design and analytic methods, and *DMC-specific findings* regarding emergence, triggers, sustainment, and (where relevant) mentoring or gamification as facilitative structures. Extracted elements were synthesized narratively and tabulated to enable thematic comparison and pattern identification across studies; special attention was paid to how studies conceptualized dynamism (e.g., via motigraphs, retrodictive modelling) and how they handled measurement and operationalization challenges. All these elements were recorded and summarized in tabular and narrative formats, allowing for thematic comparison and pattern identification across studies.

Findings

Theoretical Orientations

Across the seven Turkish postgraduate works (2019–2025), DMCs were examined with qualitative, mixed-methods, and intervention designs, anchored in CDST. Analysis revealed that while all theses shared a focus on intense, goal-directed motivational surges, they varied considerably in how they operationalized dynamism and measurement. Earlier studies (Gümüş, 2019; Sak, 2020) visualized motivational fluctuations via motigraphs, capturing micro-level ebbs and flows over time. Later works incorporated retrodictive qualitative modelling, path analysis, and Structural Equation Modelling (SEM) to test how constructs such as vision, self-regulation, and mindset interact dynamically to generate or sustain DMCs.

Data sources commonly included interviews, reflective journals, learning

diaries, and questionnaires, while advanced cases (Abi, 2021; Eker Uka, 2025) integrated experimental or intervention-based components—respectively, gamification and Enhancement Mentoring—as facilitative structures. These methodological shifts point to an increasing effort within Turkish EFL DMC research to move beyond descriptive accounts toward intervention-driven and theory-testing approaches.

Vision (often articulated as ideal L2 self or future self-images) is central in learner-focused work, while mentoring emerges as a structural scaffold in teacher-focused research. Psychological mediators—especially self-regulation and effort—are foregrounded as mechanisms that convert vision and beliefs into sustained action; mindsets receive attention as antecedents whose effects may be contingent on volitional control. Finally, gamification is tested as a designed structure capable of delivering feedback loops, perceived progress, and challenge/reward cycles aligned with DMC principles. Early studies charted motivational ebbs and flows via motigraphs and interviews; recent work adds SEM-based modelling, gamification interventions, and a teacher-centred case with Enhancement Mentoring. Core cross-cutting themes are vision/goal-directedness, self-regulatory strategy use and effort, contextual/social triggers, and facilitative structures (mentoring; gamification). The theoretical orientation of the seven postgraduate theses consistently anchored DMCs within the Complex Dynamic Systems Theory (CDST) framework, while integrating complementary psychological models.

- Vision and Goal-Directedness emerged as the most consistent conceptual anchor across studies (Gümüş, 2019; Sak, 2020; Demir Ayaz, 2023). The Ideal L2 Self and long-term future images of success structured learners' motivational trajectories.
- Self-Regulation Theory played a crucial mediating role (Kulaksız, 2023; Demir Ayaz, 2023), linking mindset and effort to sustained motivational flow.
- Mindset Theory appeared in two studies (Kulaksız, 2023; Kapısız, 2025), highlighting that growth-oriented beliefs facilitate the

onset of DMCs.

- Flow Theory (Csikszentmihalyi, 1988) and Gamification Frameworks (Octalysis; Abi, 2021) expanded DMC conceptualization to include enjoyment, feedback, and engagement mechanisms.
- Finally, Enhancement Mentoring Approach (Eker Uka, 2025) introduced a new theoretical lens connecting DMCs to teacher professional identity and sustained pedagogical motivation.

Collectively, these frameworks demonstrate an evolving theoretical pluralism: while DMCs remain grounded in CDST, Turkish research increasingly incorporates adjacent models that explain how sustained motivation can be initiated, scaffolded, and regulated in educational practice.

Methodological Trends

The theses revealed clear methodological diversification and contextual expansion across time. Early studies (2019–2020) relied on qualitative mapping and visualization (motigraphs, reflective journals) to portray individual motivational journeys. Between 2021–2023, mixed-methods and quantitative modelling gained prominence—particularly in Abi (2021) and Demir Ayaz (2023), who used SEM to identify causal pathways between self-regulation, vision, and effort. By 2025, research extended to new contexts: Kapısız (2025) qualitatively explored pre-service teachers' DMC experiences, while Eker Uka (2025) examined an in-service teacher's professional DMC trajectory through mentoring. Contextually, the focus broadened from university learners to teachers, signalling a paradigm shift. While the first generation of studies explored how DMCs emerge among learners, recent works began to examine how they can be facilitated and sustained among educators—marking a turning point in Turkish motivational research. A concise design panorama is given in Table 1.

Table 1

Distribution of Postgraduate Theses on Directed Motivational Currents (2019–2025)

Author & Year	*Research Design*	*Participants*	*Key Theoretical Frameworks*	*Core Findings*
Gümüş (2019)	Retrodictive qualitative modelling	8 EFL learners	CDST, Vision Theory	Identified DMC, DMC-like, and non-DMC archetypes; motivational trajectories are unique yet governed by limited attractor states.
Sak (2020)	Longitudinal qualitative case study	3 private university students	CDST, Self-Concept	DMCs are highly dynamic and personal; social and contextual factors shape motivational ebbs and flows.
Abi (2021)	Mixed methods (SEM + classroom intervention)	University EFL students	Octalysis, Flow Theory, DMC Framework	Gamification enhances task engagement and supports long-term motivational sustainability.
Demir Ayaz (2023)	Sequential explanatory mixed methods	305 students + 9 case profiles	CDST, Self-Regulation, Vision Theory	Self-regulatory strategies and effort directly predict DMC; vision exerts both direct and indirect effects.
Kulaksız (2023)	Mixed methods	355 preparatory students	Mindset Theory, Self-Regulation, DMC	Self-regulation fully mediates the relationship between mindset and DMC; growth mindset linked to self-motivated DMC initiation.
Kapısız (2025)	Qualitative descriptive	63 ELT students	Mindset Theory, CDST	Students enjoyed DMC experiences but associated them with stress; DMCs mostly tied to exam periods and academic milestones.
Eker Uka (2025)	Single-case longitudinal	1 in-service teacher	CDST, Enhancement Mentoring	Mentoring functions as facilitative structure; teacher's professional DMC sustained through vision, reflection, and motivational regulation.

Note. All studies were retrieved from the National Thesis Database (YÖK Ulusal Tez Merkezi). Abbreviations: MA = Master's Thesis; PhD = Doctoral Dissertation; CDST = Complex Dynamic Systems Theory; DMC = Directed Motivational Currents.

Core Findings Across Analytical Dimensions

Participants and Sampling. Most theses involved university-level EFL students, with the exception of one single-case teacher study (Eker Uka, 2025). Sampling ranged from convenience and purposive approaches to retrodictive case selection, enabling both depth and generalizability.

Research Designs and Analytic Methods. Five of the seven studies used qualitative or mixed-method designs, demonstrating the need to capture dynamic and individualized motivational processes. Longitudinal tracking (Sak, 2020; Eker Uka, 2025) and retrodictive qualitative modelling (Gümüş, 2019) were particularly effective for identifying motivational archetypes and state changes.

Data Collection Instruments. Motigraphs, reflective journals, and interviews dominated early research, while later works (Abi, 2021; Demir Ayaz, 2023) used surveys, path analysis, and SEM to model relationships between variables. This evolution reflects growing methodological maturity and triangulation.

Facilitative Structures. Two facilitative mechanisms emerged:

- Gamification (Abi, 2021) provided an external motivational scaffold through feedback loops, progress indicators, and reward cycles—enhancing long-term engagement.
- Enhancement Mentoring (Eker Uka, 2025) offered a reflective and affective structure that sustained teacher motivation, reinforced vision clarity, and stabilized emotional fluctuations.

DMC-Specific Findings. Across all theses, DMCs were characterized by high-intensity, goal-oriented motivation sustained through self-regulation and vision clarity. Triggers included exams, teacher influence, and peer support. Sustaining factors involved reflective awareness, structured feedback, and alignment of personal and academic goals. Notably, emotional turbulence (stress and anxiety) often coexisted with heightened motivation, supporting CDST's view of motivation as nonlinear and dynamic.

Study-by-Study Synthesis

Addressing the central question — *What are the methodological and theoretical characteristics, key findings, and contextual patterns of postgraduate theses on Directed Motivational Currents (DMCs) in Turkish EFL settings between 2019 and 2025?* — the review demonstrates a clear developmental trajectory. Turkish postgraduate DMC research evolved from descriptive, learner-centred inquiries toward applied, theory-testing, and teacher-oriented investigations. Methodologically, there has been a move from qualitative case studies and motigraph-based analyses to sophisticated mixed-method designs involving statistical modelling and intervention-based frameworks. Theoretically, the dominance of CDST has been enriched through integrations with Vision, Self-Regulation, Mindset, Flow, and Mentoring frameworks, showing a robust interdisciplinary synergy.

In terms of findings, DMCs in the Turkish EFL context consistently emerge as complex, dynamic, and highly contextual phenomena, driven by vivid future visions, regulated effort, and affective investment. Facilitative structures—whether designed (gamification) or relational (mentoring)—play an essential role in sustaining these motivational currents. The contextual evolution from students to teachers indicates a deepening recognition of DMCs not only as a learner phenomenon but as a professional and pedagogical process that shapes identity, persistence, and innovation in education.

Gümüş (2019, PhD Dissertation), stands as the first systematic attempt to apply Retrodictive Qualitative Modelling (RQM) to Directed Motivational Currents (DMCs) within Turkish tertiary EFL education. Anchored in Complex Dynamic Systems Theory (CDST), the study explored motivational trajectories, emotional states, and effort patterns across eight English preparatory-class students. Data were collected through a combination of self-plotted motigraphs, bi-weekly reflective journals, and semi-structured interviews, allowing for a rich, longitudinal understanding of motivational flow over time. The analysis, guided by

RQM, identified three archetypal learner profiles—pure DMC, DMC-like, and non-DMC participants—each distinguished by unique configurations of affective intensity, self-regulation, and contextual responsiveness. Despite individual variation, Gümüş found that all trajectories were organized around a limited set of "attractor states", illustrating the structured yet adaptive nature of motivational systems. The study demonstrated that long-term goal pursuit depends on both cognitive regulation and emotional resilience, emphasizing that DMCs emerge as context-specific self-organizing systems. As one of the earliest empirical inquiries in Türkiye, this thesis established motigraphs and reflective narrative triangulation as effective tools for capturing motivational dynamism, paving the methodological foundation for later DMC research.

Sak's (2020, Master's Thesis), conducted at Hacettepe University represents one of the earliest empirical attempts to examine Directed Motivational Currents (DMCs) within the Turkish EFL context through the lens of Complex Dynamic Systems Theory (CDST). Adopting a qualitative longitudinal case study design, the research followed three focal preparatory-class EFL learners at a private university over a four-week period to explore the parameters that triggered and modulated motivational fluctuations in their DMC-induced trajectories. Data were collected through self-plotted motigraphs, which visually represented weekly motivational ebbs and flows, and semi-structured interviews conducted at the end of each week to unpack the underlying reasons for change. Thematic analysis revealed that participants' motivational experiences were highly complex, dynamic, and idiosyncratic, showing both short-term variations and long-term goal orientation. Although their motivation fluctuated across weeks, each participant maintained a clear sense of vision and purpose, indicating the sustained influence of DMC-like engagement. Factors influencing these fluctuations included personal variables (self-efficacy, vision clarity, emotional readiness), social dimensions (teacher encouragement, peer collaboration), and contextual conditions (task design, classroom atmosphere, workload intensity). Emotional shifts such as enjoyment, anxiety, and stress acted as short-term

modulators, sometimes amplifying and sometimes dampening motivational energy, yet without breaking the overall current. Overall, Sak's study provided early empirical support for the existence and dynamic nature of DMCs in the Turkish EFL context, validating the construct as an operationally observable motivational surge and demonstrating the methodological value of motigraphs as visual tools for capturing motivation in motion. The study paved the way for later Turkish research that adopted longitudinal, process-oriented designs and highlighted the interplay between vision, affect, and contextual dynamics in sustaining long-term motivation.

Abi (2021, PhD dissertation), explored the potential of gamification as a facilitative structure for sustaining Directed Motivational Currents in language learning. The research was theoretically grounded in Octalysis, a comprehensive gamification framework, and integrated principles from Flow Theory, Self-Determination Theory, and Dörnyei's DMC framework. The study followed a mixed-method sequential design conducted in two phases: an initial Structural Equation Modelling (SEM) analysis to test hypothesized relationships between motivational factors and long-term engagement, followed by an experimental classroom intervention using Octalysis-based gamified elements. Quantitative data were collected through multiple standardized instruments, including the DMC Disposition Questionnaire (DMCDQ), while qualitative data came from teacher and learner interviews, reflective narratives, and classroom observations. Findings demonstrated that Octalysis-driven gamification significantly enhanced learners' engagement, persistence, and affective investment, establishing a structured pathway for sustained motivation. The integrated analysis revealed that progress feedback, challenge–reward balance, and meaningful goal cycles operated as salient structures that mirrored DMC dynamics. This study provided one of the first empirical validations of the interface between gamification and DMC theory, concluding that game design principles can serve as pedagogical architectures that sustain both short- and long-term motivational flow in EFL classrooms.

Kulaksız (2023, PhD Dissertation), provided a major advancement in the quantitative operationalization of DMCs by examining how mindset and self-regulatory processes predict long-term motivational engagement among EFL learners. Conducted with 355 preparatory-class students at a state university in Türkiye, the research adopted a sequential explanatory mixed-method design, combining large-scale quantitative modelling with qualitative validation. Data were collected via Likert-type questionnaires and open-ended questions, measuring constructs such as fixed/growth mindset, self-regulation, academic self-concept, and DMC disposition. Statistical analyses, including path analysis and mediation modelling, demonstrated that self-regulation fully mediated the effect of mindset on DMCs, while mindset itself was independent of gender and proficiency level. Qualitative reflections corroborated these results, showing that participants' DMC episodes were most often triggered by self-motivation, exams, future goals, and social influences. Furthermore, students associated DMC reoccurrence with achievement, emotional positivity, and self-regulated striving, indicating that sustained motivation requires both cognitive and affective alignment. The study's integration of large-scale modelling and narrative accounts positioned it as a landmark contribution, establishing self-regulation as the volitional mechanism linking beliefs and sustained motivational energy in the Turkish EFL context.

Demir Ayaz (2023, PhD dissertation), represents a rigorous mixed-method investigation into the individual difference (ID) variables underlying DMC sustainment, particularly focusing on self-regulatory strategy use, language learning effort, ideal L2 self, and vision. Employing a longitudinal sequential explanatory design, the study collected quantitative data from 305 EFL learners via composite surveys and conducted qualitative follow-up interviews and diaries with nine focal participants selected through retrodictive modelling. Path analysis revealed that self-regulation and learning effort were the strongest direct predictors of DMC. Qualitative data further highlighted that participants in the "pure DMC" group used meta-affective and metacognitive

strategies to regulate challenges, whereas DMC-like or non-DMC participants relied on less adaptive cognitive strategies. Effort trajectories aligned closely with emotional states, confirming the process-sensitive and cyclical nature of motivation. This study provided comprehensive evidence that DMCs are sustained through continuous regulatory adjustment and emotional monitoring, reinforcing their conceptual alignment with CDST. By empirically integrating ID variables and self-regulatory pathways, the thesis contributed a nuanced understanding of how vision, volition, and affect interdependently shape long-term motivational engagement in Turkish EFL settings.

Kapısız (2025, Master's Thesis), adopted a qualitative descriptive design to investigate how university-level EFL students experience Directed Motivational Currents and how these experiences intersect with their mindsets about language learning. Drawing on interviews with 63 English Language Teaching students, the study employed semi-structured interviews and analysed the data using *MAXQDA* Analytics to identify key motivational and cognitive patterns. The analysis yielded 14 DMC-related codes and three distinct mindset orientations. Participants reported that their DMC experiences, while intensely engaging and productive, were often accompanied by heightened stress and anxiety, reflecting the dual nature of sustained motivation. Most students described their DMC episodes as occurring during high-stakes academic periods, such as high school and university entrance exam preparation, when vision and external expectations aligned. While nearly half believed that language learning capacity can change, others held a more fixed perspective. Interestingly, no direct correlation was found between mindset orientation and DMC occurrence, suggesting that contextual and emotional factors play a more decisive role than cognitive beliefs alone. This study expanded the qualitative understanding of DMCs in Türkiye by situating them within learners' lived experiences and emphasizing their affective and contextual complexity rather than purely cognitive determinants.

Eker Uka (2025, PhD Dissertation) extended DMC theory to the domain

of teacher motivation and professional development, marking a pioneering application of the construct beyond learner contexts. Conducted as a single-case longitudinal study, it examined the DMC trajectory of an in-service English language teacher over an eleven-week period, within the framework of Complex Dynamic Systems Theory (CDST). The study's innovation lay in its focus on Enhancement Mentoring as a facilitative structure for sustaining long-term motivational engagement. Data triangulation was achieved through weekly logbooks, motivational graphs, mentoring session notes, and in-depth interviews, analyzed through hybrid thematic coding using *MAXQDA*. The findings revealed a vivid, sustained DMC trajectory characterized by vision-driven pedagogical behaviour, emotional dynamism, and innovative instructional practices. Enhancement Mentoring was shown to operate as a dynamic scaffold that helped the teacher regulate motivational dips, reinforce self-efficacy, and sustain professional vision during challenges. The study's micro-level (daily) and macro-level (weekly) analyses revealed how structured reflection and goal realignment supported motivational continuity. This dissertation stands out for introducing mentoring as a pedagogical mechanism to foster DMCs in educators, providing both theoretical and practical implications for teacher education, Continuous Professional Development (CPD) frameworks, and institutional motivation systems in complex EFL environments.

Discussion

The synthesis of seven postgraduate theses on Directed Motivational Currents (DMCs) in Turkish EFL contexts provides clear evidence that research in this area has undergone a substantive transformation between 2019 and 2025. Early works focused primarily on capturing motivational ebbs and flows through qualitative visualization techniques such as motigraphs and retrodictive qualitative modelling (Gümüş, 2019; Sak, 2020), while later dissertations adopted increasingly rigorous and theory-driven approaches, incorporating mixed methods, path analysis, and classroom interventions (Abi, 2021; Demir Ayaz, 2023). Studies by

Gümüş (2019), Sak (2020), and Demir Ayaz (2023) consistently illustrated that vivid future self-images and a sense of direction enable learners to maintain motivational momentum even amid fluctuating affective states. These findings echo Dörnyei, Ibrahim, and Muir's (2016) theoretical proposition that vision provides the teleological structure necessary for motivational flow. In the Turkish context, vision not only guided learning effort but also served as a resilience mechanism that reactivated motivation during periods of challenge—a dynamic verified through the visualization of weekly motigraphs and self-reports of emotional regulation.

This methodological diversification reflects a broader shift within second language motivation research toward dynamic, process-oriented inquiry—a shift long anticipated by Complex Dynamic Systems Theory (CDST) scholars such as Dörnyei, Ibrahim, and Muir (2014). Turkish postgraduate research has therefore aligned itself with global trends that conceptualize motivation not as a static trait but as an emergent, fluctuating, and context-sensitive phenomenon (Larsen-Freeman & Cameron, 2008). A key point of discussion concerns the interplay of vision and self-regulation, which consistently emerged as central components in the DMC experience. Across the reviewed theses, vision served as the motivational nucleus that oriented behaviour toward long-term goals, while self-regulation acted as the engine sustaining momentum through volitional control and affective monitoring. The mediating role of self-regulation, particularly demonstrated in Kulaksız (2023) and Demir Ayaz (2023), supports Dörnyei, Henry and Muir's study (2016) argument that motivational surges require both a clear end-state vision and an adaptive regulatory system capable of converting that vision into sustained action. This relationship reveals that DMCs are not spontaneous bursts of enthusiasm but structured motivational pathways, dynamically stabilized through self-reflective monitoring and metacognitive strategies.

Another notable contribution of Turkish DMC research is its growing recognition of facilitative structures as external scaffolds for sustaining

long-term motivation. The collective findings across the seven studies confirmed four recurring mechanisms of sustained motivation—vision clarity, volitional self-regulation, contextual scaffolding, and affective adaptability. Abi's (2021) work on gamification and Eker Uka's (2025) study on enhancement mentoring represent innovative extensions of DMC theory into applied pedagogical design. Both interventions function as "motivational architectures," aligning external feedback, challenge, and reflection cycles with the learner's or teacher's internal motivational system (Bai & Wang, 2020). These findings lend empirical support to Dörnyei et al.'s (2016) original claim that salient structures are essential for maintaining a DMC over time. Moreover, the mentoring-based evidence extends the theory beyond learner motivation to teacher professional growth, suggesting that sustained pedagogical engagement can be conceptualized as a form of teacher DMC. This expansion toward professional identity and reflective resilience marks a distinctive theoretical contribution of Turkish scholarship to global DMC research.

Affective and contextual triggers also emerged as defining elements of DMC formation. Sak (2020) and Kapısız (2025) documented that fluctuations in emotional states such as anxiety, enjoyment, and stress modulate motivational energy without necessarily terminating the current. Emotion and context also emerged as dynamic drivers rather than by-products of motivation. The reviewed theses revealed that DMCs often co-occur with emotional turbulence—stress, anxiety, and uncertainty—yet these affective oscillations do not undermine the current; rather, they energize it within the complex system. This finding resonates with CDST assumptions that variability is not noise but an intrinsic property of adaptive systems (Larsen-Freeman & Cameron, 2008). The coexistence of effort, strain, and enjoyment illustrates that high motivation involves both cognitive alignment and emotional regulation. Turkish studies thereby add a culturally nuanced perspective: in exam-oriented and competitive learning environments, emotional complexity is not an obstacle but a fertile condition for motivational flow (Safdari & Maftoon, 2017).

Finally, the reviewed body of work underscores a methodological evolution from descriptive to analytically rigorous and intervention-based designs. Early theses (e.g., Gümüş, 2019; Sak, 2020) utilized qualitative, exploratory frameworks emphasizing motigraphs and reflective narratives. Subsequent research (e.g., Abi, 2021; Demir Ayaz, 2023; Kulaksız, 2023) incorporated statistical modelling (SEM, path analysis) and mixed methods to validate causal pathways among constructs such as vision, mindset, effort, and DMC intensity. The transition culminated in Eker Uka's (2025) single-case teacher study, which extended DMC research beyond the learner domain, offering methodological transparency and micro–macro temporal mapping of motivational patterns. The striking contextual trend is the shift from student-centered to teacher-centered DMC research. This mirrors the global reorientation of applied linguistics toward teacher wellbeing, identity, and long-term professional motivation (Zhang, 2023). By applying enhancement mentoring as a facilitative structure, Turkish research demonstrates how DMC principles can inform continuous professional development (CPD) frameworks and institutional mentoring systems. In this sense, DMC research in Türkiye not only validates the theory in a new cultural setting but also operationalizes it as a mechanism for teacher motivation, agency, and reflective practice.

Conclusion and Implications

This systematic review concludes that research on Directed Motivational Currents in the Turkish EFL context has matured significantly, both conceptually and methodologically, over the past six years. The reviewed theses collectively illustrate that DMCs are not isolated motivational episodes but dynamic, context-embedded systems characterized by vision clarity, self-regulatory strength, emotional engagement, and supportive structures (Pawlak, 2012). The convergence of CDST with self-regulation, mindset, and mentoring frameworks signals a strong theoretical synthesis that enhances the explanatory power of DMC theory. Methodologically, Turkish postgraduate studies have moved from descriptive to analytic and

intervention-based designs, offering a blueprint for future multi-method research in applied linguistics.

Theoretically, these findings enrich the DMC framework by demonstrating its adaptability across different motivational ecosystems—student learning, pre-service preparation, and in-service professional development. Vision and self-regulation emerge as universal principles, while the implementation of gamification and mentoring provides novel, culturally responsive mechanisms for sustaining long-term motivation. In this way, Turkish DMC research contributes to the global dialogue on motivational sustainability by foregrounding the role of designed structures and contextual affordances in maintaining momentum.

Pedagogically, the reviewed studies underscore the importance of designing vision-building and self-regulatory practices within classroom and institutional contexts. Teachers and administrators can facilitate DMCs by providing environments that encourage goal clarity, feedback, autonomy, and reflective cycles—elements mirrored in both gamified classrooms and mentoring programs. The integration of Enhancement Mentoring, in particular, suggests that professional dialogue, emotional regulation, and goal realignment can serve as catalysts for long-term teacher motivation and wellbeing (Kubanyiova, 2020).

Methodologically, future research should prioritize longitudinal and comparative designs, combining qualitative tracking (e.g., motigraphs, reflective narratives) with quantitative modelling (e.g., SEM, growth curve analysis). Such triangulation would enable researchers to capture both the emergent and patterned nature of motivational dynamics. Additionally, extending DMC research beyond individual trajectories to collective or classroom-level motivational currents could reveal how social interaction and institutional culture shape shared motivational systems.

In sum, Turkish postgraduate research between 2019 and 2025 demonstrates that Directed Motivational Currents constitute a powerful lens for understanding sustained engagement in language learning and

teaching. By blending CDST principles with culturally and contextually grounded interventions, these studies offer both theoretical advancement and practical solutions for enhancing motivation in EFL education. Future research should continue to bridge learner and teacher perspectives, ensuring that DMC theory evolves as a dynamic framework not only for explaining motivation but also for transforming educational practice in complex, ever-changing environments.

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Evaluating the Reliability of AI-Assisted Writing Assessment: A Comparative Analysis of *WritingGPT*, *ChatGPT*, and Human Raters in EFL Contexts

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The use of artificial intelligence (AI) in language education has substantially changed how writing is taught, learned, and assessed. The most recent advancement in large language models (LLMs) has led to a progression from automated grammar checkers and superficial error checkers to dynamically operating, context-aware writing evaluation systems (Rost, 2024). These advances hold great promise for writing instruction in the form of immediate feedback, scalable assessment, and personalized learning experiences (Li et al., 2024). AI-based writing assessment tools, in particular, are increasingly being advocated for their efficiency, cost-effectiveness, and potential to eliminate human bias. However, it remains an open question whether these tools yield pedagogically reliable, valid, and interpretable evaluations that correspond to human assessment (Pilicita & Barra, 2025; Tajik, 2025).

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Furthermore, the role of AI in writing assessments extends beyond efficiency, as it challenges assumptions about what writing competence entails and how it should be evaluated. In English as a Foreign Language (EFL) contexts, writing is not simply a product to assess; it is also a process that supports linguistic and cognitive development (Toscu, 2023). Thus, replacing or even supplementing human raters with AI will directly affect both the pedagogical and ethical aspects of educational instruction. As AI-generated feedback takes center stage in the development of writing among learners, teachers, and researchers have to consider if that feedback can encourage learning, rather than simply optimizing scores.

While initial studies have shown that AI tools can provide consistent and criterion-based feedback, fostering learner engagement (Chen & He, 2023), questions regarding validity in comparison to human raters with training remain unsettled. Likewise, AI's ability to interpret the organization of discourse, the effectiveness of rhetorical moves, and fulfillment of tasks remains severely lacking (Geckin et al., 2023). Notably, too much reliance on AI feedback contributes to a learner's lack of engagement with metacognitive/reflective aspects, which undermines the qualities of reflexivity and criticality in writing development (Stevenston & Phakiti, 2023). In the case of EFL preparatory programs, which place a significant emphasis on formative writing assessment in the development of academic literacy, these conflicting premises are particularly problematic.

The present study will examine the correlation between human raters and AI-based scoring systems in an authentic academic writing context. More specifically, it will examine the reliability of *WritingGPT*—a model that has been fine-tuned on the rubric and corpus of a university's undergraduate writing course—in comparison to standard *ChatGPT* and expert human raters. *WritingGPT* was trained by researchers to more closely reflect the academic writing expectations on campus and the institution's assessment rubrics. The study will next outline the comparative examination through the context of two research questions:

1. To what extent do AI raters (*WritingGPT* and *ChatGPT*) align with human raters in evaluating EFL writing performance?
2. Can fine-tuned AI tools be considered pedagogically valid and ethically responsible alternatives or supplements to human scoring in higher education?

This study contributes to the increased dialogue surrounding responsible AI adoption in education by considering these questions. It aims to serve as a guide for institutions engaging with policy development, to foster evidence-based policies that allow for a balance between efficiency and pedagogical fidelity. The study's recommendations are expected to inform the design of evaluation instruments that hybridize human judgment and AI efficiency while offering considerations for fairness, transparency, and validity. Ultimately, this work reiterates that the study does not aim to replace teachers, but rather to expand human evaluative capacity through the ethical and contextual deployment of AI.

Literature Review

AI-Assisted Writing Assessment

Automated writing evaluation (AWE) has evolved from early systems that relied on rules to more sophisticated, neural-network-driven platforms. Early systems, such as *e-rater* and *IntelliMetric*, relied on linguistic and statistical features to train human scores (Attali & Burstein, 2006). Early AWE models were primarily concerned with surface-level features (grammar, mechanics, and vocabulary range), but did not account for aspects such as discourse coherence, argument quality, and language creativity, which are essential in a university writing environment (Ding & Zou, 2024).

With the technology known as LLM, this began to shift. Distinct from traditional AWE systems, LLMs are capable of representing meaning, context, and rhetorical intent through the examination of text across large corpora. LLMs not only score but also generate and adjust text for writers in context, resulting in an interactive, process-oriented feedback loop. This

has changed how AI systems evaluate a wider variety of characteristics of writing quality typically used in educational settings—cohesion, lexical richness, task achievement, and stylistic appropriateness (Crossley, 2020). For example, *ChatGPT* provides narrative, argumentative, or expository responses as a reaction to the prompt and context in which the user presented the information, while also being able to offer examples and revisions in real-time.

Still, researchers stress the importance of domain-specific fine-tuning to lessen bias and promote fairness. Generic models that have been trained on English-dominant, large-scale corpora may misinterpret some of the unique features of non-native writing, or may inadvertently penalize valid and appropriate English as a foreign language (EFL) variation. Domain-specific AWE systems (eg, *WritingGPT*) utilized in the present study are trained through locally relevant rubrics and learner corpora to provide more contextually sensitive scoring. Despite these significant advancements, there is a lack of empirical literature examining how AI scoring aligns with human judgment across a diverse range of EFL contexts. Most validation studies have been conducted in English-dominant contexts, where learners' linguistic practices often differ from those of EFL learners, leaving the extent to which findings can be transferred unknown (Li et al., 2024). Lastly, while AI scoring has been shown to have high correlations with human raters in standardized test settings (eg, *TOEFL iBT*), the findings may not generalize to the classroom-based assessment context, which emphasizes formative feedback and learner autonomy.

Human–AI Alignment and Reliability

Reliability and validity are fundamental aspects of any assessment mode. Inter-rater reliability between human raters has long been a concern in writing assessment, with differences often attributed to variations in interpretation, experience, and even fatigue (Toscu, 2023). The involvement of AI raters complicates the issue further, as machine consistency has to be balanced against the interpretive flexibility available

to a human rater. Recent work has explored this intersection from psychometric and pedagogical interests.

Chen and He (2023) found that after controlling for contextual variables, AI scores correlated strongly with human scores, particularly in terms of surface-level features (grammar, lexical accuracy). However, Geckin et al. (2023) found that human raters weigh rhetorical structure and argument coherence more heavily than AI systems, resulting in differences in scores. Working with a large-scale meta-analysis, Pilicita and Barra (2025) additionally concluded that AI scoring tends to be more lenient than human scoring, as AI issued higher average scores and often assessed student writing based on linguistic fluency rather than conceptual depth. These studies indicate that AI is evaluating writing more for its form than its content.

Another aspect of alignment is interpretability, which refers to the extent to which human raters can understand and trust the decisions made by AI. Rost (2024) notes that unless teachers understand the process by which AI generates scores, the use of this technology has the potential to decrease pedagogical transparency. For example, teachers may struggle to explain the AI feedback to their learners, which raises questions about the formative function of assessment. Another consideration is bias: AI models trained on unbalanced datasets can trigger linguistic or cultural bias, which may impact non-native speakers.

Reliability measures, such as Pearson correlations or Cohen's kappa, provide some statistical evidence that scores are aligned; however, they do not account for the qualitative dimension of trust between raters and the AI. In practice, teachers' trust in AI scoring is important, even as the metrics drive some reporting of agreement. Pilicita and Barra (2025) explain that teachers are more likely to consider an AI evaluation favorable when they feel it augments their judgment, rather than replaces it. This relational trust forms the basis of hybrid assessments, which combine human intuition and AI scoring in reference to alignment.

Pedagogical and Ethical Considerations

Apart from its practical effectiveness, introducing AI writing assessment raises considerable pedagogical and ethical issues for educators and researchers. From a pedagogical perspective, AI feedback appears to foster learner autonomy more effectively than traditional means, as it provides nearly immediate, transparent, and criterion-referenced feedback on writing drafts that emphasizes the iterative process of learning (Lui, 2024). The nature of AI feedback enables learners to revise their drafts independently, allowing them to develop a more self-regulated writing style. When employed in a formative assessment context, this type of feedback may even further empower learners by connecting what they learn in the classroom and their own writing (Lui, 2024; p. 239).

However, there are dangers in an overreliance on AI writing assessments that could dilute critical thinking and creativity. In a case that learners become accustomed to "help" through automated feedback, they may focus on checking for mechanical correctness rather than developing the rhetorical aspects of their writing. They could respond to AI feedback without carefully formulating their responses. In contexts such as EFL, where metacognitive awareness can facilitate not only language but also learning, there may be negative consequences to providing prompts instead of responses that encourage reflection.

Considering AI as an ethical issue raises the problem of data privacy, algorithmic transparency, and fairness (Zawacki-Richter et al., 2023). While many AI tooling, particularly LLMs, function in the black box, or opaque, architecture of Machine Learning, determining how they process learner data or evaluate learning is far more difficult. It is thus critical to discuss the implications of both explainability and accountability in teachers and institutions in determining the responsible and ethical use of AI and AI feedback with students for educational purposes. Further, considerations of fairness in scoring for second language or learner populations will require monitoring for potential systematic disadvantage. Many researchers on AI assessment tools endorse a hybrid model of AI–

human assessments. In hybrid models, AI would provide scoring or feedback in a consistent manner based on data, addressing surface-level accuracy, while teachers and/or other human raters would focus on conceptual depth, discourse-focused assessment, and the contextualized appropriateness of the assessment. This method could serve efficiency and educational validity in the process.

Nevertheless, while the teacher transitions from an evaluator to a mediator (Pangrazio et al., 2020), interpreters' feedback for students prompts students to engage with AI's feedback critically. This mediating role as a pedagogy keeps institutions in control of the use of educational technology: students are supposed to learn with educational technology, rather than the educational technology governing the learning. AI-supported writing evaluation has the potential to be transformative for EFL. However, the integration of AI must be adequately contextual and undertaken with caution. The literature highlights three recurrent challenges: (1) the need for psychometric reliability, comparability to human grading, (2) pedagogical integrity, in terms of developing metacognitive and critical engagement with the AI, and (3) ethics of transparency and fairness. Developing these issues requires empirically valid evidence, in authentic, classroom-based instruction versus lab-based tasks.

The present study compares *WritingGPT*, *ChatGPT*, and human raters in a writing program at a university in this effort. The study extends our empirical and theoretical understanding of how AI can ethically enhance writing assessment in EFL higher education—connecting the innovation of technology with human-centered pedagogy.

Methodology

Research Design

A within-subjects quantitative comparison design was employed to evaluate the performance of two AI models, *WritingGPT* (fine-tuned and domain-specific) and *ChatGPT* (general-purpose), alongside the ratings of

human raters in the EFL academic writing environment. Using the within-subject quantitative comparison design, every paper is rated by each type of rater, ensuring that the ratings of the raters are directly comparable for the same written work. This particular research design not only eliminates the variance in ratings caused by the subjects' proficiency levels but also provides maximum power with a small sample size.

Data Collection Instruments and Procedure

The dataset consisted of 29 sample essays written for a single task in a course on Academic English Writing at a state university in Türkiye. The course is nested within the English as a Foreign Language (EFL) preparation program and focuses on enhancing learners' knowledge of academic English writing skills, enabling them to write well-structured and well-supported English essays. The essays used in the study were typical coursework and not specially designed studies for experimentation, thus lending a high degree of construct validity to the findings, as the work represents the performance of learners within the course environment. The essays were written by different learners, and the authors were not paired with any individual learner's information, as the objective of the study was to compare scoring performance across the three raters.

The raters consisted of three instructors with experience and knowledge of Academic English and Writing at the same institution. The three raters also possessed a significant level of familiarity and understanding of the course outcomes and the rubric used within the program to carry out the summative and formative evaluations. Prior to the rating task, the raters participated in a brief and formal orientation procedure designed to establish a common understanding of the study's procedures and the importance of various aspects, including confidentiality and the objective and unbiased nature of the ratings.

Essays and Rubric: The essays were graded using the same rubric (0-100 points) that is used in the writing course. The rubric captures the essential aspects of the writing performance criteria, including task satisfaction and

the relevance of the written work, organization and cohesion, vocabulary and accuracy, and mechanics (such as spelling, punctuation, and layout). Although the final score of the essays provides a holistic judgment of the work, the scorers are required to take into account each of the aspects of the work being considered for the final judgment. The rubric was collectively reviewed with the three instructors for the course to ensure a common understanding of the rubric's performance criteria and the characteristics that define low-, mid-, and high-performing essays. This enabled the scorers to align local standards with the institution's shared criteria.

Human Scoring: The essays were anonymized by removing all personally identifiable information and then further randomized so that the scorers could not determine the original order of submission or the identities of the authors. This served the dual purpose of reducing the risk of any bias and allowing the essays to be scored purely within the merits of the written product itself. Each of the three scorers individually scored the entire set of 29 essays, not referring to the work of the other scorers and not having access to any AI-computed information. Each of the essays received a single score within the range of 0 to 100, based on the rubric criteria. Once the scoring concluded, the three scores were then combined into a Human Mean, which would serve as the standard for measuring AI performance. Before applying the Human Mean to further analysis, inter-rater agreement among the three scorers of the essays and the derived Human Mean standard itself would be assessed to ensure that the standard itself possessed adequate inter-rater reliability to be used for the purpose of comparison.

The interaction between the candidate's writing performance and the fine-tuned, domain-specific model of the writing generator (*WritingGPT*) only occurred after the finalization of the grading scores, ensuring that the AI model scores could not influence the final scoring procedure. The fine-tuned model, specifically the writing generator (*WritingGPT*), focuses on a locally representative dataset of student writing and related scores from

the same institution, aiming to replicate the standards of a similar writing program in a comparable educational organization. The procedure of the submission of each candidate's work (29 essays) to the writing generator (*WritingGPT*) followed a specific pattern of common questions that included (a) the description of the scoring task (EFL academic writing performance), (b) a summary of the scoring criteria of the specific rubric (0-100), and (c) a scoring task of the model to derive a single score within the (0-100) range. *ChatGPT* served for comparison. The model responded to the same essays and the same rubric-aligned prompt, but, unlike the *WritingGPT* model, the training of the model was not adjusted to the local context and rubric. This difference enabled a comparison of a domain-specialized AI model and a general-purpose model operating within the same scoring task instructions. Both AI models were accessed through their respective interfaces, and each essay was scored only once using each model. Additional information generated during scoring and text produced during the scoring task are considered irrelevant to the study and therefore not utilized; only the score itself is retained and used for analytical comparison. The scoring of both AI models using rubric-aligned prompts enabled a comparison of model performance that could be attributed to model training and specialization, rather than to scoring task instructions.

Data Analysis

The assumption of normality for score distributions was assessed using the Shapiro–Wilk test, which is recommended for small- to moderate-sized samples ($n < 50$) (Ghasemi & Zahediasl, 2012). As the distributions for all three rater groups did not deviate significantly from normality ($p > .05$), the data satisfied the assumption required for parametric analyses.

Descriptive statistical tests (mean, standard deviation, minimum, maximum) were carried out for each rater group (Human Mean, *WritingGPT*, *ChatGPT*) to obtain a summary of each of the raters' distribution of scores and a first impression of the raters' level of leniency vs. severity. The calculations of the descriptive statistics further enabled the inspection of the data and its distribution, which has implications for

whether the rater tends to assign scores that are bunched close together or whether the rater has the ability to discriminate between the essays (see Table 1 below and further discussion below).

Given the within-subject design, where each essay received ratings from both human and AI raters, paired-samples t-tests were employed to determine whether AI-generated ratings systematically differed from the human benchmark. The dependent nature of the observations makes this test suitable for comparing the ratings of the same essays across raters (Field, 2018).

To examine the degree of linear association between AI-generated scores and human ratings, Pearson correlation coefficients (r) were computed. Pearson's r is appropriate for interval-level continuous data under parametric conditions, enabling the assessment of how closely AI and human raters align in the rank ordering of essays (Dancey & Reidy, 2017).

Because correlation reflects association but not agreement or bias, error metrics were also computed:

- **Mean Difference (Bias)** — to assess systematic over- or under-scoring by AI relative to human ratings.
- **Mean Absolute Error (MAE)** — to quantify the average magnitude of score deviations irrespective of direction.
- **Root Mean Square Error (RMSE)** — to weight larger deviations more heavily, highlighting the impact of outlier discrepancies.

To further evaluate agreement — especially the consistency across different raters (human and AI) — the Intraclass Correlation Coefficient (ICC) was calculated using a two-way random-effects, absolute-agreement model. Both ICC(2,1) (single-rater reliability) and ICC(2,k) (average-rating reliability) were reported following established guidelines (Koo & Li, 2016).

Additionally, the agreement between AI and human ratings was visualized using Bland–Altman plots, which depict the mean difference and limits of

agreement to examine bias and variability across the scoring range—a recommended method for comparing measurement methods (Giavarina, 2015).

Finally, to determine whether AI-generated grades could be considered practically equivalent to human grades for educational purposes, a Two One-Sided Tests (TOST) procedure was conducted with a predefined equivalence margin of ±5 points. In line with recommendations for equivalence testing, the equivalence bounds were set a priori to reflect the smallest difference deemed educationally meaningful in this grading context, that is, a range within which score differences would not be expected to alter substantive grading decisions (Lakens, 2017; Meyners, 2012; Wiens, 2002).

The predictive validity of the AI-generated ratings was examined using linear regression analyses, with the Human Mean serving as the dependent variable and each AI's scores as predictors. This approach allowed the assessment of how much variance in human ratings can be explained by the AI scores. Regression provides evidence of predictive alignment—that is, the extent to which AI scores can estimate human scores linearly, rather than merely reflecting association or mean-level equivalence. Similar regression-based approaches are widely employed in automated essay scoring research, where models are explicitly trained to predict human essay scores from linguistic features or embeddings (Attali & Burstein, 2006; Attali, 2008; Crossley, 2020; Li & Ng, 2024).

Results

The Results section is organised into four parts: (a) descriptive statistics for the three rater types, (b) associations and agreement between AI and human scores, (c) predictive validity analyses, and (d) equivalence testing. As a starting point, Table 1 presents the descriptive statistics for the Human Mean, *WritingGPT*, and *ChatGPT* scores, all on a 0–100 scale. Overall, *WritingGPT* tended to assign slightly higher scores than human

raters, whereas *ChatGPT*'s mean scores were closer to the human benchmark but showed different patterns of variability.

Table 1

Descriptive Statistics for Rater Scores (0–100)

Rater	***Mean***	***SD***	***Min***	***Max***
Human	64.09	7.79	50	82.5
WritingGPT	67.69	8.53	54	82
ChatGPT	63.86	6.92	46	72

Human = mean of three calibrated human raters.

Table 1 summarises the distribution of scores assigned by the three rater types. Human raters awarded on average 64.09 points (SD = 7.79), whereas *WritingGPT* produced higher scores (M = 67.69, SD = 8.53). *ChatGPT*'s mean score (M = 63.86, SD = 6.92) is almost identical to the Human Mean. These values indicate a leniency bias for *WritingGPT* at the level of central tendency, while *ChatGPT* aligns with humans in terms of mean severity. The larger standard deviation for *WritingGPT* indicates that it utilizes a wider range of the scale and discriminates more strongly between essays than either the human raters or *ChatGPT*.

Table 2

Mean Bias vs. Human (Paired Comparisons)

Rater	***Mean Difference (AI − Human)***	***t (28)***	***p***	***Max***
WritingGPT − Human	+3.60	4.43	0.00013	82.5
ChatGPT − Human	−0.22	−0.16	0.874	82

Table 2 presents the mean differences between AI scores and the Human Mean, together with paired-samples *t*-tests. *WritingGPT* graded essays

significantly higher than human raters, with an average positive bias of 3.60 points, $t(28) = 4.43$, $p = .00013$. This result shows a systematic leniency effect rather than random fluctuation. By contrast, *ChatGPT*'s scores do not differ statistically from human grades ($MD = -0.22$), $t(28) = -0.16$, $p = .874$, indicating the absence of a consistent positive or negative bias. In terms of mean severity, *WritingGPT* functions as a lenient rater, whereas *ChatGPT* is equivalent to the Human Mean.

Table 3

Correlations with Human Scores

	Pearson r
WritingGPT ↔ Human	0.860
ChatGPT ↔ Human	0.480

Table 3 reports Pearson correlations between AI and human ratings. *WritingGPT* exhibits a very strong positive association with human scores ($r = 0.860$), demonstrating that it closely reproduces the human rank ordering of essays: essays that receive higher scores from human raters also receive higher scores from *WritingGPT*. The correlation between *ChatGPT* and human ratings is moderate ($r = .480$), indicating a weaker alignment in ranking and more frequent deviations from human judgment. Overall, *WritingGPT* approximates the scoring pattern of human raters to a substantially greater extent than the general-purpose *ChatGPT* model.

Table 4

Error Metrics Relative to Human Grading

Model	***Mean Difference***	***MAE***	***RMSE***
WritingGPT	+3.60	4.76	5.61
ChatGPT	−0.22	6.07	7.41

Table 4 presents absolute and squared error indices relative to the Human Mean. *WritingGPT* shows a positive mean difference (+3.60), but its MAE (4.76) and RMSE (5.61) are smaller than those of *ChatGPT* (MAE = 6.07, RMSE = 7.41). These values indicate that individual scores produced by *WritingGPT* remain closer to human ratings, with fewer large discrepancies, even though *WritingGPT* is consistently higher on average. ChatGPT produces larger and more variable errors around the Human Mean. Consequently, in terms of point-by-point accuracy, WritingGPT provides a closer numerical approximation to human grading than ChatGPT.

Table 5

Regression Models Predicting Human Scores from AI Scores

Predictor (AI)	***Intercept***	***Slope***	***R²***	***RMSE***
WritingGPT	10.98	0.785	.739	4.05
ChatGPT	—	—	.230	6.96

Table 5 summarises the regression models predicting human scores from AI scores. The model with *WritingGPT* as a predictor explains 73.9% of the variance in human ratings (R^2 = .739) with an RMSE of 4.05, indicating high predictive validity. The slope of 0.785, which is below 1, shows that WritingGPT inflates scores in the lower and middle range and compresses scores at the top of the scale, consistent with the observed leniency. The regression model based on ChatGPT accounts for only 23.0% of the variance in human scores (R^2 = .230) and yields a considerably larger RMSE (6.96). These results demonstrate that WritingGPT can be used to estimate human ratings with substantially greater precision than *ChatGPT*.

Table 6

Inter-Rater Reliability

ICC Type	*Value*
ICC (2,1)	0.563
ICC (2, k)	0.794

Table 6 reports the intraclass correlation coefficients for overall agreement across the three rater types. The single-rater coefficient ICC(2,1) = 0.563 reflects moderate reliability when any one rater is considered in isolation. The average-measure coefficient ICC(2,k) = 0.794 indicates good reliability when ratings are averaged across raters. From an assessment perspective, these coefficients show that combining scores from multiple raters—such as human raters with *WritingGPT*—produces more stable and dependable grading than relying on a single source of scores.

Table 7

Bland–Altman Agreement Summary

	Mean Difference	*Spread (approx.)*	*Pattern*
WritingGPT − Human	+3 to +4	Narrower	Predictable leniency
ChatGPT − Human	~0	±15 (wider)	Less precise agreement

Table 7 summarises the Bland–Altman analyses. For *WritingGPT*, the mean difference relative to the Human Mean is consistently between +3 and +4 points, with a relatively narrow dispersion. This pattern indicates a stable agreement structure characterised by a constant leniency offset: WritingGPT grades higher than humans by a predictable amount across the scale. For *ChatGPT*, the mean difference is close to zero, but the spread of differences is approximately ±15 points, revealing wide limits of agreement. This wide dispersion indicates that *ChatGPT* occasionally

assigns scores that are substantially higher or lower than human ratings, resulting in imprecise agreement despite the absence of systematic bias.

Table 8

Equivalence Testing vs. Human (TOST, ±5 Points, 90% CI)

Comparison	***Mean Difference***	***90% CI***
WritingGPT − Human	+3.60	[2.22, 4.99]
ChatGPT − Human	−0.22	[−2.61, 2.16]

Table 8 presents the results of the TOST procedure with an equivalence margin of ±5 points. For WritingGPT, the 90% confidence interval of the mean difference [2.22, 4.99] lies entirely within the equivalence bounds, indicating that its average scores are statistically equivalent to human scores within this tolerance. The same holds for *ChatGPT*, whose confidence interval [−2.61, 2.16] also falls inside the ±5-point region. Thus, both AI models can be regarded as producing scores that are, on average, practically equivalent to human grades. However, when the equivalence results are interpreted in conjunction with the error indices and correlations, *WritingGPT* exhibits a more coherent pattern of equivalence and reliability, whereas *ChatGPT* achieves equivalence only at the mean level and displays considerable variability at the level of individual essays.

Discussion & Conclusion

This research investigates whether or not AI-supported writing assessment produce reliable and valid results by using three types of evaluative approaches: 1) A Fine-tuned AI Model called *WritingGPT* (WWN); 2) a General-purpose AI Model like *ChatGPT* (API); and 3) the Evaluator; Analyzing the three approaches produces quantitative analysis and comparisons of scores distribution and correlations and Ross et. al (2021)

provide detailed information regarding error metrics. From our analyses, the research offers insights into evaluating academic writing (English as a Second Language [ESL]) using Artificial Intelligence (AI); however, our primary goal here is to shed light on the potential and/or limitations of AI for academic writing assessment.

The results of this research suggest that *WritingGPT* had a higher level of correlation with human judgments than did either the API or evaluator approach; the Pearson Correlation Coefficient of *WritingGPT* was 0.86. The mean absolute and maximum errors indicate that the score produced by *WritingGPT* approximates the evaluation produced by an evaluator. This supports the conclusion that *WritingGPT* assessment scores closely resemble those of a human evaluator. As another form of support for *WritingGPT*'s high level of reliability, the statistical analysis performed in this research (Statistical Equivalent Test) showed that *WritingGPT*'s assessment scores were statistically equivalent to those produced by human evaluators within an acceptable range of ±5 points of the maximum score. While *WritingGPT*'s tendency to score more leniently than a human evaluator was consistent and systematic in its scoring, it was not random; therefore, this tendency could be easily adjusted and/or interpreted.

ChatGPT's performance was the least consistent and most variable across samples compared to the other two tools. The correlation coefficient between *ChatGPT*'s ratings and those of human raters was lower ($r = .48$), indicating that *ChatGPT*'s ratings were less stable and less reflective of its ability to evaluate writing quality in relation to the assignment context. While *ChatGPT* tended to rate writing more highly based on its surface-level linguistic properties (i.e., grammar, spelling, complexity, etc.) and less on the overall quality of the writing, including how well the argument was presented, how coherent and structured the text was, how effectively the author used rhetorical elements, and, ultimately, how well the reader understood the text (Crossley & McNamara, 2020). Thus, *ChatGPT* faces a significantly greater challenge than general-purpose AI models when it comes to providing feedback on a writing assignment that is highly

specific and based on a detailed set of criteria, such as standardized writing assessments and the conventions of writing in a particular discipline (Biber & Gray, 2016). The results of this study indicate a substantial difference in the abilities of AI and generalized writing tools to rate writing accurately, and that *WritingGPT*'s successful ratings can be explained by the fact that it was specifically trained to support the evaluation of academic writing in the English as a Foreign Language (EFL) context and was trained based on the criteria used by human raters to evaluate EFL writing (Li et al., 2023). *WritingGPT* is thus able to simulate the way a human would reason through the quality of a text much better than a generic AI was able to eliminate generative programming.

One major discovery related to predictive validity. *WritingGPT* accounted for nearly 74% of the variance seen in human scores. As a result, *WritingGPT*'s evaluations correspond well to the features that human raters consider important, and therefore, it was able to predict writing proficiency by integrating not only measurable elements but also overall and interstate writing proficiency as interpreted through human judgment (Weigle 2002; Knoch 2009). Conversely, *ChatGPT* only explained about 23% of the variance found in human scores, indicating that a significant portion of its scoring methodology did not correspond to the constructs that are valued in the evaluations made by human raters. Therefore, this supports that the reliability and validity of AI tools do not occur naturally, but rather must be established by creating reliable AI tools through careful planning, training, and contextualization (Chapelle & Voss, 2021).

The results of this research also provide insight into the potential applications of AI in the field of education. Given that *WritingGPT* has a high degree of reliability, AI tools can be used effectively to augment human raters in the context of large-scale assessments, when resources are constrained. Teachers may use AI score evaluations to identify outliers more effectively and review certain papers more closely. AI-based systems could also provide formative feedback to students, highlighting

strengths and weaknesses more rapidly than traditional grading methods, thereby supporting iterative learning and timely revision cycles.

Nevertheless, the findings also reveal significant warnings. First, if AI were to achieve results similar to those of a human rater, one should not view it as an alternative to human judgment. The slight difference in leniency between *WritingGPT*'s scores and those of a human is indicative of a systematic bias that could favour or disfavour certain groups of learners, particularly within the context of EFL, where the linguistic features of both groups are often significantly different (Ortega, 2020). If these types of biases are not monitored by a human being, they can build upon themselves, and over time, they can result in a substantial difference between the two ratings. Second, AI systems are unable to provide the same level of contextual empathy and interpretive flexibility that human raters naturally offer in their responses. Writing is not only an assembly of vocabulary and grammar; writing is an act of communication that carries intent, nuance, and awareness of the audience. A model like WritingGPT, although sophisticated, is unable to account for the rhetorical or emotional aspects of a text that would be valued by a human reader (Hyland & Jiang, 2021). Thus, it would likely misinterpret the creative or non-traditional choices made in a piece of writing that a human evaluator may be able to recognise as valid.

Thirdly, AI will offer fast feedback; however, both teachers and learners must have access to and be able to interpret AI's comments as well as understand how AI arrives at evaluation scores. Suppose a learner does not understand why they received a specific evaluation score or is unsure how to proceed based on feedback provided by AI. In that case, the value of AI as an educational assessment tool has been diminished. For this reason, creating clarity and user understanding, as well as developing AI evaluation systems that meet the needs of teaching and learning, will be the highest priority, alongside creating accurate systems.

The findings of this study also impact teacher practice and school or institutional policy regarding assessment. Teachers can utilize AI as a co-

evaluator to enable them to focus on higher-order skills in their feedback, such as argumentation, organization, or creativity. Additionally, policymakers at the institutional level should establish transparent, accountable, and fair AI-supported assessments (Reich & Ito, 2023). Regular alignment between the human scoring and the AI scoring will help support fairness and consistency in scored assessments.

In addition to establishing reliability, the current research provides guidance for future development. This future development could be supported by additional research in the area of how the continual fine-tuning of AI using locally generated students' writing samples impacts its performance over time. A longitudinal study on how students react to the Artificial Intelligence (AI) feedback, and what impact this has on students' levels of autonomy, improvement in revisions, and perspectives of fairness for graded materials. Furthermore, the addition of multimodal features, such as audio prompts or visual cues, could increase the use of automated assessment across all communication modalities.

Ultimately, the study underscores the importance of a balanced integration of AI in educational evaluation. While many of the advantages of integrating AI into educational evaluation (e.g., increased efficiency, more consistent grading, and enhanced scalability) are apparent, the human element of teacher evaluation cannot be fully substituted by AI alone. In addition to grading students' writing, teachers interpret what their students' writing means, identify the uniqueness of each student, and provide emotional and motivational support; these areas cannot be addressed by AI (Cummins, 2021). Thus, the collaboration of both the teacher and AI—the model of the future—would likely be the most effective. Specifically, the AI would handle the routine and more technical aspects of the grading process, while the educator would ensure fairness, understandability, and pedagogical value.

In conclusion, this research demonstrates that when AI models are customised and applied in the correct context, these models can replicate the level of accuracy found in human assessment of academic writing. In

the case of *WritingGPT*, reliability, validity, and predictability were extremely high, while the results produced by *ChatGPT* indicated the inherent limitations of general-use AI for educational applications. In the future, we will see a cooperative relationship between human experts and Artificial Intelligence that will produce writing assessments that are more efficient, timely, and fair. However, we must approach this cooperative relationship with extreme caution, ensuring that automation continues to enhance the human connection to education. The goal of using AI should be to empower educators rather than replace them. To accomplish this, AI can provide greater transparency, immediate feedback, and equitable assessment processes while maintaining the inherent subjective and ethical factors that can only be derived from human judgment.

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Ethical Declaration and Committee Approval

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Proportion of Authors' Contribution

Author 1: Conceptualization, Methodology, Results, Data Collection, Formal Analysis.

Author 2: Conceptualization, Review & Editing, Visualization, Data Collection, Writing – Original Draft.

Author 3: Conceptualization, Review & Editing, Writing - Last Draft

Exploring the Link between Foreign Language Enjoyment and Reduced Test Anxiety in EFL Settings

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Over the last few decades, there has been growing concern about the emotional aspects of foreign language education. Although traditional research has focused more on cognitive and linguistic facets of language education, current studies have begun to emphasize affective dimensions as a crucial factor in learning a foreign language effectively. Accordingly, positive and negative emotions function collectively to build language learners' experiences. As the central foci of this study, "enjoyment" and "anxiety" are two of these emotions.

On the one hand, Foreign Language Enjoyment (FLE), as defined by Dewaele and MacIntyre (2014), is "a complex emotion" characterized by the successful interaction of perceived competence and challenging tasks, reflecting the urge to achieve beyond plain requirements. In other words,

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enjoyment is felt when students sense that they are capable, involved, and supported in the classroom. On the other hand, Foreign Language Anxiety (FLA) can be described as a distinctive and complex set of self-perceptions, attitudes, emotions, and actions associated with the process of learning a language in a classroom setting (Horwitz et al., 1986). It is a common case for students to be anxious regarding their academic performance and the possibility of committing errors during in-class practice or exams. While enjoyment can foster motivation and task engagement in students, anxiety may affect their confidence and performance during classroom activities. Moreover, students may experience both feelings concurrently, despite the fact that FLE and FLA are two opposing notions (Dewaele & MacIntyre, 2014). Hence, it is essential to examine the relationship between foreign language enjoyment and foreign language anxiety from the learners' perspective.

With the introduction of Positive Psychology to the field in the late 1990s, Second Language Acquisition (SLA) researchers shifted their attention to positive emotions in relation to the management of negative feelings during language acquisition. Positive Psychology (PP) is an approach that aims to consider the emotions of everyone actively involved in language learning contexts, such as students, teachers, and administrators (Mercer, 2021). In line with this, the emotional well-being of these parties is vital for a more sustainable and effective language education. As a key part of this group, students' resilience and self-regulation skills may lead them to be successful language learners in the long term. In fact, this achievement mostly depends on the students' ability to deal with negative emotions like anxiety and even to transform them into positive ones, namely, enjoyment.

Several studies have been conducted on FLE and FLA in recent years. Some of these focused on the impacts of different factors (e.g., gender, culture, teacher attitudes) on enjoyment. Other studies explored the relationships between enjoyment and various emotions, such as motivation and boredom. Regarding the research on FLA, it is centered on students' perspectives and underlying reasons for anxiety. As in FLE, FLA

studies also examine the relationships between anxiety and other feelings, like motivation. Therefore, there is a need to examine enjoyment and anxiety from the perspective of EFL learners, both quantitatively and qualitatively, to gain deeper insight into them.

It is a fact that FLE and FLA are underexplored concepts in EFL contexts - especially in higher education. Enjoyment is also an underestimated element in Turkish EFL classrooms, as there is a greater emphasis on the product, namely, assessment, rather than on the process, which refers to the language learning experience. Moreover, this lack of enjoyment in Turkish EFL classrooms might be one of the reasons why students lose their motivation while learning the target language. Likewise, students' anxiety might influence them negatively, lowering their willingness to participate in the language learning activities and hindering them from displaying their linguistic competences during assessments. This topic is particularly relevant given the growing emphasis on sustainability in education, which can be further enhanced by incorporating emotional experiences.

The present study aims to investigate the relationship between foreign language enjoyment and test anxiety from the perspectives of EFL learners. Understanding and considering our students' emotions will contribute to the effectiveness of the language programs, as well as the teaching and administrative processes. Thus, we aimed to determine whether positive emotional engagement reduces anxiety in exam-focused classroom settings. To this end, we addressed the following research questions:

1. What are the perceptions of students in the preparatory program in terms of anxiety and language learning enjoyment?
2. Is there a correlation between anxiety and enjoyment?
3. Are there significant differences in anxiety enjoyment across key demographics (gender, age, department, being in the preparatory program, or in faculty)?
4. How do students in the preparatory program describe what

increases or reduces their anxiety and enjoyment in language classes?

Literature Review

The Role of Emotions in Language Learning

Investigation of emotions in relation to education has led to a widespread increase in interest among EFL researchers. Mercer et al. (2018) emphasize the importance of teachers fostering their students' soft skills, in addition to their linguistic skills, to ensure sustainability in diverse cultural settings. Based on the idea that positivity benefits humans in all cases, Wang et al. (2021) state that emotions must be taken into consideration to increase the quality of language education systems. Previous studies have focused more on negative emotions such as anxiety (e.g., Horwitz, 2001; Wei, 2007). However, MacIntyre and Gregersen (2012) highlight that positive emotions should also be explored because they raise students' awareness and help them understand the linguistic input better. Therefore, studies combining positive and negative emotions can offer a more balanced insight into our students' perspectives.

Studies on Foreign Language Anxiety (FLA)

Several studies have been conducted on foreign language anxiety. Horwitz et al. (1986) categorize anxiety into three groups: (a) communication apprehension, (b) test anxiety, and (c) fear of negative evaluation. They assert that communication apprehension is a common type of anxiety observed in language classrooms, especially during speaking practices, so they suggest that there needs to be more investigation into this issue. Following that, numerous studies have been conducted on FLA from various aspects.

MacIntyre and Gardner (1991) found that anxiety can negatively affect students' speaking ability, vocabulary learning, and willingness to communicate. Likewise, Von Worde (2003) demonstrated that a decrease in anxiety levels can enhance students' motivation and language acquisition. Additionally, Horwitz et al. (2010) stated that all language

programs should help their students overcome foreign language anxiety. Han (2013) reviewed a number of studies on foreign language anxiety, showing several sources of anxiety and their effects on the language learning process. Yet, more recent studies, such as Gregersen (2020), pointed out the dynamic nature of anxiety as a negative emotion. These studies found that anxiety usually stems from three interconnected factors, which are fear of negative evaluation, communication apprehension, and test pressure. For instance, Aydın et al. (2020) examined test anxiety in foreign language learners and its effects on EFL learners, exploring strategies to overcome it. They suggest that teachers of English as a foreign language should raise their awareness of issues that cause anxiety for learners and the effects of such issues on learners. Furthermore, it is indicated that teachers should be aware of strategies that can be employed to decrease anxiety in learners. Finally, some FLA studies that have been conducted after the COVID-19 pandemic focused on the role of online education as a factor affecting learners' anxiety. Resnik et al. (2023) compared the levels of foreign language classroom anxiety (FLCA) in face-to-face and online EFL classes through mixed-method research. They found that students feel more anxious in online classes in comparison with traditional classes, due to unexpected technical problems related to technology. Conversely, according to the results of a similar study by Véliz-Campos et al. (2023), students feel less anxious in online classes, possibly because they are anonymous while speaking in the target language. In conclusion, although many studies about FLA were undertaken, it could offer better insights when anxiety is studied with other emotions.

Studies on Foreign Language Enjoyment (FLE)

As part of Positive Psychology, the enjoyment of foreign language learning (FLE) has aroused interest among foreign language researchers, and numerous studies on FLE have been conducted in the field. According to the studies by Dewaele et al. (2018), Inada (2022), and Li (2022), students who experience enjoyment develop more positive attitudes

towards the target language and their teacher, and they value the time they spend in the classroom. Li (2022) explored the relationship between foreign language enjoyment and foreign language boredom and found that success depended on the interplay of intrinsic student characteristics and extrinsic instructional elements. Proietti Ergün and Ersöz Demirdağ (2023) aimed to investigate the role of positive language teaching in fostering enjoyment of foreign languages. They found that positive language instruction has the capacity to improve students' well-being, thereby enhancing the level of pleasant feelings experienced in the language classroom. As noted by Zhang et al. (2020), students' levels of proficiency are influenced by their motivation and enjoyment of the foreign language. In a more recent study, Yang et al. (2024) explored the relationships between FLE and teacher support as factors affecting L2 willingness to communicate (WTC) and found some positive correlations among them. As a result, it is clear that variables such as teacher behaviors, peer support, learning atmosphere, and students' perceptions about their own progress can contribute to foreign language enjoyment, thereby mitigating the effects of negative feelings, such as anxiety.

Learners' Perspectives and Emerging Research Gaps

Few studies in the body of research combine the two emotions, enjoyment and anxiety, with a specific focus on foreign language education. Dewaele et al. (2016) found that female students report more enjoyment in classes, although they experience more anxiety about making mistakes, compared to their male classmates. Ozer and Altay (2021) studied the impact of positive and negative feelings on secondary-level foreign language education and found that enjoyment was a more common emotion among students, regardless of gender. In another study, Dewaele et al. (2022) investigated the levels and predictors of Foreign Language Enjoyment (FLE) and Foreign Language Classroom Anxiety (FLCA) among Turkish learners in Kazakhstan. They revealed that there was a surprisingly weak positive link between FLE and FLCA while the average levels were similar to those in other contexts. Finally, Yeşilçınar and Erdemir (2023)

claimed that anxiety and enjoyment are affected by culture, showing that students may experience a higher level of anxiety but a lower level of enjoyment in teacher-centred contexts.

Yet, some of the studies integrating foreign language anxiety and enjoyment are quantitative and may lack an in-depth understanding of students' perspectives on the related topics. Moreover, they should be investigated in diverse contexts from different aspects. Therefore, the role of enjoyment and anxiety in foreign language education remains an underexplored topic in higher education contexts, which warrants exploration in Turkish EFL contexts. Therefore, this study aims to explore the issue from the perspectives of Turkish EFL students in an institution that adopts innovative and sustainable education policies, employing a mixed-methods research design to illustrate how enjoyment and anxiety interact in fostering sustainable emotional engagement in the context of foreign language learning.

Methodology

Research Model

This study aims to investigate the relationship between anxiety and enjoyment in the language learning process, as well as participants' perceptions of these concepts. To address these aims, a mixed-methods explanatory sequential design was employed, where the quantitative phase (descriptive, group comparisons, and correlation) was followed by qualitative interviews and thematic analysis to deepen the interpretation. The integration of these two approaches provides a more comprehensive understanding of a research problem than either approach could offer alone. Accordingly, descriptive, inferential, and correlational analyses were conducted to meet the study's objectives for the quantitative part. For the qualitative part, thematic analysis was conducted to identify themes from the interviews.

Setting and Participants

The study was conducted among preparatory students and faculty students

attending the state university in Kayseri, Türkiye, during the Summer School of 2024-2025. It consisted of 160 students who were all enrolled in a program designed to help them master the necessary English skills relevant to their department.

Data Collection

The participants were required to provide their demographic information, which included their gender, age, type of student (preparatory or faculty), and department affiliation. The questionnaires were then followed, with each consisting of 5 points on the Likert scale. Two questionnaires were used in the study to collect data. The first one, with the name Cognitive Test Anxiety Scale – 2nd Edition (CTAS), was created by Thomas et al. (2017) with 24 items without subscales. The tool was completed by the participants with the help of a 5-point Likert scale, with an Alpha Cronbach standard value of .80, confirming that the tool is reliable. The second tool, known as the Foreign Language Learning Enjoyment Scale (FLES), was created by researchers Aydın et al. in 2024, with 12 items without subtitles. The tool was completed by the study participants with the help of a 5-point Likert scale, with an Alpha Cronbach standard of .74, confirming that the tool is reliable. After collecting quantitative data, semi-structured interviews were conducted to gather the opinions of the 10 participants regarding the process of language learning, including aspects such as enjoyment levels and language exam performance.

Data Analysis

The quantitative data were analyzed using SPSS Version 27.0 software, employing descriptive, inferential, and correlation statistics. The descriptive analysis was done to establish the perceptions of the participants with regard to their feelings of anxiety and enjoyment. The inferential analysis was conducted to determine if there are any differences between the variables of gender, age, whether the participant is from the preparatory or faculty level, the department, or the levels of anxiety and language. The final analysis involved a correlation analysis to establish if there is any correlation between the levels of anxiety and enjoyment. The

second study employed thematic analysis to identify themes from the interview study.

Results

The results are presented in two parts. First, quantitative findings from the questionnaires are reported, including descriptive statistics for enjoyment and anxiety, group comparisons across demographic variables (gender, age, student status, and department), and the correlation between enjoyment and anxiety. These analyses examine the variation in learners' enjoyment and anxiety levels across groups and the strength of the relationship between the two constructs. Second, qualitative findings from the semi-structured interviews are summarised in terms of four overarching themes: (a) enjoyment as a positive emotional driver, (b) anxiety as a negative but complex force, (c) the interaction between enjoyment and anxiety, and (d) positive learning climate as a mediating factor. The qualitative themes are used to deepen and contextualise the quantitative results by illustrating how learners experience and interpret enjoyment and anxiety in the language learning process.

Table 1

Inferential Results of Enjoyment and Dependent Variables

Dependent Variable		***M***	***sd***	***t / F****	***p-value***
Gender	Female	3.62	0.57	0.22	.820
	Male	3.60	0.59		
Age	18-20	3.62	0.58	0.11	.905
	21+	3.61	0.58		
Student Status	Faculty	3.55	0.56	0.86	.388
	Prep	3.64	0.63		
Department	Computer Engineering	3.55	0.63	1.13	.337
	Bioengineering	3.65	0.60		
	Economy	3.71	0.63		

	Electrical and Electronics Engineering	3.69	0.58
	Industrial Engineering	3.71	0.52
	Civil Engineering	3.54	0.62
	Business Administration	3.87	0.54
	Mechanical Engineering	3.45	0.57
	Architecture	3.49	0.39
	Molecular Biology and Genetics	3.55	0.95
	Psychology	3.60	0.45
	Political Science and International Relations	3.94	0.55
	Nanotechnology	4.16	0.58

*t value is for independent t-tests, F value is for ANOVA.

Table 1 presents the analysis of demographic variables in relation to enjoyment in the language learning process. No significant difference was observed between male (M = 3.62, SD = 0.57) and female participants (M = 3.60, SD = 0.59), t = 0.22, p = .820. Similarly, age groups 18–20 (M = 3.62, SD = 0.58) and 21+ (M = 3.61, SD = 0.58) did not differ significantly, t = 0.11, p = .905. Being a prep or faculty student also showed no significant differences, t = 0.86, p = .388. Finally, no significant variance was found across departments, F = 1.13, p = .337. Overall, these results suggest that demographic variables, including gender, age, faculty or prep student status, and department, do not have a statistically significant impact on enjoyment in this study.

Table 2

Inferential Results of Anxiety and Dependent Variables

Dependent Variable		***M***	***Sd***	***t / F****	***p-value***
Gender	Female	2.58	0.70	4.55	.000
	Male	2.06	0.71		

Age	18-20	2.32	0.72	-0.91	.363
	21+	2.43	0.78		
Student Status	Faculty	2.29	0.75	0.63	.252
	Prep	2.38	0.76		
Department	Computer Engineering	2.22	0.97	1.33	.207
	Bioengineering	2.36	0.73		
	Economy	2.31	0.98		
	Electrical and Electronics Engineering	1.95	0.67		
	Industrial Engineering	2.58	0.79		
	Civil Engineering	2.57	0.65		
	Business Administration	2.56	0.73		
	Mechanical Engineering	2.22	0.65		
	Architecture	2.72	0.74		
	Molecular Biology and Genetics	2.11	0.78		
	Psychology	2.29	0.47		
	Political Science and International Relations	2.25	0.72		
	Nanotechnology	1.51	0.24		

*t value is for independent t-tests, F value is for ANOVA.

Table 2 presents the analysis of demographic variables in relation to anxiety during the language learning process. Age groups 18–20 (M = 2.32, SD = 0.72) and 21+ (M = 2.43, SD = 0.78) did not differ significantly, t = -0.91, p = .363. Being a prep or faculty student also showed no significant differences, t = 0.63, p =.252 Moreover, no significant variance was found across departments, F = 1.01, p = .438. However, a significant difference was found between gender and anxiety. According to the results, female participants showed higher anxiety (M=2.58, SD=0.70, p = .000), compared to male participants (M=2.06, SD = 0.71). Overall, these results indicate that demographic variables,

excluding gender, do not have a statistically significant effect on anxiety in this sample.

Table 3

Correlation Results of Enjoyment and Anxiety

		Enjoyment	***Anxiety***
Enjoyment	Pearson Correlation	1	
	Sig. (2-tailed)		
Anxiety	Pearson Correlation	-.408	1
	Sig. (2-tailed)	.000	

**p= 0.01*

Table 3 illustrates the correlation between enjoyment and anxiety. In order to analyze the significance of correlation, Cohen's (1992) correlation coefficient was utilized, indicating that the strength of correlation can be classified into different levels: small correlation ($.10 \leq r < .30$), medium correlation ($.30 \leq r < .50$), and strong correlation ($.50 \leq r < 1.00$). According to Table 3, there is a moderate negative correlation between enjoyment and anxiety ($r = -408$), $p < .001$). Results suggest that an increase in enjoyment in the language learning process leads to a decrease in anxiety.

Table 4

Descriptive Results of Enjoyment and Anxiety

	M	**SD**
Enjoyment	3.61	0.58
Anxiety	2.36	0.75

Table 4 illustrates the descriptive statistics for overall enjoyment and anxiety. The mean score for enjoyment was 3.61 (SD = 0.58), indicating a moderate to high level of enjoyment in the language learning process. The mean score for anxiety was 2.36 (SD = 0.75), suggesting that

participants demonstrated a moderate to low stress anxiety in the language learning process.

Qualitative Results

Semi-structured interviews were conducted to gather participants' perceptions of enjoyment and anxiety in the language learning process. Thematic analysis was employed to identify and categorize themes and subthemes. The first theme is "Enjoyment as a Positive Emotional Driver". According to the participants, the language learning process is an exciting and enriching experience that fuels curiosity and personal growth. This theme is emphasized by three subthemes: intrinsic motivation, enjoyable learning activities, and the teacher's role in fostering enjoyment. Some participants stated that enjoyment arose from discovering new cultures and new words, whereas others found enjoyment in games, songs, and group tasks. It can be said that enjoyment can be fostered through multiple activities. Additionally, participants reported that a relaxed and friendly classroom atmosphere promoted enjoyment, and speaking and listening tasks, in particular, were especially effective in promoting engagement.

The second theme is "Anxiety as a Negative but Complex Force". According to the findings, while anxiety mainly acts as a barrier to learning, some students perceive it as a motivating pressure to improve. Results showed that participants' anxiety sources include: fear of making mistakes, grammar difficulties & exam pressure, irregular study habits, and lack of preparation. Additionally, participants reported that when they experience time pressure and panic during exams, they tend to interpret these reactions as motivational signals to work harder in the future. It can be said that these stress related issues do not affect students negatively at all. Finally, some participants explained that in their classrooms, strict or impatient teachers increase tension, while supportive feedback from teachers can help eliminate fear and encourage risk-taking.

The third theme is "The Interaction Between Enjoyment and Anxiety". Participants stated that enjoyment and anxiety are inversely related; when

one rises, the other falls. Results indicate that students who have an enjoyable classroom experience tend to have lower anxiety, and they can build confidence compared to their peers. Also, some students experience more anxiety than their peers due to the fact that they fear poor grades or poor judgment from their teachers. As a result, they tend to focus more on performance, which can lead to reduced learning and intrinsic motivation. Finally, increased anxiety tends to reduce overall enjoyment and learning efficiency.

The final theme is "Positive Learning Climate as a Mediating Factor". According to the qualitative results, a warm, supportive classroom environment and empathetic teacher behavior simultaneously increase enjoyment and reduce anxiety. The participants emphasized that encouragement and humor make students feel more comfortable expressing themselves, and constructive feedback helps reduce the fear of failure. Additionally, the results indicate that group activities tend to lower stress, and students feel less isolated and more confident during exams.

Discussion

The current study aims to gain further insight into the above-mentioned emotional processes by linking quantitative and qualitative research results. In terms of quantitative data analysis, it was found that there was moderate to high enjoyment ($M = 3.61$) and moderate to low anxiety ($M = 2.36$), with a moderate negative correlation between the two ($r = -.408$; $p < .001$). The above results correlate with existing research that has shown that enjoyment was found to be higher than anxiety in many FLL environments and that there was evidence that the constructs are negatively but not perfectly correlated (Dewaele & MacIntyre, 2014). The above results indicate that there are two distinct concepts that are linked to each other but still overlap in that higher levels of one are linked with lower levels of the other.

The finding that the levels of enjoyment were comparatively high is consistent with the positive psychology in the SLA movement, as it

highlights the role of positive feelings, such as enjoyment, interest, and curiosity, in expanding learners' thought-action repertoires and creating permanent personal resources (MacIntyre et al., 2016). In current research, the issue of enjoyment is often illustrated through participation in interactive class activities (such as games, songs, and group work), learning about new cultures, and feeling comfortable in class. These findings are consistent with other evidence suggesting that FLE is strongly related to supportive teacher behavior, significant tasks, and a sense of progress in the target language (Dewaele & MacIntyre, 2014).

The negative correlation between enjoyment and anxiety found in this study confirms previous research that found higher FLE to be linked to lower levels of foreign language classroom anxiety (FLCA), but that FLE and FLCA are partially unrelated variables (Dewaele & MacIntyre, 2014). In terms of the control-value model of achievement emotions (Pekrun, 2006), learners are most likely to feel enjoyment if there is a high sense of perceived control over the activity, as well as if there is a strong sense that the outcome is valued; conversely, there is a higher likelihood of experiencing anxiety if there is low perceived control but high stakes. These results suggest that factors correlated with increased enjoyment—such as clear instructions and interactive tasks—may be linked to higher levels of perceived control and outcome value, which in turn could reduce test anxiety in the area of language learning.

One notable quantitative finding was a significant difference between females and males in terms of feeling anxious in class, with female students experiencing more anxiety compared to male students; however, there was no difference in terms of enjoyment. This finding is consistent with other research that has found female students to be more anxious in learning foreign languages, even if there is no difference between females and males in terms of motivation and achievement (Park & French, 2013). Nevertheless, more recently, there has been evidence that gender disparities are generally trivial and insignificant with regard to L2 learning anxiety (Piniel & Zólyomi, 2022). These results are likely to be accurate

in the sense that certain sociocultural factors may make female students more nervous about performing successfully in class. Additionally, there was qualitative evidence that some students felt more apprehensive about evaluation by teachers and class results that seemed to impact the gender difference found here with regard to test anxiety.

The qualitative themes supply these numerical observations with explanatory meaning. The first qualitative theme is "Enjoyment as a Positive Emotional Driver," in which students highlighted the role of enjoyment in terms of opportunities to communicate, connect with others, and discover new cultural meaning; these observations are supported by research that has highlighted the more personally significant elements of FLE (Dewaele & MacIntyre, 2014). The role of teacher behavior in terms of warmth, humor, and encouragement was highlighted, as supported by research indicating that teacher-child emotional sensitivity is not only an indicator of enjoyment but also a factor that minimizes anxiety (Qiu, 2022).

The second theme, "Anxiety as a Negative but Complex Force," recognizes the ambiguous role that anxiety had in these students' experiences. While it was definitely disruptive to most students' learning experiences and was closely tied to fear of error, tests, and inconsistent study practices, there was also evidence that these students believed that certain aspects of their anticipatory reactions to time pressure and tests served as reminders to "work harder next time," which was similar to the facilitating vs. debilitating types of anxiety (Scovel, 1978). Recent research about academic and language anxieties has suggested that there is a beneficial "facilitating" form of somewhat higher-level "anxiety" that can increase focus and concerted action as long as the individual believes that they are "in enough control" (Thomas, 2018). In the current study, this more beneficial function was seen in the form that these learners' reports about their experiences with these anxieties took on—the augmentative functions that these anxieties served as warnings about more effective preparation, rather than debilitating functions.

The issue "The Relation Between Enjoyment and Anxiety" perfectly correlates with the quantitative results, with students expressing that these two factors are inversely related to each other. Enjoyable learning in class, particularly when it includes interaction and collaboration with classmates and receiving positive feedback, would lead to lower levels of anxiety and higher confidence levels. Conversely, stressful and evaluative learning environments would result in lower levels of enjoyment and higher levels of anxiety. This correlates with research indicating that FLE and FLCA are dynamically related constructs that tend to increase and decrease correspondingly, though to some degree within the same individual (Dewaele & MacIntyre, 2014).

The sixth theme, "Positive Learning Climate as a Mediating Factor," highlights the key element that learning climate and teachers' behavior are the mediating factors between enjoyment and anxiety. The group illustrated that feeling comfortable in class with such learning climates encouraged them to feel free to share ideas and make mistakes. This was supported by recent reviews suggesting that teachers' use of positive learning climates to build strong bonds with students helps develop intrinsic motivation to participate and alleviate fear in learning environments (Qiu, 2022). In these regards, the current results conformed to the call made by positive psychologists emphasizing SLA to "look beyond" focusing on trait approaches to understanding the potential impact that learning climates with strong bonds with teachers may ensure the pursuit of wellness and learning (Dewaele et al. 2019)

In terms of the theoretical perspective adopted by the study in its assessment procedure, the application of the Cognitive Test Anxiety Scale - 2nd Edition (CTAS) situates this study within the cumulative body of research on test anxiety, which is viewed as a domain-general but context-dependent construct. The CTAS has been found to be reliable and structurally robust with respect to its psychometric properties in other research settings (including Turkish university students) (Dogan and Beycan Ekitli, 2021). The finding that the study already has moderately

anxious mean values and that these are in conjunction with moderately high values on the CTAS scale implies that while these students do tend to be concerned with test-related matters, these are still perhaps more within the manageable zone with regard to levels that might be seen in earlier research delineations (Thomas, 2018), and with potentially more emphasis on the enjoyment side if approaches are made to adjust these balances.

Despite these findings, several limitations of the study need to be highlighted. First, the data are cross-sectional and gathered through self-report measures, which makes it difficult to draw strong conclusions about the causal relationships between enjoyment and test anxiety. To that end, more longitudinal intervention studies are needed to explore whether measures of increased enjoyment are related to subsequent decreases in test anxiety over time. Second, the study drew on data from one state university's summer school population, which may limit the level of generalizability to other types of institutions and proficiencies. Third, the study's qualitative element was limited due to the sampling requirements, which drew only 10 volunteers; consequently, these results offer a rich perspective that is more suggestive than comprehensive. Fourth, the study drew upon measures that captured enjoyment and test anxieties more generally, which are unlinked to more specific measures such as speaking anxieties and measures of writing enjoyment.

Conclusion

The current research followed an explanatory sequential mixed-methods design to investigate the correlation between FLE and test anxiety within university-level EFL learners. The quantitative results showed moderate to high levels of FLE and moderate to low levels of test anxiety, with no significant effect of age, department, or status (preparation vs. faculty) in either construct. The sole significant demographic variable was gender, with female students registering higher levels of test anxiety compared to male students. This is supported by various studies suggesting that female

students tend to display higher levels of FLE-related anxieties, yet with similar or greater levels of motivation and achievement (Park & French, 2013). At the same time, the impact of demographic factors on FLE highlights that positive experiences within the classroom are generally possible if supported by the quality of the environment.

In combination, these results underscore the importance of giving serious attention to creating emotionally supportive learning environments in classrooms. From an instructor and learning perspective, this means attending to (a) interactive tasks that are designed to be enjoyable, (b) tasks that provide useful and clear feedback to reduce uncertainty, (c) assessments that are challenging yet provide psychological safety, specifically, and (d) tasks that communicate concern and respect to build trust. When these needs are met, enjoyment will be enhanced, and test anxiety—and its debilitating cognitive aspect in particular—can be managed.

One possible extension of the current research would be to design longitudinal studies to better understand the development dynamics between enjoyment and anxiety. Additionally, it might be useful to conduct research within the realm of classroom interventions linked to positive psychology (for example, activities focusing on people's strengths, gratitude, and savouring activities) to assess the effect these might have on the results in EFL settings. Furthermore, rather than using more general assessments to evaluate enjoyment and anxiety (for example, enjoyment in general versus anxiety in general), more precise results may be obtained with measures designed for each skill (for example, speaking enjoyment versus speaking anxiety). Lastly, further research needs to be conducted to gain more insight into the dynamics between enjoyment and anxiety during various settings (for example, an online environment vs. an offline environment).

In conclusion, the current study contributes to the growing body of evidence that enjoyment in learning foreign languages and test anxiety are fundamental and interrelated components of the emotional experience of

learners in EFL contexts. Demographics are found to be insignificant factors, but class environment, teacher factors, and learning design are identified as strong drivers of student outcomes. Language teachers' deliberate attempts to induce enjoyment and create positive environments during assessments can therefore be effective approaches to alleviating test anxiety and positively impacting learners' well-being and continued commitment to the foreign language.

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Ethical Declaration and Committee Approval

In this research, the principles of scientific research and publication ethics were followed. Necessary permission was obtained from the Abdullah Gül University Institutional Review Board in July 2025. The document number for the ethics committee approval is 129957. According to the IRB, the project has been deemed ethically appropriate.

Proportion of Authors' Contribution

Author 1: Conceptualization, Methodology, Results, Data Collection, Data Analysis, Review & Editing, Writing - Last Draft.

Author 2: Literature Review, Review & Editing, Visualization, Data Collection, Writing– Original Draft.

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Sustaining Student Motivation in Online Language Learning: A Self-Determination Theory Perspective

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The digitalization of higher education has reshaped the pedagogical landscape of English Language Teaching (ELT) as online instruction has evolved from emergency remote teaching to an established instructional mode. Online learning continues to expand globally and is projected to grow further in the coming years (Rodríguez-Ardura et al., 2025). This transformation, while increasing accessibility and flexibility, has also intensified concerns about learner motivation, identified as a critical determinant of engagement, persistence, and achievement in digital environments (Bai & Gu, 2024; Chiu et al., 2021). A growing body of research demonstrates that motivation in online learning is strongly linked to persistence, achievement, and overall learning success (Hsu et al., 2019; Hew, 2016). Despite these advantages of online formats, such environments also pose motivational challenges, including shifts in teacher–student immediacy, reduced interaction, and heightened self-regulation demands (Broadbent & Poon, 2015).

In tertiary English as a Foreign Language (EFL) programs, these challenges are further intensified by the dual cognitive and self-regulatory demands of language learning and technology-mediated study, rendering

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motivation both context sensitive and multifaceted (Almayez et al., 2025). To address these complexities, Self-Determination Theory (SDT; Deci & Ryan, 1985; Ryan & Deci, 2000) offers a well-established framework for examining the quality rather than merely the quantity of motivation.

SDT distinguishes between autonomous motivation, engagement driven by interest or personal value, and controlled motivation, which reflects behaviour regulated by external demands or internal pressure, alongside demotivation, indicating a lack of intentionality or value (Deci & Ryan, 1985; Ryan & Deci, 2000). These forms are conceptualized as points along a continuum of self-determination, and their relative prominence has been shown to predict learning outcomes such as persistence, engagement, and satisfaction in both traditional and online education (Chen & Jang, 2010). While numerous studies have validated SDT's motivational regulation constructs in traditional, face-to-face educational settings, empirical applications of this framework in fully online EFL higher education remain scarce. Research on SDT within digital learning contexts tends to be fragmented by context or methodology, often focusing on Western, school-aged populations or relying predominantly on quantitative survey designs. Recent reviews further highlight that investigations integrating SDT into online university settings are limited in scope, with few exploring how autonomous, controlled, and demotivated orientations coexist or how learners interpret these motivational experiences within virtual environments (Rosli et al., 2022).

The present study addresses this gap by adopting SDT's motivational regulation framework to analyse EFL learners' motivation in online higher education. Quantitatively, it examines the relationships among autonomous motivation, controlled motivation, and demotivation, the latter corresponding conceptually to amotivation (absence of intentionality) in SDT (Deci & Ryan, 1985), using the Teaching and Learning Strategy and Motivation in Virtual Learning Environments (TLSM-VLE) scale (Beluce & Oliveira, 2015), which was specifically designed to assess motivation in digital contexts. Qualitatively, it explores

how students representing distinct motivational profiles experience and interpret their engagement in online English courses. By integrating these perspectives, the study aims to provide a theoretically grounded and context-sensitive account of motivational regulation in Türkiye's digital ELT landscape and to contribute empirical evidence to the growing discourse on sustaining engagement in online higher education.

Literature Review

Theoretical Foundation: Self-Determination Theory

This study draws on SDT (Deci & Ryan, 1985; Ryan & Deci, 2000) as the theoretical framework for analysing motivation regulation in online English language learning. While earlier behavioural and cognitive models—such as the Social Cognitive Theory (Bandura, 1986), the Theory of Planned Behaviour (Ajzen, 1985), Expectation-Confirmation Theory (Bhattacherjee, 2001), and Social Exchange Theory (Blau, 1964)—identified various determinants of user engagement, they often conceptualised motivation as a unitary construct, emphasising intensity rather than quality (Malhotra et al., 2008). In contrast, SDT differentiates among types of motivation according to the degree of self-determination and volition on a continuum. It posits that motivation exists along a continuum from amotivation to controlled and autonomous motivation, emphasizing that the quality rather than the quantity of motivation predicts adaptive outcomes.

Within this continuum, autonomous motivation refers to engagement grounded in personal values or genuine interest, whereas controlled motivation involves actions driven by external demands or internal pressures such as obligation or approval seeking. According to SDT, motivation can be classified as either autonomous (volitional) or controlled (Vansteenkiste et al., 2020). Autonomous motivation encompasses intrinsic motivation—engaging in an activity for its inherent enjoyment—and identified or integrated motivation, where individuals recognize and accept the personal importance of a behaviour (Ryan &

Deci, 2000). In contrast, controlled motivation arises when behaviour is regulated by internal or external pressures. It comprises external regulation, where actions are performed to obtain rewards or avoid punishment, and introjected regulation, where behaviour is partially internalized but not fully integrated into one's sense of self (Ryan & Deci, 2000; see also Vansteenkiste et al., 2020 for an updated synthesis). At the lowest end of the continuum lies amotivation, characterized by a lack of intentionality and a sense of meaninglessness in learning activities (Deci & Ryan, 1985). Empirical research consistently shows that these qualitatively distinct forms of regulation predict different learning outcomes: autonomous motivation fosters greater engagement, persistence, and satisfaction, whereas controlled motivation is more closely linked to compliance, anxiety, and surface-level learning approaches (Assor et al., 2005; Niemiec & Ryan, 2009; Vansteenkiste et al., 2020). Being one of the most established motivational theories in second language learning, SDT has been widely applied across educational contexts to interpret motivational dynamics and the mechanisms by which contextual factors influence language learners' regulatory orientations (Ryan & Deci, 2020; Al-Hoorie et al., 2022). In technology-mediated language learning, the theory has proven particularly relevant for analysing how instructional design, feedback, and communication modalities shape learners' motivation regulation (Chiu et al., 2021). Recent research in educational technology extends SDT to digital settings, revealing that technological tools and pedagogical structures affect motivation depending on how they are perceived and internalized by learners (Jeon, 2022).

For empirical measurement, instruments such as the TLSM-VLE scale (Beluce & Oliveira, 2015) provide an operational framework for assessing motivation within online contexts. The TLSM-VLE captures three distinct motivational orientations—autonomous, controlled, and demotivated—and has been validated as a reliable measure of learners' motivational regulation in digital education. As it conceptualizes motivation directly in terms of SDT's regulatory types rather than underlying needs, it offers a

practical model for examining how these orientations interact in online higher education. Consequently, SDT serves as a robust theoretical and analytical lens for investigating how different motivational regulations coexist and influence engagement in digital ELT settings.

Motivation in Online Language Learning

Motivation has long occupied a central position in second language acquisition (SLA) research. Early frameworks, such as Gardner and Lambert's (1959, 1972) Socio-Educational Model, emphasized integrative and instrumental orientations as key predictors of L2 success. Subsequent critiques (Crookes & Schmidt, 1991) reconceptualized motivation as a dynamic, context-dependent process, giving rise to process-oriented models that highlight its temporal and situational variability (Dörnyei & Ushioda, 2021).

Increasingly, contemporary research integrates Gardner's socio-educational perspective with SDT to capture both social orientations and the regulatory quality of motivation (e.g., Kızıltaş & Yılmaz, 2024). This dual approach reflects a growing recognition that language learners' motivation encompasses not only socially mediated goals but also internalized value systems—an intersection particularly salient in contexts where cultural affiliation and communicative purpose converge.

Building on this theoretical evolution, SDT-based approaches have refined our understanding of language learning motivation by emphasizing the quality rather than the quantity of engagement. Across diverse L2 contexts, autonomous motivation has been shown to foster deeper learning strategies, persistence, and willingness to communicate (Oga-Baldwin et al., 2017; Noels et al., 2019), whereas controlled motivation is associated with lower achievement and diminished self-confidence (Vansteenkiste et al.,2009). This distinction has become especially salient in online environments, where self-paced learning, limited immediacy, and variable feedback can both enable and constrain learners' motivation.

Emerging evidence indicates that autonomous and controlled forms of

motivation are not necessarily antagonistic. Under certain contextual conditions, externally regulated behaviour can be internalized and experienced as personally meaningful, leading to a functional coexistence of both types (Ryan & Deci, 2020; Vansteenkiste et al., 2020). Person-oriented analyses (Ratelle et al., 2007) further show that learners exhibiting high levels of both autonomous and controlled motivation often display the most stable engagement and academic persistence. These findings highlight the importance of exploring motivation as a constellation of interacting regulatory orientations rather than treating them as mutually exclusive categories.

In digital learning contexts, the interplay between structure and autonomy becomes particularly critical. Well-designed environments that offer clarity, guidance, and consistent feedback can sustain motivation even when engagement is initially driven by external requirements such as grades or deadlines (Ryan & Deci, 2020; Shank, Tang, & Morris, 2025). Conversely, poorly structured or socially isolating online courses often exacerbate disengagement and demotivation (Chen & Jang, 2010). Recent studies further indicate that motivational challenges in online higher education frequently arise from diminished social presence and a lack of emotional connection with peers and instructors, which undermine learners' sense of engagement and belonging (Rodríguez-Ardura et al., 2025). When presence and interaction are low, students experience weaker psychological ownership and reduced flow, resulting in fragmented motivation. Evidence also highlights that meaningful design features such as interactive tasks, timely feedback, and opportunities for peer collaboration foster more self-determined forms of engagement (Tanaka, 2017; Zou, Xie & Wang 2023).

Despite these conceptual and empirical advances, research remains scarce in fully online tertiary EFL contexts, particularly in non-Western systems where cultural norms, institutional expectations, and digital infrastructures can shape motivation regulation differently (see also Meşe & Sevilen, 2021, for evidence from the Turkish higher-education context). The few

existing studies typically isolate motivational types rather than examining how autonomous, controlled, and demotivated orientations coexist within learners or are experienced subjectively.

Addressing this gap, the present study integrates SDT's regulatory framework with the TLSM-VLE scale (Beluce & Oliveira, 2015) to analyse motivational co-occurrence patterns among university-level EFL learners in Türkiye. By combining quantitative correlation analysis with qualitative inquiry, it seeks to clarify both the structural relationships among motivational dimensions and the lived experiences that underlie them. This dual-phase approach contributes to the growing body of literature on motivation in digital language education by offering a context-sensitive understanding of how motivation regulation operates in online higher education.

Methodology

The study employed an explanatory sequential mixed-methods design (Creswell & Plano Clark, 2023). In the first phase, quantitative data were collected and analysed to identify motivational tendencies and relationships among autonomous motivation, controlled motivation, and demotivation. The results of the quantitative phase were subsequently used to select participants for the second phase, representing three contrasting motivational profiles: high autonomous motivation, high controlled motivation, and high demotivation to ensure diversity of perspectives in the follow-up analysis. Phase 2 involved qualitative data collection through semi-structured interviews with volunteer participants purposively drawn from the survey respondents. This phase aimed to deepen the understanding of learners' motivational experiences by exploring how students with distinct motivational orientations (autonomous, controlled, and demotivated) perceived and made sense of their engagement in a fully online English course and how such insights can inform pedagogical understanding in online language teaching.

The study involved a total of 265 EFL learners (145 female, 120 male)

enrolled in the English preparatory program of a private university in Türkiye. The participants were distributed across 11 classes, all taught by experienced English instructors following the same institutional syllabus and assessment policy. The participants were native speakers of Turkish, ranging in age from 18–27 with a mean age of 19.8 years. Students were placed at B1–B2 proficiency levels based on institutional placement tests. Their curriculum included 4 hours of writing and 10 hours of integrated skills instruction per week, delivered entirely online via synchronous sessions. All classes required active participation, with students' cameras and microphones kept on, ensuring real-time interaction and engagement comparable to face-to-face instruction. Participants were selected using convenience sampling due to the teacher-researcher's accessibility to the students. Informed consent was obtained from all participants prior to data collection, and personal data were anonymized to ensure privacy and confidentiality.

Data Collection

Instruments and Procedure

This study employed two complementary data sources, an online questionnaire and semi-structured interviews. The online questionnaire was administered via a secure survey link shared during an online class session following participants' informed consent. It consisted of two sections.

The first section of the questionnaire gathered demographic information, including participants' age, gender, English proficiency level, and class section. The second section drew on the TLSM-VLE scale developed by Beluce and Oliveira (2015). This validated instrument assesses motivational and strategic dimensions of online learning through 32 items across six subscales: Teaching Strategies, Autonomous Motivation, Controlled Motivation, Demotivation, Cognitive and Metacognitive Learning Strategies, and Monitoring of Learning.

In line with the study's aims, only the motivational subscales, Autonomous Motivation (5 items), Controlled Motivation (6 items), and

Demotivation (4 items) were employed to capture learners' motivational orientations in digital contexts. The other subscales were excluded as they fell outside the study's scope. Each item was rated on a three-point Likert scale (0 = never, 1 = sometimes, 2 = always), consistent with the original validation.

Beluce and Oliveira (2015) reported acceptable reliability for these subscales (α = .64–.68). Internal consistency was recalculated for the present sample, yielding comparable Cronbach's alpha coefficients. The TLSM-VLE was deemed contextually appropriate as it integrates SDT constructs with indicators of engagement in virtual learning environments.

To enable purposeful sampling for the qualitative phase, individual scores were computed by summing responses within each motivational subscale. Participants with the ten highest scores in each motivational dimension (autonomous, controlled, and demotivated) were initially identified as representing distinct motivational profiles and invited for follow-up interviews. However, because several participants shared identical cutoff scores, all were included to ensure fairness and consistency in selection, resulting in a total of 37 participants. Participants for the qualitative phase were selected strictly based on their motivational profiles identified in the survey; although participation was voluntary, all individuals meeting the criteria were invited to minimize self-selection bias. Five semi-structured focus group interviews were conducted online, each lasting approximately 40–45 minutes and consisting of 6–8 participants representing the three contrasting groups: highly autonomous, highly controlled, and highly demotivated learners.

The interview protocol was grounded in SDT (Deci & Ryan, 2000) and adapted from previous SDT-based studies examining motivational experiences in digital and synchronous learning contexts (e.g., Belt & Lowenthal, 2023; Jeon, 2022). The questions were designed to capture both broad reflections and context-specific accounts of learners' motivational experiences in virtual environments. The interviews began with informed consent and consisted of questions such as: (a) In what

ways do online activities affect your motivation? (b) What are your experiences of feedback and interaction in online classes? (see Appendix A for the interview outline).

Data Analysis

Quantitative data were analysed using descriptive statistics and Pearson product–moment correlations to examine relationships among the three motivational dimensions. Following the TLSM-VLE framework, subscale totals were calculated with possible ranges of 0–10 for Autonomous Motivation, 0–12 for Controlled Motivation, and 0–8 for Demotivation. Higher scores indicated stronger levels of each regulatory type. These profiles informed the selection of three contrasting motivational groups (a) highly autonomous, (b) highly controlled, and (c) highly demotivated learners, who were subsequently invited to participate in the qualitative phase.

Qualitative data from open-ended survey responses and interviews were analysed through reflexive thematic analysis (Braun & Clarke, 2023), involving iterative phases of familiarization, inductive coding, and theme refinement. Codes were primarily derived from participants' language, with deductive attention to pedagogical constructs central to learner-centred and affectively engaging online instruction. Emerging patterns were synthesized into themes capturing (a) learners' experiences of motivation and engagement in virtual contexts and (b) perceived pedagogical affordances and constraints.

All interviews were conducted by the teacher-researcher, for whom reflexivity was integral to the analytic process. The researcher's professional background in language teacher education informed both coding and thematic interpretation. To enhance trustworthiness, a second qualitative researcher, a PhD-qualified university instructor from the same institution, independently coded all transcripts, yielding 89% inter-coder agreement.

Results

Quantitative findings

Scores for autonomous motivation, measured through five items, could range from 0 to 10. Analysis indicated that 44% of the participants (n = 22) scored either 9 or 10, while none scored below 5. The mean score was 7.74 (SD = 1.84), suggesting a generally high level of autonomous motivation among participants. Item-level analysis showed that a substantial proportion of students selected "always" for each item: 54% (n = 27) for Item 1, 74% (n = 37) for Item 2, 62% (n = 31) for Item 3, 50% (n = 25) for Item 4, and 60% (n = 30) for Item 5.

The controlled motivation subscale, consisting of six items with a possible range of 0–12, yielded a mean of 8.02 (SD = 2.85). 24% of students (n = 12) scored either 11 or 12, whereas only 6% (n = 3) scored below 5, indicating moderately high levels of externally regulated motivation. Scores for demotivation, measured by four items (range = 0–8), were considerably lower, with a mean of 2.23 (SD = 3.40). Nearly one-quarter of students (24%, n = 12) scored 0 or 1, while only 8% (n = 4) scored above 5, indicating that most participants reported low demotivation (see Table 1).

Table 1

The Descriptive Statistics for the Three Motivational Dimensions

Question Number	***Motivation Type***	***always (2)***	***sometimes (1)***	***never (0)***	***M***	***SD***
1	Autonomous Motivation	27	19	4	1.5	0.6
2	Autonomous Motivation	37	11	2	1.7	0.5
3	Autonomous Motivation	31	16	3	1.6	0.6
4	Autonomous Motivation	25	23	2	1.6	0.5

5	Autonomous Motivation	30	19	1	1.7	0.5
6	Controlled Motivation	21	25	4	1.5	0.6
7	Controlled Motivation	17	20	13	1.3	0.8
8	Controlled Motivation	24	20	6	1.6	0.7
9	Controlled Motivation	25	21	4	1.7	0.6
10	Controlled Motivation	22	23	5	1.7	0.6
11	Controlled Motivation	28	17	5	1.9	0.7
12	Demotivation	8	23	19	1.2	0.7
13	Demotivation	9	27	14	1.5	0.7
14	Demotivation	10	16	24	1.3	0.8
15	Demotivation	9	21	20	1.4	0.8

Pearson product–moment correlation coefficients were calculated to examine relationships among the three motivational dimensions. A moderate positive correlation was found between autonomous and controlled motivation ($r = .48$, $p < .05$, $n = 50$), indicating that higher autonomous motivation tends to coincide with higher controlled motivation. A small negative correlation emerged between autonomous motivation and demotivation ($r = –.25$, $p < .05$, $n = 50$), suggesting that autonomy may buffer against demotivation. Finally, the relationship between controlled motivation and demotivation was negligible ($r = .12$), implying that external regulation alone does not strongly influence demotivated tendencies (see Table 2).

Table 2

Pearson Correlations among Motivational Dimensions (N = 265)

Pearson Correlation	***Autonomous Motivation***	***Controlled Motivation***	***Demotivation***
Autonomous Motivation	—	.48*	–.25*
Controlled Motivation	.48*	—	0.12
Demotivation	–.25*	0.12	—

Note. Correlation is significant at the 0.05 level (2-tailed).

Qualitative Findings

The thematic analysis of interviews with 37 tertiary-level EFL learners illuminated how motivation in fully online learning environments operates as a dynamic negotiation among internal value, external expectations, emotional engagement, and digital affordances. Four major themes emerged, corresponding to the three motivational orientations identified in the quantitative phase (autonomous, controlled, and demotivated), illustrating how learners interpret and reconstruct their motivation in digital contexts.

Autonomy and Personal Relevance in Meaningful Online Engagement

Participants reported that when online course design combines choice with guidance—offering optional paths, student-led projects, and reflective spaces that connect academic work to learners' personal goals—their autonomous motivation flourishes.

Learners with high autonomous motivation described their online experiences as meaningful when tasks aligned with personal goals or allowed choice and creativity. A recurring narrative was the sense of "ownership" over learning: *"I feel motivated when I can choose how to approach an assignment; it feels like my own project, not something I must do"*. Students who valued English for academic or career purposes described higher motivation and more consistent engagement in online tasks: *"This course is important for my career plans. Improving my English helps me prepare for international opportunities"*. Students from

the highly autonomous group highlighted that digital tools amplified autonomy when used flexibly, allowing independent exploration and varied choices: *"When we do online assignments, it gives more options to complete; I mean not rigid. I like the flexibility it offers with the teacher"*. Participants in the demotivated group commonly linked limited interaction with reduced feelings of freedom and lower motivation: *"Sometimes it felt like just clicking and submitting, not real learning"*.

External Expectations as Supportive or Controlling Forces

Some students perceived external motivators such as grades, deadlines, and teacher expectations not as detrimental but as constructive sources of pressure: *"Grades push me to do my best, even when I don't feel like it. It keeps me organized"*. These students emphasized that external regulation can be internalized when supported by meaningful rationale and autonomy. Learners who valued achievement tended to adopt external standards as part of their self-concept. When teachers provided clear explanations and allowed flexibility, external demands were viewed as scaffolding that sustained engagement: *"When instructions are clear, I feel confident to try my own ideas, and it is easier to complete the task. I have no issues with assignments if they are explained clearly and I know what to do"*. In contrast, students who reported demotivation often described external expectations as burdensome and controlling. For these learners, strict deadlines, performance pressure, and unclear instructions produced stress and disengagement. *"When the pressure is too high to meet deadlines without clear guidance, I just shut down and stop trying"*. Several participants associated rigid deadlines and high demands with decreased effort and engagement. Similarly, some participants noted that participating mainly out of obligation or fear of falling behind led to compliance but not genuine engagement: *"Sometimes I participate only because I'm afraid of falling behind, but it doesn't make me feel motivated, it feels like I'm trapped by the system"*. Overall, participants who perceived external expectations as inflexible or ambiguous reported lower confidence and diminished motivation.

Relatedness and Teaching Presence in Digital Learning Spaces

Students emphasized the importance of social presence and feedback in sustaining motivation during online learning. They described the online environment as one that requires deliberate effort to build connections and highlighted the motivational value of feeling seen and supported. Across accounts, students who experienced strong interaction and feedback reported higher engagement, whereas those with limited social connection described declining motivation:

> *"When the teacher makes sure she is always there—I mean when she signals that she is showing attention, such as responding to our utterances or giving immediate feedback—I feel noticed".*
>
> *"Group activities and small games online make me feel part of a class, not just alone at home".*

Conversely, demotivated students often struggled to sustain a sense of connection, particularly during group work: *"Teachers cannot check all breakout rooms, so in group activities, I get lost. I believe they have to handle small group activities more effectively in the online environment"*. Overall, students' perceptions of teacher presence and interaction quality appeared central to their motivation and sense of belonging in online learning contexts.

Self-Regulation and Re-Engagement through Online Activities

Learners experiencing fluctuating motivation described a repertoire of self-regulation strategies to re-engage with learning, positioning these strategies as a process of sustaining autonomy. These included setting micro-goals, alternating between tasks, or using interactive tools (e.g., *Kahoot*, *Quizizz*, shared slides) to sustain focus: *"When we get bored, the teacher opens a game like Quizizz or Kahoot or a shared document we can all contribute to together; it helps me restart"*. To overcome low motivation, some students suggested diversifying learning tasks and setting concrete goals: *"Sometimes we do not find time to get bored. Once we listen to a conversation, then watch a video, next the teacher gives us a quick, clear task, then the class is over"*. Immediate feedback emerged as another key factor supporting persistence and re-engagement: *"Getting*

quick responses motivates me to keep trying". In contrast, students with predominantly demotivated orientations emphasized the absence of such feedback and interaction, which diminished their sense of involvement and agency: *"Sometimes there is not enough time for the teacher to give feedback or check my work, and I feel not heard. I do not feel like participating"*. Overall, students underscored how structured variety, interactivity, and timely feedback foster self-regulated re-engagement, whereas limited feedback and social responsiveness can intensify demotivation in online settings.

Discussion

This study examined tertiary-level EFL students' motivation in fully online English courses using an explanatory sequential mixed-methods design grounded in SDT (Deci & Ryan, 1985). The integration of quantitative and qualitative findings reveals that motivation in digital environments is not simply an individual attribute but a situated negotiation among personal values, instructional structures, and social affordances. Rather than confirming a linear hierarchy of motivational types, the findings illustrate how learners dynamically reconstruct their motivational orientations in response to pedagogical design and digital interaction.

Quantitatively, the coexistence of high autonomous and moderately high controlled motivation, coupled with low demotivation, demonstrates that external and internal regulations are functionally interdependent rather than oppositional. The moderate positive correlation between autonomous and controlled motivation substantiates the SDT proposition that external regulation can become adaptive when internalized (Ryan & Deci, 2020; Vansteenkiste et al., 2020), while the negligible relationship between controlled motivation and demotivation indicates that not all external pressures suppress engagement. Qualitative evidence elucidates the mechanism underlying this pattern: when deadlines, assessments, and teacher expectations were presented with transparent rationales and

accompanied by choice, learners perceived them as structured freedoms that scaffolded rather than constrained their agency. This finding nuances the dichotomy between autonomy and control in SDT, suggesting that within well-designed online environments, external accountability can act as a vehicle for internalization, transforming obligation into volition. In doing so, the study extends Ratelle et al. (2007) by demonstrating that mixed motivational profiles can also emerge productively in fully digital, higher-education EFL settings.

The small negative association between autonomy and demotivation reflects the partial but not absolute buffering effect of autonomy. While learners with higher perceived autonomy demonstrated resilience in sustaining effort, demotivation still arose when online activities lacked personal relevance, interactivity, or feedback loops. The qualitative findings highlight that autonomy alone does not ensure persistence unless competence and relatedness needs are also met through meaningful feedback and social connection (Ryan & Deci, 2020). Students' accounts emphasized the necessity of dialogic feedback and authentic purpose in task design, underscoring that autonomy is context-dependent and relational, not merely an individual preference. This observation resonates with Tanaka (2017), who found that perceived autonomy and competence sustain intrinsic and identified regulation even in demotivating environments. The present data therefore demonstrate that autonomy functions less as a fixed learner trait and more as an emergent property of the learning ecology, conditioned by feedback immediacy and the social texture of interaction (Broadbent & Poon, 2015; Reeve, 2016).

Teacher presence surfaced as a pivotal motivational anchor, operating simultaneously as a cognitive regulator and an emotional stabilizer. Students' motivation intensified when they felt "seen" through responsive communication, interactive feedback, and small-group engagement. Conversely, the absence of immediacy or delayed responses triggered perceptions of invisibility and disengagement. This confirms that social presence operates as the relational infrastructure of online motivation,

bridging the gap between structural clarity and affective investment. Within this ecology, relatedness is not peripheral—it is the medium through which autonomy and competence are sustained (Reeve, 2016; Rodríguez-Ardura et al., 2025). By situating these dynamics in a non-Western higher-education context, the study demonstrates that the cultural expectations of teacher responsiveness and emotional visibility remain critical determinants of motivation in digitally mediated EFL education (Meşe & Sevilen, 2021).

Learners' reported strategies of micro-goal setting, task switching, and use of interactive digital tools further illustrate that self-regulation in online learning is co-constructed. Rather than a fixed disposition, self-regulation emerged as a reciprocal process, a dynamic interplay between external scaffolding and learners' internal efforts to maintain engagement. This reciprocity signifies that online EFL motivation depends not merely on the presence of autonomy-supportive design features but on their alignment with learners' evolving self-regulatory strategies. The finding aligns with research showing that the combined use of multiple *Web 2.0* tools (e.g., *Socrative*, *Padlet*, *Google Docs*) fosters autonomy through interactive multiplicity (Uras Eren & Atay, 2021). Motivation, in this sense, becomes an adaptive system sustained by digital variety, feedback immediacy, and cognitive rhythm rather than by singular motivational sources.

Theoretically, the study makes two interrelated contributions. First, it extends SDT to a fully online, non-Western tertiary context, demonstrating that motivational quality is not fixed along a continuum but recalibrated through learners' interpretations of pedagogical structure. This reconceptualization highlights that structure and autonomy are complementary poles of motivational design, not competing forces (Ryan & Deci, 2020; Chen & Jang, 2010). Second, it bridges SDT's continuum approach with person-oriented perspectives, showing that mixed regulation profiles such as high autonomous and high controlled can serve as indicators of adaptive internalization rather than transitional instability (Ratelle et al., 2007). By empirically linking these profiles to concrete

pedagogical conditions; clarity, choice, and presence, the study moves SDT from theoretical generality toward a design-sensitive framework for digital language education.

Conclusion

This study demonstrates that motivation in online English language learning operates as a dynamic balance between autonomy and structure, where external guidance and internal drive reinforce rather than compete with one another. Accordingly, online language teaching should treat structure as an enabler of autonomy, using clear rationales, interactive tools, and meaningful task design to transform compliance into self-endorsed engagement

Pedagogically, these findings advocate for autonomy-supportive yet structure-rich design in online ELT. Teachers and course designers should prioritize multimodal interactivity, purposeful choice, and the human architecture of feedback and presence as essential motivators. Institutional policies must recognize that sustainable online engagement depends less on technology itself than on intentional pedagogy that integrates structure, support, and learner agency.

Although the findings deepen understanding of motivational regulation in digital higher education, several limitations remain. The single-institution sample limits generalizability, reliance on self-reported data may introduce bias, and the correlational design restricts causal inference. Future research could extend this work through cross-institutional or longitudinal studies, as well as intervention-based designs testing specific autonomy-supportive strategies. Overall, the study emphasizes that self-determination in online EFL learning is not static but an evolving dialogue between pedagogical design and learner interpretation.

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Ethical Declaration and Committee Approval

This study was conducted in accordance with the principles of scientific research and publication ethics. Ethical approval for this research was obtained from the Ethics Committee of Biruni University, with approval number 2024-BİAEK/15-01.

Appendix A

Interview outline

1. What makes your online English learning experience meaningful or satisfying?
2. How do grades, deadlines, and teacher expectations affect your motivation?
3. Can you describe a situation where you felt free to learn in your own way?
4. When do course rules or requirements feel supportive, and when do they feel controlling?
5. What usually helps you stay or become motivated when you feel disengaged online?
6. How do interactions and feedback from teachers or peers influence your motivation?
7. What do you think teachers could do differently to make online English learning more motivating?

Ideology in Translation Pedagogy

Eser ÖRDEM[1]

The field of translation and ideology has gained paramount importance with the advent of postcolonial translation theory. Spivak's (2000) theory has been prevalent in the discipline of translation and offers a critical approach to translation critically. For her, translation is an opportunity for silenced subjects, groups, communities and societies so that they can express themselves as a praxis area, which aims to transform societies.

In translator education, ideology is rarely discussed or ignored because it is reduced to micro-linguistic exercises. Students are often expected to recognize semantic, construction-based, lexical or syntactic differences between source and target translations, yet they are hardly expected to examine these differences within the framework of power relations, market positioning, or cultural norms. There seems to be lack of empirical evidence that considers socio-cultural or socio-political criteria. The aim of such an analysis is to help learners notice systematic ideological interpretation. Thus, this study purports to explore whether feeding learners with definite criteria helps them to produce systematic ideology analyses instead of using linguistic criteria alone.

Within postcolonial frameworks, translation studies have shifted focus

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from structural analysis to cultural, political and ideological analysis to prioritize voices of the voiceless, power relations, subjective experiences, political discourses and representation. This perspective becomes pivotal when learners move from internal text analysis to external factors that constitute the text. Classroom tasks in translation foreground lexical or syntactic differences, but they hardly open space for learners to understand power relations in translation texts. This study aims to fill this gap with a two-phase intervention in a senior-level Translation and Interpreting course. In Phase 1, the task deals with form-focused comparison of different published translations of Romans 10:9–10 in the Bible (with a Turkish translation). In this task, the learners were expected to examine the translation through lexical, morphological, syntactic, phrasal, and semantic lenses. As for Phase 2, the task contained socio-cultural criteria for the learners to analyse multiple Turkish editions of *Alice in Wonderland*. The study makes a comparison across two phases and examines whether the given criteria function as a guide for ideological reading.

Theoretical Framework

This study maintains that translation can be interpreted as ideological praxis rather than a neutral and linguistic transfer. Spivak (2000) states that translation is a site where voice, power, and cultural difference overlap and are critically discussed.

Venuti (2008) also claims that domestication/foreignization distinction is pivotal in that value-based perspective can explain target-culture norms and imagined readerships. Lefevere (1992) also asserts that rewriting and patronage could explain how institutional forces and publishing ecologies impact translation. Baker (2006) approaches translations from a wider viewpoint to explore social factors instead of focusing on merely linguistic products.

Discourse theories of ideology are also addressed because ideology is embedded in discourse practices and textual choices (Fairclough, 1992;

van Dijk, 1998). Hatim and Mason (1997) emphasize the importance of the shift from micro-level choices to macro-level communicative intentions and socio-cultural positioning. By doing so, the translator is thought to be an accountable communicator. These perspectives help us move beyond examining lexical, syntactic, and paratextual features because power relations, ideology, gender representation, and cultural adaptation also become the sites of the analysis of the texts to be translated.

Pedagogically, sociocultural learning theory has been adopted. In line with this, rubrics and checklists act as mediational tools that help learners notice features of context-aware ideological claims. In Vygotsky's (1978) terms, providing explicit criteria enables learners to attend to and reason within the zone of proximal development. The study uses this scaffold operationally through rubric-guided socio-cultural interpretation. Thus, the study moved from an unaided task (noticing linguistic differences) to guided one (discussing and interpreting socio-political contexts) to develop higher order thinking skills.

The pedagogical challenge emerges when and how to conduct ideological analysis into translator training in a critical and systematic way. A lack of evidence still exists in translation pedagogy on whether socio-cultural analytical criteria can scaffold students' trajectory from noticing differences to interpretations of ideology in translation. This study aims to address this gap by investigating a classroom intervention, which aimed to move learners from linguistic analysis toward socio-cultural, socio-political and ideological analysis of translations.

The main research question asks whether giving socio-cultural criteria enables them to produce more systematic and ideological analyses than focusing on linguistic criteria alone. In other words, can guided criteria help student translators transform micro-level textual choices into macro-level ideological contexts?

Methodology

Methodologically, the study involves classroom-based qualitative research and interpretive inquiry in applied linguistics and translation pedagogy (Creswell & Creswell, 2018; Duff, 2008; Saldanha & O'Brien, 2013). Thus, this study aimed to comprehend contextualized intervention because the tasks were predicated onto the existing curriculum so that ecological validity could be preserved to observe how students interpret ideological categories within authentic course using the texts from religion and literature.

Designing the sequence from linguistic noticing (Phase 1) to ideology-guided interpretation (Phase 2) was affected by sociocultural learning theory. It views learning as mediated by tools, artefacts, and guidance (Lantolf & Thorne, 2006; Vygotsky, 1978). In this design, the mediational device is the socio-cultural criteria in that these criteria scaffold students' movement and process from micro-level observations to macro-level ideological analysis. Thus, this study was composed of a two-phase classroom intervention which was implemented in a senior-year course. All the students experienced both phases in a fixed order (from linguistic phase to socio-cultural phase). This methodological design helped compare the breadth and systematicity of analysis.

Participants and Context

The study involved 20 final-year students studying in the Translation and Interpreting Department of a state university. The tasks were incorporated into regular coursework. Reflections of the participants were anonymized, and no course grades were required on study participation. The course included an intervention focused on translation analysis and criticism, and all students had experience with text-based linguistic comparison tasks. The intervention was conducted as part of the regular course syllabus. No extra incentives such as grading were presented to participation.

Participation in the study was on a voluntary basis, and students' written reflections were anonymized. The use of a class is typical in that it addresses practitioner-oriented translation pedagogy research, where the

aim is to understand and improve the learning environment in its immediate setting instead of foregrounding a statistically representative sample (Duff, 2008; Saldanha & O'Brien, 2013).

Materials and Stimuli

In Phase 1 (linguistic lenses), the students were asked to examine ten published English texts of Romans 10:9–10 from the Bible (with Turkish equivalents). They were told to analyse lexical, morphological, syntactic, phrasal, and semantic variation.

The material used was a verse obtained from the Bible (Romans 10:9–11) given in ten different translated versions which also included at least one Turkish translation and 10 English translations of the text. Romans 10:9-10

1. Romans 10:9-10 (New International Version) 9 That if you confess with your mouth, "Jesus is Lord," and believe in your heart that God raised him from the dead, you will be saved. 10 For it is with your heart that you believe and are justified, and it is with your mouth that you confess and are saved.
2. Say with your mouth, "Jesus is Lord." Believe in your heart that God raised him from the dead. Then you will be saved. 10 With your heart you believe and are made right with God. With your mouth you say that Jesus is Lord. And so you are saved.
3. That if thou shalt confess with thy mouth the Lord Jesus, and shalt believe in thine heart that God hath raised him from the dead, thou shalt be saved. 10 For with the heart man believeth unto righteousness; and with the mouth confession is made unto salvation.
4. that if you confess with your mouth the Lord Jesus and believe in your heart that God has raised Him from the dead, you will be saved. For with the heart one believes unto righteousness, and with the mouth confession is made unto salvation.
5. For if you confess with your mouth that Jesus is Lord and believe in your heart that God raised him from the dead, you will be saved. For it is by believing in your heart that you are made right with God, and it is by confessing with your mouth that you are saved.
6. that if you confess with your mouth Jesus as Lord, and believe in your heart that God raised Him from the dead, you will be saved; for with the heart a person believes, resulting in righteousness, and with the mouth he confesses, resulting in salvation.
7. because if you confess with your lips that Jesus is Lord and believe in your heart

that God raised him from the dead, you will be saved. For one believes with the heart and so is justified, and one confesses with the mouth and so is saved.

8. that if you declare with your mouth that Jesus is Lord, and if you believe with your heart that God raised him from the dead, then you will be saved. It is by believing with the heart that you are justified, and by making the declaration with your lips that you are saved.
9. If you confess that Jesus is Lord and believe that God raised him from death, you will be saved. For it is by our faith that we are put right with God; it is by our confession that we are saved.
10. So you will be saved, if you honestly say, "Jesus is Lord," and if you believe with all your heart that God raised him from death. God will accept you and save you, if you truly believe this and tell it to others.
11. İsa'nın Rab olduğunu ağzınla açıkça söyler ve Tanrı'nın O'nu ölümden dirilttiğine yürekten iman edersen, kurtulacaksın. Çünkü insan yürekten iman ederek aklanır, imanını ağzıyla açıklayarak kurtulur. Kutsal Yazı, "O'na iman eden utandırılmayacak" diyor.
12. Çünkü, 'senin ağzında olan o sözü', yani İsa'nın Efendimiz olduğunu açıkça bildirirsen ve Tanrı'nın onu ölüyken dirilttiğine yüreğinle iman edersen kurtulacaksın. Yürekle iman ederek doğruluğa erişilir, imanı ağızla açıkça bildirerek de kurtuluşa erişilir.

The students were told to take into consideration the different versions of the texts through lexical, morphological, syntactic, phrasal, and semantic perspectives so that they could notice differences on a lexical, syntactic, or semantic level. The task gave them some clues to make comments on ideological aspects on linguistic levels. Thus, Phase 1 aimed to show how students approach ideological analysis when they are told to remain limited to form-based criteria. Typically, the students in this phase produced superficial observations such as which words were used in different translations or differences in formality and inclusivity. However, it was observed that they had difficulty in connecting these observations to societal or ideological implications for a larger society.

In Phase 2, socio-cultural analysis was conducted after Phase 1. The same students were given criteria in order that they could take socio-cultural criteria into consideration for ideological analysis. The task in Phase 2 was given as a different text. The sentences from *Alice's Adventures in*

Wonderland written by Lewis Carroll and their Turkish equivalents by different publishers were presented to the students as follows:

> So she was considering in her own mind, (as well as she could, for the hot day made her feel very sleepy and stupid) whether the pleasure of making a daisy-chain would worth the trouble of getting up and picking the daisies, when suddenly a white rabbit with pink eyes ran close by her.

1. Acaba, papatyalardan bir çelenk yapmak için kalkıp papatya toplamaya değer mi, diye düşünürken (ne kadar düşünebilirse tabii, çünkü sıcaktan mayışmış, serseme dönmüştü), yanından pembe gözlü bir tavşan koşarak geçti. (Sosyal Publishing, pp. 9-10)
2. O sırada, "Acaba çelenk yapmak için kalkıp papatya toplasam mı?" diye düşünürken (ne kadar düşünebilirse tabii, çünkü sıcaktan mayışmış, serseme dönmüştü), yanından pembe gözlüklü bir tavşan koşarak geçti. (Epsilon Publishing, pp.5)
3. Ablası mırıltı çıkararak kitap okuyordu. Alice onu dinlemiyordu bile. Kitabın sıkıcılığı, sesin tekdüzeliği uykusunu getirmişti. Göz kapakları kapanacak gibi oluyor, sık sık esniyordu. Bir yandan da kolye yapacağı papatyaları bulmak için kapanmasına güçlükle engel olduğu gözlerini etrafta gezdiriyordu. Ama sıcak olduğundan papatyalar solmuştu. İşte tam bu sırada Alice, kırmızı gözlü, beyaz tüylü bir tavşanın yanlarından geçtiğini gördü. (İskele Publishing, p.7)
4. Çok sıcak bir gündü. Alice "Öyle uykum var ki," dedi kendi kendine. Ağaçtan düşen bir yaprak gördü ama ona bakamayacak kadar uykuluydu. Bu sırada yakınından beyaz bir tavşan geçti. (Gugukkuşu Publishing, p. 5)

Another paragraph from *Alice's Adventures in Wonderland* was also given to the students so that they could notice different versions of the English text so that they could reflect on them from a sociopolitical perspective. Five publishers' translations were provided to the students who critically examined and interpreted them in pairs.

> "You!" said the Caterpillar contemptuously. "Who are you?" Which brought them back again to the beginning of the conversation. Alice felt a little irritated at the Caterpillar's making such very short remarks, and she drew herself and said, very gravely, "I think, you ought to tell me who you are, first." "Why?" said the Caterpillar. Here was another puzzlling question; and, as Alice could not think of any good reason, and as the Caterpillar seemed to be in a very unpleasant state of mind, she turned away. (BookVirtual Publishing, p. 61)

5. "Sen ha!" dedi Tırtıl küçümsercesine, "Sen kimsin ki?" Bu sorudan sonra, yine konuşmanın en başına döndüler. Alice, Tırtıl'ın böylesine kestirme karşılıklar vermesine biraz bozulmuştu, dimdik durmaya çalışarak çok ciddi bir sesle,

"Önce siz bana kim olduğunuzu söyleseniz," dedi. "O neden?" diye sordu Tırtıl. İşte akıl karıştıran bir soru daha; Alice, uygun bir karşılık bulamadı. Tırtıl'ın da keyfi iyice kaçmışa benziyordu; Alice dönüp yürümeye başladı. (Sosyal Publishing, p.40)

6. "Sen ha!" dedi Tırtıl küçümsercesine, "sen kimsin ki?" Bu sorudan sonra, yine konuşmanın en başına döndüler. Alice, Tırtıl'ın böylesine kısa karşılıklar vermesine biraz bozulmuştu. Dimdik durmaya çalışarak çok ciddi bir sesle, "Önce siz bana kim olduğunuzu söyleseniz," dedi. "O neden?" diye sordu Tırtıl. İşte akıl karıştıran bir soru daha; Alice, uygun bir karşılık bulamadı, Tırtıl'ın da keyfi iyice kaçmışa benziyordu. Alice dönüp yürümeye başladı. (Epsilon Publishing, p. 38)
7. Tırtıl iyice öfkelenmişti birden bağırdı: 115 -Sözü dolaştırmayı bırak! Söyle sen kimsin? Tırtıl yine sözü başlangıç noktasına getiriyordu. Alice de artık tırtılın bu inatçı sorularından sinirlenmeye başlamıştı. Ayak parmakları üzerinde biraz daha yükselerek: -Önce sen söyle bakalım, sen kimsin? Tırtıl yine eski inatçı tavrıyla: -Hayır önce sen söyle bakılım, sen kimsin? Alice artık hem sinirlenmiş, hem de tırtılın bu inatçı tavrından usanmıştı. Boşuna vakit kaybetmekte olduğunu düşünerek arkadaşını dönüp yürüdü. (İskele Publishing, p.48)
8. "Senin için mi? Sen kimsin?" Tırtıl bu soruyu daha önce de sormuştu, Alice sinirlenmeye başlıyordu. Dedi ki; "Belki ben kim olduğumu söylemeden, sen kim olduğumu bilirsin!" "Neden?" Bu başka bir zor soruydu. Alice bunu cevaplamadı ve yürümeye başladı. (Gugukkuşu Publishing, pp. 21-22)

Each student received a rubric, a scale containing socio-cultural criteria, and was asked to approach the translated text and sentences through the vantage point of ideology. The criteria presented multiple categories of features and some guiding questions and examples based on translation studies theory such as postcolonial translation and critical discourse studies.

The students used the criteria in Phase 2 and systematically analysed the text from *Alice in Wonderland* translations. They also commented on factors like target audience assumptions, cultural references and any evidence of the translator's or publisher's influence on the text. After they completed both Phase 1 and Phase 2 tasks, they were given several semi-structured reflection questions so that they could answer in writing. These open-ended reflection questions led students to write down their experiences in each phase such as the challenges that they encountered,

and their reflections on the usefulness of the criteria that guided their analysis.

Thus, in Phase 2 (socio-cultural criteria), the students were given rubric/criteria with ideological concepts based on theoretical framework. They applied this rubric to multiple Turkish editions of *Alice in Wonderland*. Ideology-focused translation analysis criteria were given to the learners in Table 1 as follows.

Table 1

Criteria for Examining Ideological Influence in Translation

Key Dimension	***Key Questions***	***Indicators of Ideological Influence***	***Example***	***Theorist / Theory***
Lexical Choices	Are specific terms altered, softened, or emphasized?	Use of euphemisms, loaded language, or culturally preferred terms.	'Terrorist' changed to 'freedom fighter' in politically sensitive translations.	Hatim & Mason (1997) – CDA
Omissions / Additions	Is information left out or added? Why?	Removing controversial content, inserting clarifications or moral lessons.	Omitting references to alcohol in children's books for conservative audiences.	Lefevere (1992) – Rewriting Theory
Cultural Adaptation	Are cultural elements preserved, domesticated, or foreignized?	Names, customs, idioms, humour, or political references.	Changing a culturally specific food (e.g., 'muffin') to a local equivalent (e.g., 'rice ball').	Venuti (2008) – Domestication/Foreignization
Tone and Register	Has the tone shifted to be more formal, informal, humorous, or serious?	Shifts in register to align with dominant norms or suppress subversiveness.	Softening an ironic tone to a neutral tone to avoid criticism.	Fairclough (1992), Hatim & Mason (1997) – CDA

Narrative Voice / Focalization	Has the perspective changed (e.g., more distant or intimate)?	Shifting agency, enhancing or silencing voices.	Making a child narrator sound more adult-like in the target text.	Baker (2006) – Narrative Theory
Gender Representation	Are gender roles emphasized or neutralized in translation?	Pronoun changes, role modifications, portrayal of authority.	Changing 'he' to 'they' to reflect gender neutrality in modern translations.	Baker (2006), van Dijk (1998) – Ideology in Discourse
Power Relations	How are authority, class, or political power represented?	Emphasizing/de-emphasizing dominance, submission, resistance.	Portraying colonizers as 'adventurers' rather than 'invaders'.	Fairclough (1992), van Dijk (1998) – CDA
Ideological Filtering	Is the translation shaped by the translator's or publisher's ideology?	Evidence of censorship, propaganda, or alignment with national/religious ideologies.	Deleting anti-government lines in politically censored contexts.	Lefevere (1992), Hermans (1985) – Ideological Control
Paratextual Elements	Do introductions, footnotes, titles reflect ideology?	Framing effects through titles, cover design, translator notes.	Adding a foreword framing the book as 'a Christian parable' or other ideological lens.	Lefevere (1992) – Patronage and Poetics

Procedure

The lectures related to the study of two-phase tasks lasted four weeks based on guided examples on translation and ideology. The study spanned four weeks. The fundamental theories of translation and ideology were introduced to the learners through lectures and readings so that they could establish a conceptual basis. After delivering the lectures, the study was divided into two phases. In Phase 1**,** small-group and individual analysis of Romans 10:9–10 translation was conducted by the participants through

linguistic features. As for Phase 2 task**,** the socio-cultural rubric to *Alice in Wonderland* excerpts from different publishers was given to the participants to explore and search for power relations, gender norms and cultural norms. After each phase, students were asked to respond to five semi-structured prompts about the excerpts.

Data Analysis

Thematic analysis was conducted on the texts and interpretations. A comparative analysis followed shifts from Phase 1 to Phase 2 for each student. Credibility was ensured through a second coder who reviewed a 30% subsample to discuss codes and refine the codebook. Later, discrepancies were resolved through discussion.

Findings

Phase 1 produced micro-linguistic observations with indirect references to ideology, whereas Phase 2 generated more systematic, socio-cultural interpretations.

In Phase 1, the participants noticed linguistic features with limited ideological claims**.** The students focused on lexical and syntactic binary relations (e.g., *confess/declare/say*; *justified/made right*; *man* vs. *one/person*), yet seldom connected these choices to broader implications. Representative quotations are provided to illustrate the pattern:

> I circled *confess/declare/say* and *justified/made right*, but my comments stayed lexical. I couldn't explain the social implications. (P3)
>
> I saw *man* versus *one/person*, yet I wasn't sure how to frame that as ideology without categories. (P9)
>
> My notes became a list of differences such as lexis, syntax, register. (P8)
>
> The analysis felt random: many observations, but no shared criteria to decide which ones matter ideologically. (P5)

In Phase 2, in line with the criteria-guided, context-aware reasoning, students expressed their thoughts regarding power relations, gender norms, institutional discourses, and publisher stance. The learners interpreted the process as follows:

> The criteria helped me focus on non-linguistic issues. I tried to emphasize the importance of gender and power in translation because the female was invisible. (P10)
>
> Using audience/market and gender representation helped me justify choices instead of just saying 'tone is softer. (P7)
>
> Paratext and register allowed me to understand ideology, publisher bias and different normalizing discourses to translation strategies. I tried to make my reasoning systematic, not intuitive. (P14)
>
> I noticed that foreignization was more important than domestication because foreignization helped express the subaltern's voices. (P20)

The students described Phase 1 as superficial and only linguistic, which they were already familiar with, while Phase 2 helped them to comprehend and interpret the language and categories to argue issues such as ideology, discourses, power relations and gender norms. However, Phase 1 can be regarded as a baseline even if it restrains over-interpretation, reinforcing the pedagogical logic of the sequence (form-first, then socio-cultural). The second phase, however, shows that the explicit criteria could act as a scaffold that supported intuition as well as perceived fairness and confidence, and produced systematic and evidence-based analyses.

Discussion

The findings show that providing socio-cultural criteria for the learners can render ideology teachable in translator education. The learners moved from noticing (Phase 1) to critical argumentation (Phase 2) and supports Spivak's (2000) conceptualization of translation as a praxis where sociopolitical issues can be made conscious. In students' Phase 1, some difficulties were observed because they tended to privilege micro-equivalence and fluency with little emphasis on the social and political effects of those choices. The given criteria and categories such as ideology, power relations and gender norms helped the learners consistently link textual choices to power, readership, and cultural norms and take discourse-oriented approaches into consideration (Fairclough, 1992; Hatim & Mason, 1997; van Dijk, 1998).

Various studies also examine ideological framing across editions report similar findings when socio-cultural issues are dealt with instead of focusing on merely linguistic features (Elnaili, 2014; Valerio, 2013). It has also been emphasized that historically, translation pedagogy has gone back and forth between form-driven drills and socially framed practice (McLelland, 2020).

These findings support Valerio's (2013) cross-lingual study of *Pinocchio*, which compared Italian, English, Russian, and Turkish and which showed that translators' ideological stance becomes clear when translators embrace socio-cultural categories while examining the text. Proceeding without such categories, basic observations regarding the text translated emerge similar to Phase 1 in this study. Likewise, studies that address Venuti's (2008) domestication/foreignization concepts in Arabic translation reported improvements in critical awareness towards the text. Elnaili (2014) showed that when student translators were familiarized with ideology, power relations, culture-specific items and normative pressures in Arabic–English translation, their assessment proved to be more systematic and consistent than when they prioritized only linguistic forms. This shows that the benefit of naming categories could move beyond languages and contexts. An (2024) also surveyed 232 articles that discussed the importance of the domestication and foreignization and found that the participants could develop more context-sensitive and ideology-aware frameworks. Madkour (2018) also argues that translation students can learn to justify their choices considering discourses, gender norms, audience, power relations, and market needs instead of foregrounding only linguistic differences between source and target texts. These studies show that translation studies tend to recognize the importance of context and ideology in translation pedagogy as well.

This study offers a practical task for translator training. The two-step approach which starts with form-focused and linguistic noticing and layers socio-cultural criteria aimed to offer an instructional design that prevents easy interpretation while endorsing critique. Some students reported to have experienced hesitation in Phase 1 about superficial interpretation,

and then Phase 2 helped them to search for meanings systematically and analytically when they were scaffolded with criteria. The dimensions of ideology such as audience, political issues, power relations and gender gave the students to have solid evidence and theory to support their ideas and claims. In addition, it was seen that the criteria could be portable because the same criteria could be applied to any translation they encounter, and that might be teachable because they managed to divide a complex task into clear components. Bringing micro and macro elements together offers a balanced pedagogy. Students learn not only the what of linguistic change but also the how of ideological reading. In doing so, they could develop more sound analytical skills and a more evidence-based approach while evaluating translations and can gain greater confidence in discussing translation decisions. When they gain these critical skills, they are likely to transfer them to their future professional practice and be responsive to the ideological basis of those texts.

Thus, the findings show a practical way to fill this gap through a two-step aid. To mention from a sociocultural learning perspective, the criteria were used as a mediational tool that structured the learners' attention and supported their trajectory through the zone of proximal development because they made progress from noticing to explanation and interpretation (Vygotsky, 1978). In this sense, Phase 1 can be regarded as a good starting point. However, with the addition of Phase 2, the learners can develop a more critical perspective towards translation texts. In doing so, Phase 1 and Phase 2 didactically complement each other

Conclusion

This study shows that ideology in translation can be traced when classroom tasks provide socio-cultural criteria besides form-focused comparison. In addition, ideology in translation should not be approached as a linguistically theoretical concern, but something that can be teachable through pedagogical design. It was found that final-year students moved from listing and noticing linguistic differences to developing arguments

about audience, subjective experiences, power relations and cultural positioning. This two-phase study produced significant gains in analyticity, systematicity and breadth. It was also found that they could transform their basic observations into developing arguments about cultural norms, gender issues, values and power relations.

From a pedagogical perspective, this approach helps understand the importance of scaffolding how to analyse a translation text through scaffolding, rather than focusing only what to look for. If students are taught explicitly about the dimensions of translation texts that can vary ideologically by giving them the vocabulary to discuss those dimensions, teachers can help them develop analytical depth, critical thinking skills and more confidence in their interpretive arguments. The students in this study developed certain skills about ideological issues in texts and had the chance of practicing the dimension of reasoning so that they could transfer real-world translation into a more productive sphere from an ideological standpoint. They learned to base their decisions and justify critiques in line with the needs, gender issues, cultural norms, and power relations. Acquiring these skills of mind can be interpreted as invaluable for future translators who may have to deal with complex socio-cultural expectations.

Thus, it can be said that a socio-political and socio-cultural framework can enhance learners' critical awareness and help them become reflective practitioners in that they can understand that any kind of translation text, whether literary or political or social, can contain ideological charge. Translator education can incorporate ideological reading instead of prioritizing only form and linguistic-based features. Translators can be linguistically open but also need to be conscious of social, cultural and political issues regarding texts to be translated. Future studies can include both translation-criticism and translator-ethics modules. In addition, tasks including criteria-based scaffolding can be prepared to guide learners to develop a socio-cultural and socio-political perspective regarding texts in the field of literature, politics, philosophy, plays and other social-science

based genres to be translated. In doing so, the theory of postcolonial translation can be practically grounded for translation pedagogy by foregrounding theory and practice together in order to train learners in the field of translation with concrete and meaningful outcomes and to trigger change in the community of translators and society. Without scaffolding learners with given dimensions and criteria of postcolonial translation, it might be unlikely for both learners and teachers to justify, reason and critically analyse texts given to them. Therefore, it is critically pivotal to produce theoretical and practical space for both agents to argue translation texts on a sound basis.

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Ethical Declaration and Committee Approval

This study was conducted in accordance with the principles of scientific research and publication ethics. Consent form on a voluntary basis was obtained from the participants. All student names and publisher names were removed from reporting. Thus, anonymity was ensured.

Interrater Reliability in Rubric-Based Essay Scoring: A Case Study in a Turkish EFL Classroom

Esra DEMİRCİ[1]

Writing is a way of thinking on paper (Zinsser, 2006), which highlights how cognitively challenging it is to create meaning using only language. In language education, learners are required to carry out this process of meaning construction in a second or foreign language, drawing on linguistic resources that are often still developing, which makes the task cognitively more challenging. However, as they are expected to progress step by step in the learning process, writing is generally regarded as a skill that needs to be mastered after the other three skills. Byrne (1988) supports this by pointing out that other skills precede writing, as it requires having control of other skills and is more complicated. Weigle (2002) asserts, "[w]riting differs from the other language skills in that it involves the ability to generate and organize ideas, express them coherently, and monitor language use at the same time*"* (p. 5). As pointed out, writing can be challenging since learners need to have a good command of grammar and vocabulary, express their ideas clearly and logically, along with having control over organization. Just as it is challenging for learners to come up with a piece of writing, it is also challenging for teachers to assess them because it is inherently subjective, specifically in essay writing.

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Evaluating writing frequently entails subjective judgment, especially in open-ended tasks like essays, in contrast to receptive skills like reading or listening. It is a tendency for many teachers to use rubrics to guide them in their evaluation or scoring, mostly analytic rubrics. Teachers use scales for scoring; otherwise, their assessments would depend on their perspectives and their senses regarding the writing product (Kayapınar, 2014). Huot (1990) asserts that analytic rubrics bring out more reliable results than holistic assessment. Analytic rubrics assess a product in detail, giving scores for different parts of it, and outline feedback and assessment specifically for various parts through pre-determined criteria; however, how teachers make sense of these rubrics is not likely to remain consistent due to differences among their perspectives (Jonsson & Svingby, 2007). Teachers' evaluation of these essays is influenced by their judgments and background, namely, their interpretation of the essays. Thus, these assessments can differ from one teacher to another. Even though the purpose of rubrics is to standardize evaluation, variations may still arise due to raters' differing interpretations and applications. This study uses a five-category analytic rubric to score student opinion essays, aiming to investigate how two raters interpret and apply its criteria differently in practice (Appendix A).

When teachers' judgments highly dominate their assessment and cause variety in assessment, it is unlikely to speak of fairness and reliability. Thus, it is fundamental to make sure that teachers remain consistent with each other in the evaluation process, which is known as interrater reliability. The term is defined by McNamara (2000) as the range of alignment between raters or scorers who assess the same piece of product or work. Weigle (2002) notes that the lower the interrater reliability is, the less fair and valid the assessment turns out to be. Knoch (2009) explains that writing products can be assessed differently by different raters due to focusing on different parts, such as how the language is used, how the sentences are organized, or what topics are included, although they are guided by analytic rubrics. Therefore, it is insightful and crucial to focus

on interrater reliability in authentic classroom contexts, due to the variation among raters, even in rubric-based assessments.

Due to a growing understanding of the difficulties in assessing writing performance, interrater reliability in writing assessments within language testing has attracted a lot of attention recently. Interrater reliability has been investigated widely in standardized test assessments (Knoch, 2009; Huang & Whipple, 2023); however, classroom-based writing assessment using an analytic rubric has been investigated by fewer studies. Moreover, having a qualitative perspective on rater assessment, focusing on why and how raters align or diverge in their scoring, has not been a common emphasis of many researchers, specifically in the EFL context in Türkiye. Realizing this gap in the literature, this study set forth to investigate how two raters, one of whom is the researcher, evaluated students' essays in an EFL writing course using analytic rubrics. This rubric, which includes five scoring categories, serves as a shared framework for assessing student writing performance. In addition, it examines how and why these raters align or diverge in their assessment, supported by the participant teacher's perspective on how she made sense of the rubric and the process in general. By combining quantitative scoring comparison with qualitative interview data, this study aimed to provide deeper insight into how writing assessment was interpreted and applied in real classroom contexts. Therefore, to explore these issues in depth, this study aimed to answer the following research questions:

1. To what extent do two raters align or diverge in scoring student writing using an analytic rubric?
2. In which writing performances is alignment or divergence between raters most evident, and what might explain these differences?
3. What does the teacher's perspective reveal about how rubric criteria are interpreted and applied during writing assessment?

Literature Review

Writing, as a skill, stands out in terms of being difficult and demanding among other skills in language education. Apart from teaching and learning writing, the evaluation of writing in fairness and reliability is challenging for the raters, as the evaluation process includes raters' subjective judgments. Writing performances require writers' own viewpoints, which are interpreted by raters' own viewpoints. Ferris (2010) points out that while assessing a written performance, a rater needs to pay attention to many aspects altogether, such as accuracy, relevance, coherence, and content. Thus, an objective evaluation may not pay off, just as in multiple-choice tasks of other skills. Therefore, it is both demanding and crucial to ensure reliability in writing assessment. A common way for this is to use rubrics for evaluation and scoring in writing practices. Even using rubrics does not guarantee the reliability altogether, as raters may interpret rubrics in different ways. Therefore, interrater reliability is a crucial issue that raters need to pay attention to and guarantee in their practices.

Interrater reliability has been mostly handled in the framework of standardized or high-stakes exams. Huang and Whipple (2023) examined how consistent raters were when scoring constructed-response items in large-scale assessments and looked at rater behaviour. The study indicated that even in standardized, high-stakes exams, interrater reliability is not guaranteed. Also, rubrics were helpful, but could not eliminate subjective judgments. A Turkish context study (Sarı, 2024) also studied the reliability of high-stakes EFL writing assessments at a Turkish university. She concluded that the single-task, single-rater, holistic scoring process did not provide adequate reliability, and there was a need for improvements in assessment policies.

Knoch (2009) conducted a study on rating scale design on rater reliability in writing assessment. He discovered that using diagnostic analytic rubrics brought about more consistent results among raters as they provided more detailed and specific criteria in the rubrics. Thus, it proved that using well-

constructed rubrics both produced more reliable scoring for raters and more detailed feedback for learners. Similarly, Rezaei and Lovorn (2010) emphasized the importance of well-constructed and detailed rubrics. They asserted that when the rubric criteria were ambiguous and weak in scoring descriptions, the rubrics could cause discrepancies among raters.

While analytic rubrics are commonly used to promote fairness and scoring consistency, they are not always sufficient in eliminating subjectivity among raters. Jonsson and Svingby (2007) conducted a meta-analysis on rubric use and concluded that analytic rubrics helped provide transparency and were useful in terms of informing learners. However, they also pointed out that these rubrics did not guarantee interrater reliability. Despite its limitations in varied interpretation, using rubrics in evaluation was found beneficial in terms of assessment. Furthermore, Winke et al. (2018) studied how rater training and modification in rubrics affected the way teachers scored writing performances. Although alignment among raters was facilitated through training and better rubrics, raters differed in interpreting the criteria and so differed in scoring. They proposed to incorporate raters' viewpoints into research to provide a different perspective on the issue of variation in raters' scoring. They believed that including raters' viewpoints could reveal how much raters agree or disagree, and this could provide a bigger picture for interrater reliability. In a similar vein, but in a different field, Bresciani et al. (2019) investigated the inter-rater reliability and design of a rubric used to assess the calibre of research in several fields. In order to reduce subjectivity and increase rater consistency, their findings highlighted the necessity of explicit rubric criteria. In line with previous research on the difficulties posed by rater variability, they argued that discussions about scoring variations and rubric modifications were essential for improving assessment reliability.

A qualitative study (Demir, 2018) conducted in a Turkish EFL context also revealed a remarkable variation in raters' assessment performances. The researcher delved into the way teachers made sense and applied the

rubrics in writing assessment, which concluded that personal beliefs, experiences, and context were also influential in interpreting criteria in rubrics, along with the criteria themselves. In another study also conducted in the Turkish EFL context, using the generalizability theory as a framework, Uzun, Alıcı, and Aktaş (2019) examined the validity of analytical checklists and rubrics for evaluating narrative writing abilities. They highlighted how important interrater reliability was for writing assessments in language tests and how rater training and background affect scoring results, which aligned with the results of Demir (2018). Valizadeh (2019) proved the need for rater training in his study, revealing that a majority of the participants of the study expressed that they needed professional development in areas like rubric design and application.

Overall, taken together, these studies underscore the persistent challenge of subjectivity in writing assessment. Although many studies have focused on rater reliability in standardized testing processes, there is limited research examining how teachers apply rubrics and interpret student writing in classroom-based EFL contexts. Furthermore, while prior research has highlighted the benefits and limitations of analytic rubrics, few studies have examined how these tools are interpreted in real classroom settings by multiple raters. This study addresses that gap by applying a detailed rubric and analysing scoring divergences between two evaluators. This study also aims to address this gap by investigating rater alignment and divergence in scoring student essays using analytic rubrics, as well as exploring the reasoning behind rater decisions through interviews.

Methodology

This study employed an explanatory case study design, which is used to explore causality and identify the underlying principles of a phenomenon (Yin, 2014). While a case study is an appropriate way to reveal the complex interaction between a concept and its context, explanatory case studies emphasize causal relationships and examine why and how things

happen in that context (Merriam, 1998). This study combined quantitative score comparisons and qualitative interview data to explore how and why two raters align or diverge in their scoring of student essays using a shared analytic rubric in an EFL classroom context. To demonstrate the alignment and divergence in scoring, this study focused on the concept of interrater reliability in a classroom-based writing assessment and utilized a five-category analytic rubric.

The current study took place in an English preparatory school at a state university in Türkiye, with a single class. The class consisted of 21 students, who started the year at the A2 level and strived to end at the B1+ level in English. The writing courses, which started in the first term with writing paragraphs for 6 hours per week, continued with writing essays in the second semester. They were taught three kinds of essays: opinion, compare-contrast, and cause-and-effect essays. The raters in this study were the researcher and one of her colleagues, who was teaching writing that semester. Independently, they evaluated the students' writing papers from their mid-term writing exam using the analytic rubric set by the school's testing commission.

Data Collection Instruments and Procedure

The first data was the writing papers obtained in the writing exam. The papers were photocopied just after the exam by the researcher to ensure the independent evaluation, and evaluated at different times by the raters.

The second part of the data was an analytic rubric. Analytic rubrics facilitate multi-dimensional assessment, allowing for detailed feedback to students on various aspects of student performance (Weigle, 2002), including content, organization, and language use. Its format is both compatible with the classroom practices in English writing instruction and allows for scoring the papers in a transparent and detailed way. The analytic rubric (Appendix A) was prepared and provided for the teachers teaching writing by the testing commission of the school. It was specifically for opinion essay evaluation, it gave a total of 60 points and consisted of 5 categories: (1) Introduction and Conclusion Paragraph

Skills, (2) Body Paragraph Skills, (3) Use of English, (4) Use of Vocabulary, and (5) Mechanics. The raters carried out the evaluation process independently, and this was the first time for them to utilize an analytic rubric. Besides, they did not have any prior rater training.

The last part of the data was gathered through the interview conducted with the teacher, who was the actual rater of the papers. It was carried out a few weeks after the evaluation process was completed. The teacher was asked questions to explore how she interpreted and used the rubric. Also, she was asked about the clarity and the format of the rubric, her decision-making process, the difficulties she had in scoring, and her thoughts on divergence and alignment of the scoring. It was a face-to-face semi-structured interview lasting for about one hour, which provided in-depth discussions regarding the application of the rubric, the evaluation process, and the possible reasons for divergence and alignment. It was audio-recorded to be transcribed later. In addition, the interview was conducted in Turkish as it would allow the participant to share her actual feelings and opinions more candidly, easily, and directly.

Data Analysis

For the quantitative analysis, first, the writing papers were evaluated and scored using the analytic rubric. Then both the general scores and the categorical scores from raters were put on a list to make comparisons. The scores showing divergence of more than 5 points between the raters, and the scores showing alignment of less than 2 points were identified. Lastly, they were prepared as visual representations to show the comparison.

For the qualitative analysis, although there was only one interview to deal with, thematic analysis by Braun and Clarke (2006) was utilized. This method was chosen because it provided a flexible approach to find and analyse the patterns in the data despite having only one participant. The use of thematic analysis in a case study like this allowed for an elaborate exploration of the rater's perceptions. It also supported the explanatory aspect of the study, as the study aimed to go beyond the numbers and bring out how and why the scores diverged or aligned. This analysis shed light

on how the rubric was understood and interpreted, and applied by the teacher, focusing on her opinions and inferences. In the familiarization step of thematic analysis, the interview was transcribed, and a holistic understanding of the data was ensured. Then, the initial codes were formed out of meaningful units focusing on the main themes, such as rubric use, evaluation, divergence, and alignment. Next, the codes were brought under categories, which were recurring or significant. The generated themes were checked, defined, and named. Lastly, the themes were analysed based on the research questions and the prior research. As this was a single participant research, the aim was to have an in-depth understanding focusing on the teacher's words and clearly stated ideas, rather than forming a generalization.

The fact that the researchers also had the rater's position in this study might have an impact on the scoring process to some extent. Although objectivity was aimed at with the use of a shared analytic rubric and independent evaluation, it might not be provided completely. However, the case studies where the researcher is also a participant in the process are generally known and can be beneficial in terms of providing an insider insight. With a sample of 21 essays by two raters and with one interview, this study did not intend to reach a generalization. With a focused approach to reach an in-depth analysis, it offered insights into rater behaviour, evaluation, and the use of an analytic rubric.

At the start of the research process, official consent was obtained from the Rectorship of Fırat University and the School of Foreign Languages. Participating students and the teacher were informed about the study and asked to provide written consent. To provide an easier discrimination between students, their first names were used with their consent. They were assured that their identities would remain confidential and that their full names would not appear in the research.

Results

This study aimed to explore alignment and divergence between raters and

how rubric criteria were interpreted in scoring. Based on the quantitative and qualitative analysis of the data, scores of 21 student essays rated by two raters and one semi-structured interview emerged as the findings of this study.

Quantitative Findings

The comparison of the scoring revealed that there was a high level of agreement between raters. Out of 21 essays, raters showed an alignment of between 2-5 points in 17 papers, which meant a significant consistency. In two papers, raters showed full agreement in scoring, while they showed divergence in three papers, which was a significant divergence of more than 6 points.

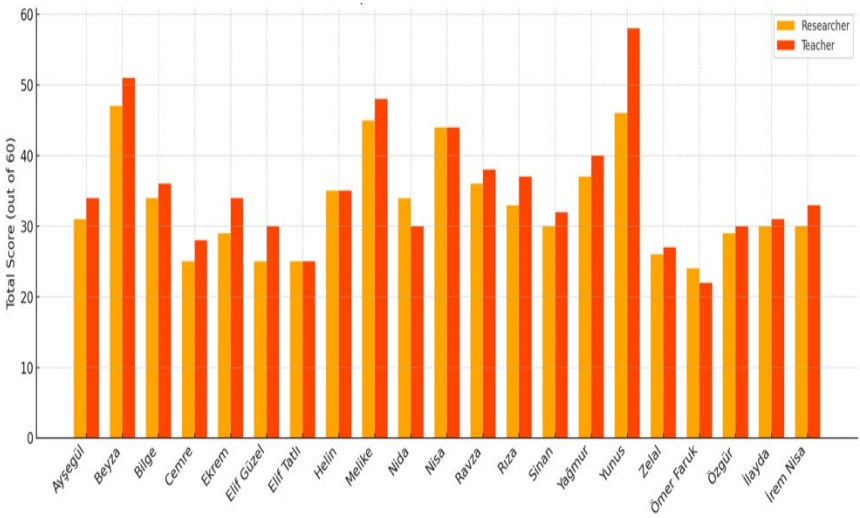


Figure 1 *Total Comparison of Scores Between the Researcher and the Teacher*

The mean for the scores of the teacher is approximately 35.29, and the median score is 34.0, while the mean for the scores of the researcher is 32.19, and the median score is 31.0. As the difference between the scores is lower than 5 points, this outcome supports the consistency between the raters.

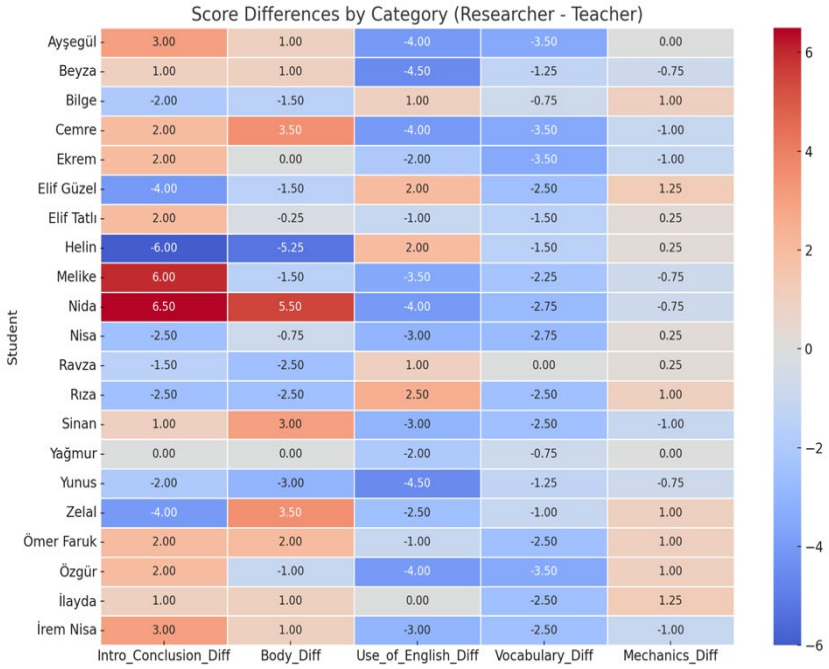


Figure 2 *Category-by-Category Comparison of Scores Between the Researcher and the Teacher*

The heatmap above is centred on the researcher's scores, showing how they differ from the teacher's scores. The red and plus-marked cells show the researcher scored higher than the teacher, while the blue and minus-marked cells show the researcher scored lower than the teacher. The detailed category-by-category comparison reflects that the raters demonstrated a high level of alignment across most of the categories. The majority of the score differences fall within a narrow range, which indicates the consistency between the raters. The categories "Use of English" and "Introduction & Conclusion" showed the greatest divergence between the researcher and the teacher. In particular, in the first category, Melike and Nida got significantly higher scores from the researcher, while Helin, Elif Güzel, and Elif Tatlı got higher scores from the teacher.

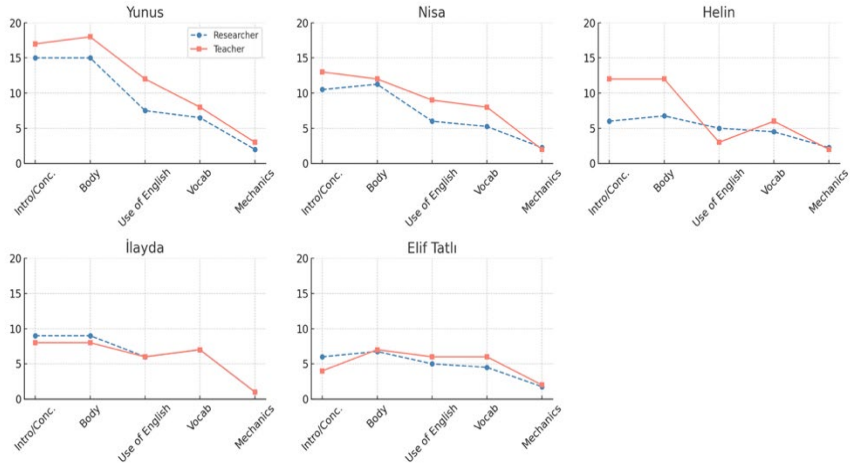


Figure 3 *The Most Diverged and the Most Aligned Essays*

Figure 3 shows the most diverged and the most aligned essay papers. Yunus, Nisa, and Helin were the ones with whom the raters diverged the most, and İlayda and Elif Tatlı were the ones with whom the raters aligned the most. The rater diverged 12 points in Yunus's paper, 10 points in Helin's paper, and 9 points in Nisa's paper. The greatest divergence (5 points) in Yunus's paper was related to the use of English, the third category, while in Helin's paper, the raters scored both paragraph skills categories differently, which was approximately a half-and-half difference. For Nisa's paper, there was a moderate difference of 3 points in terms of both the use of grammar and vocabulary. On the other hand, in İlayda and Elif Tatlı's papers, they had full alignment in total score, but with very minor differences across the categories.

Qualitative Findings

The data obtained through the semi-structured interview were analysed using thematic analysis of Braun and Clarke (2006). As a result, four themes emerged: (1) Interpretation and Application of Rubric Criteria, (2) Sources of Rater Divergence, (3) Ethical Concerns in Rubric Use, and (4) Reflections on the Scoring Process.

Interpretation and Application of Rubric Criteria

The teacher repeatedly and openly explained how she was strictly adherent to the use of the rubric. She said, "*[f]irst of all, in my evaluation, I basically look at the rubric. I definitely and completely follow the rubric, so I grade according to whatever type of rubric is provided"*. She also added that while evaluating each paper, she kept the rubric next to the papers to check the items one by one and to confirm the alignment between her evaluation and the items.

She adjusted the scoring of the rubric, where there were decimal values, like 6,75, and rounded them up. It prevented the confusion and allowed for easy scoring. In addition, she showed some degree of flexibility in scoring, instead of sticking rigidly to the points determined under "full agreement" and "partial agreement" sections in the rubric. She tried to give in-between values when a student did not fully match the determined mark exactly, and she noted, "*I didn't want to give full points to some, but they weren't fully weak either. I thought, maybe not 12, but maybe 9. When I was unsure, I tried to find a middle point"*. This point of view reflected her nuanced interpretation and how she used her judgment to reflect the degree of success. Lastly, the categories for the "Use of English" and the "Use of Vocabulary" were found challenging for the teacher as they required reading and checking the essays more than once, and careful judgment.

Sources of Rater Divergence

Based on the discussion in general and specifically on the papers that the raters diverged on, it was indicated that although they expressed to use the rubric strictly, they showed some differences in interpretation of the rubric. While the teacher evaluated only paragraph skills in categories A and B without paying attention to grammar or vocabulary mistakes, the researcher paid attention to the mistakes and gave lower scores due to these mistakes for the sake of clarity. In addition, the teacher tended to evaluate the papers by comparing them with each other, while the researcher stuck to the items in the rubric and evaluated "variety" as well

in the grammar and vocabulary categories, which resulted in lower results for some students.

As the teacher had known these students for two semesters, and knowing their capacity and writing skills, she reflected that *"I think the students' writing skills, way of expressing themselves, and ability to convey their ideas may have influenced things".* In other words, how students express themselves and their writing skills may affect the teacher when they are aware of their skills and potential. However, this did not mean that she did positive discrimination towards better students; rather, she showed a low degree of flexibility in scoring, evaluating them as a class.

Moreover, the raters agreed that they had minor interpretation differences, which caused divergence between them. To illustrate, the teacher acknowledged that she only focused on the existence of a thesis statement or topic sentence in the paragraph, regarding it as a full agreement in the rubric, as she interpreted the item *"[t]he body paragraph starts with a clear topic sentence"* in that way. However, the researcher interpreted this as the topic sentence needed to be grammatically correct as well because of the word "clear".

Ethical Concerns in Rubric Use

The teacher shared her emotional concerns regarding the use of the selected rubric.

> *"As a school, we couldn't ensure a standard because not everyone used the same rubric, which led to unfairness. Since students were on the borderline of passing or failing, I felt guilty—why did they receive such low grades if this rubric wasn't that great and accepted? I regretted applying the rubric when the other teacher didn't. I worried that my students might fail because of this".*

The fact that only two teachers used that rubric for evaluation at school was seen as an injustice by the teacher. She felt sorry, also, knowing that her students were also aware and upset that they had lower scores compared to the other classes. Furthermore, she expressed a strong sense of responsibility in scoring and showed great efforts to be fair, carefully balancing rubric application with concern for student impact.

Reflections on the Scoring Process

The teachers reflected on the scoring process from several aspects. First, she re-read essays several times, took a lot of detailed notes, and compared performances to make the last decision.

> *"It was harder to score the lower-performing ones because I felt a greater sense of responsibility since they had received low scores. I re-read their papers several times, comparing them and grouping them separately".*

Next, she offered some alterations in the rubric, like simplifying the rubric, removing decimal values from scoring, and providing a clearer description for a specific item. However, she was satisfied with applying the rubric, although it took much more time for her to finish the evaluation. She stated, *"[p]ersonally, I found it effective. Although it took more time to use, it made my work easier as a whole".* As a teacher, she expressed how much importance she gave to being fair to all the students, so despite being tedious, the rubric allowed her to provide fairness.

Lastly, this was the first experience of using an analytic rubric for these teachers, and the teacher believed that there should be a standardization in terms of evaluation. Thus, the teacher evaluated the viewpoints of the teachers at school towards using rubrics in evaluation;

> *"Teachers need to receive training on how to use rubrics. First, there must be an acceptance of rubric use. Teachers should be encouraged to adopt a new perspective and willingly engage with rubrics. It's also important for instructors to come together, discuss, and consult with one another".*

Overall, the findings indicated that there was a high degree of alignment between the two raters, while they diverged in some points and on some papers, specifically in the interpretation of some points in the rubric. The qualitative data demonstrated the importance of rubrics in providing fairness and revealed the emotional and ethical considerations involved in evaluation. In conclusion, the findings showed that the rubrics contributed significantly to reliability, while they might carry the risk of being interpreted differently.

Discussion

Analytic rubrics have been widely shown to enhance interrater reliability in writing assessment by providing structured criteria for raters. The use of these rubrics has been indicated to result in more consistent scoring across different raters in the existing literature (Jonsson & Svingby, 2007; Limgomolvilas & Sukserm, 2025). Recent studies in language assessment have noted that the use of detailed analytic scoring guidelines facilitates rater agreement (Bijani, 2018; East, 2009; Beyreli & Ari, 2009). Rubrics define multiple performance dimensions and so lead teachers to have a closer alignment in scoring (Mariana, 2018). When raters employ a common analytic rubric, they are likely to emphasize the same set of criteria, thereby they are likely to minimize inconsistency and improving the scoring in terms of fairness and reliability (Sundqvist et al, 2020). In a similar vein, a study conducted by Beyreli and Ari (2009) indicated that different raters reached remarkably aligned scores by using an analytic rubric, supported by moderate-to-high interrater correlation coefficients. The existing research was also supported by this study's findings, which reflected that two raters were able to have more consistent evaluations thanks to using the same rubric.

On the other hand, the risk of having inconsistencies or lacking objectivity is always prevalent in assessment, even with an analytic rubric. Supported by Jonsson and Svingby (2007), who pointed out that "two raters might come to different conclusions about the same performance" (p. 133), it is accepted internationally that evaluating writing is still a challenging process with a level of subjectivity, as it involves individual perceptions. To illustrate, Ekmekçi (2016) asserted that different raters may interpret rubrics in their own way, which can cause significant changes in grading. In other words, the use of a rubric can alleviate the subjectivity; however, the evaluation process cannot fully rule out the effect of the perceptions of the raters. Like the raters' final result in the current study, Çetin (2013) found that two raters were able to align in scoring highly, but not completely. Above all, they had lower reliability compared to the raters

who utilized holistic rubrics. It is apparent that teachers can have inconsistencies in the application of rubrics, which also facilitates standardization among raters. In the current study, the use of the same rubric was not able to provide a perfect alignment on all essays. In addition, the reflections of the teacher indicated the effect of individual interpretations on scoring, like the raters who differentiated in scoring the paragraph skills category, one focusing on the presence of a topic sentence, while the other focusing on the grammatical accuracy of that sentence. This reflects Jonsson and Svingby's (2007) and Winke et al.'s (2018) views on the subjectivity of judgment in writing assessment and highlights the effect of raters' mindset.

In consideration of these issues, the importance of rater training and standardization through rater calibration becomes prominent among researchers. Rater training, as a requisite for a high interrater reliability (Weigle, 1998; Knoch, 2011), can help teachers establish a shared understanding of rubric criteria and scoring standards. Although Bijani (2018) and Mariana (2018) demonstrated the influence of training programs in improving inter-rater agreement among the raters of speaking, rather than raters of writing, it is still supportive of the principle that rater training facilitates uniform application of the criteria of the rubrics. Tran and Hang (2021) examined the process of rater calibration and found more consistent essay scores among the raters. Recent studies emphasize that providing a rubric alone is not enough to ensure consistent scoring, and teacher preparation and training play a critical role in achieving interrater reliability. For instance, Ari (2021) highlighted that even when teachers are given rubrics, a lack of familiarity and standardization may lead to inconsistent interpretations of scoring criteria, stressing the need for clearer guidance and calibration.

As a result, the research brought out three essential points: the highly promising link between analytic rubrics and interrater reliability, the effect of individual interpretations of rubrics on scoring, and the significant importance of rater training and calibration. The findings of this study and

the reflections of its participants reinforced these important issues. To conclude, the reliability and transparency of the writing assessment can be best provided through analytic rubrics, on the condition that rubrics are combined with rater training and standardization.

Conclusion

This study has shed light on the use of analytic rubrics in classroom-based writing assessment, with a specific focus on interrater reliability. By combining quantitative score comparison with qualitative insights from a teacher interview, it was revealed that while a high level of agreement was generally achieved between the two raters, there were some divergences, especially in how certain rubric criteria were interpreted and applied. These findings are supported by the existing research, reflecting that analytic rubrics can improve consistency and transparency in writing assessment; however, they also reveal that these rubrics cannot entirely prevent subjectivity. Individual perspectives, prior experiences, and personal interpretations of rubric items played a role in how the raters assessed student essays.

The results also emphasize the critical importance of rater training and calibration in achieving scoring reliability. Even when using the same analytic rubric, minor differences in how raters understood specific criteria led to divergences in scores. The fact that rubrics alone are not sufficient needs to be supported by rater training sessions, collaborative discussions, and shared understanding among raters. The study is hoped to contribute to the existing literature with new qualitative insight into writing assessment in EFL classrooms in the Turkish context.

Limitations

One key limitation of this study is the small sample size and narrow scope of data collection. With only 21 student essays evaluated by two raters and a single teacher interview, the findings cannot be generalized to broader populations or institutional contexts. Additionally, the researcher also served as one of the raters, which may have introduced bias despite

showing efforts to ensure objectivity through independent scoring. Future research should be done by involving more raters, multiple classroom contexts, and specifically following a rater training and standardization process.

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Ethical Declaration and Committee Approval

This study was conducted in accordance with the principles of scientific research and publication ethics. Ethical approval for this research was obtained from the Ethics Committee for Social and Human Sciences Research of Fırat University, with approval number (41032).

Appendix

Opinion Essay		Full Agreement		Partial Agreement		No
A. Introduction and Conclusion Paragraph Skills (6)	A1. The introduction successfully gets reader's attention and follows a pattern from general to specific.	3	2,25	1,5	1	0
	A2. The thesis statement successfully takes a stance with a clear controlling idea.	1	0,75	0,5	0,25	0
	A3. The conclusion successfully restates the thesis or it sums up the supporting ideas.	2	1,5	1	0,5	0
B. Body Paragraph Skills (6)	B1. The body paragraph starts with a clear topic sentence.	1	0,75	0,5	0,25	0
	B2. There is a planned and coherent passage development with logical ideas.	2	1,5	1	0,5	0
	B3. The ideas are presented and explained without repetition and irrelevant information.	3	2,25	1,5	1	0
C. Use of English (4)	C1. There is an expected level of appropriate structures with accuracy and there is a variety of sentence types and structures.	2	1,5	1	0,5	0
	C2. The sentences are well formed with no or minor errors which don't distort the meaning.	2	1,5	1	0,5	0
D. Use of Vocabulary (3)	D1. Vocabulary meets the level expectation and is effective to the task.	1,5	1	0,75	0,5	0
	D2. There is almost no inappropriate use of vocabulary items.	1,5	1	0,75	0,5	0
E. Mechanics (1)	E. There are very few or no capitalization, punctuation or spelling mistakes with no meaning obstruction.	1	0,75	0,5	0,25	0
		Total Score: _____ / 20				

Notes to the raters:
***If the paragraphs are below the word limit, please evaluate them as follows:**

WORD LIMIT:
230 – 200 words: Students lose points from the rubric.
199-181 words: Take off 1 pt. from the total score.
180-161 words: Take off 2 pts. from the total score.
Below 160 words: Take off 3 pts. from the total score.

Exploring Instructors' Perceptions and Practices of Mediation in the School of Foreign Languages at Pamukkale University

Feride ACAR[1] **Eda DURUK**[2]

In 2001, in the field of language teaching in Europe, a significant development took place with the publication of the *Common European Framework of Reference for Languages* (*CEFR*). This framework was designed to establish a shared foundation for developing language curricula, syllabi, assessments, and instructional materials across European contexts (Council of Europe, 2001). It explained and illustrated the various language proficiency levels, from A1 to C2, along with their descriptors, to provide insight into what language learners are expected to accomplish for each skill. Built on an action-oriented perspective, the *CEFR* emphasizes the communicative dimension of language learning, aligning with contemporary pedagogical trends that foreground the social nature of communication and reflect principles of Vygotskian sociocultural theory (Piccardo & North, 2017). Within this framework, learners have been described as social agents who participate in plurilingual and intercultural environments, collaboratively constructing

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meaning and knowledge through interaction (North, 2022). *CEFR* introduced the new concept of 'mediation' first in 2001 by moving beyond the traditional skills which were reception, production and interaction in both spoken and written language. Even though mediation was involved in *CEFR* basically in 2001, it did not take the attention, and it was not understood fully as there was no descriptor available describing the expected outcomes (Stathopoulou et al., 2023). In the 2001 edition, mediation was presented mainly in terms of interpretation and translation. It was described as activities that allow individuals to convey written and spoken messages when interlocutors cannot communicate directly (*CEFR*, 2001). Its conceptualization witnessed an evolution after illustrative descriptors and plurilingual/pluricultural competences were provided in the *Companion Volume with New Descriptors* in 2018 (Council of Europe, 2018). Plurilingualism and pluriculturalism refers to the social situations where multiple languages or cultures coexist as an interconnected way. It seeks to reflect the overall, integrated nature of learners' linguistic and cultural resources, viewing their competencies as part of a unified repertoire (*CEFR CV*, 2020). After that development, a reference has been provided for language learners and teachers to clarify what language learners are supposed to do using mediation skills for each level.

Mediation in the *CEFR*

The concept of mediation has been addressed in different contexts in many disciplines during the history such as politics, health or business (Alvarez & Hernandez, 2021). The mediators were supposed to act as bridges between two interlocutors who cannot establish a healthy communication because of a gap or conflict. Mediation skills are required in all parts of our lives such as education, public or work relations. In our daily lives, it is quite often that we encounter situations in which using mediation skills are required. For instance, an English-speaking tourist can see a concert advertisement in a local language on a bulletin board and asks for information by greeting a local person nearby. S/he helps by conveying the information about the place and time to the tourist. In another example,

a person might have difficulty in understanding a literary written text even in his/her mother tongue and get support from his/her literature teacher to find out what the sentences mean. Another person tells her/his friend about a new song s/he has started to listen and his/her would like to learn what the lyrics of the song mean. S/he tries to tell her/his friend by translating and explaining the song. In these examples, individuals act as a cross-linguistic mediator to reformulate or restate the message to foster construction of meaning and facilitate the communication (Stathopoulou et al., 2023).

In the present study, mediation as an underlying concept in the field of language teaching will be the main focus. As communicative and cooperative skills have become vital to be used by people in language learning contexts, mediation has gained more significance in relevance with the development of communicative language teaching and sociocultural theories to language teaching over the last years. Mediation has been defined as "a purposeful social practice, aiming at the interpretation of (social) meanings which are then to be communicated/relayed to others when they do not understand a text or a speaker fully or partially" by Dendrinos (2006, p.12). In *CEFR*, mediation skills are based on real-life communication experiences, consistent with task-based and action-oriented approach. As shown in Figure 1, mediation skills have been considered more complex and abstract as they require integration of skills by using reception, interaction and production skills where the language learners try to facilitate communication, helps to convey or co(construct) meaning between two interlocutors from different languages, different accents or even the same languages but from different backgrounds (Council of Europe, 2020, p. 90).

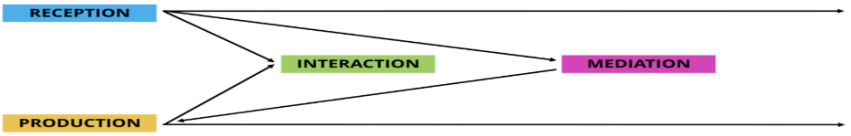


Figure 1 *The Relationship between Reception, Production, Interaction and Mediation. (Taken from CEFR, 2020, p.34)*

CEFR descriptors (can-do-statements) have been included in course books to show the expected outcomes and have been used as references in assessing English language skills. The descriptors are positive and show competences the language learners are supposed to display for each scale. After the mediation descriptors were provided and published in the updated *CEFR* in 2018, it has been more accessible and measurable for the language teachers and learners to comprehend mediation skills which have been considered as complex and abstract (Gadomska, 2024). As it is stated in *CEFR CV*, overall mediation involves intralinguistic and cross-linguistic descriptors for B2, C1 and C2 levels and it covers and requires using the other skills (perception, production and interaction).

In *CEFR*, mediation covers activities that either bridge communication between languages or support meaning-making within the same language, referred to respectively as cross-linguistic and intralinguistic mediation (Stathopoulou et al., 2023). Mediation has been presented in *CEFR* as to involve two main pillars which are *mediation activities* and *mediation strategies.* Mediating activities includes three scales which are: *mediating a text, mediating concepts,* and *mediating communication* (see Figure 2).

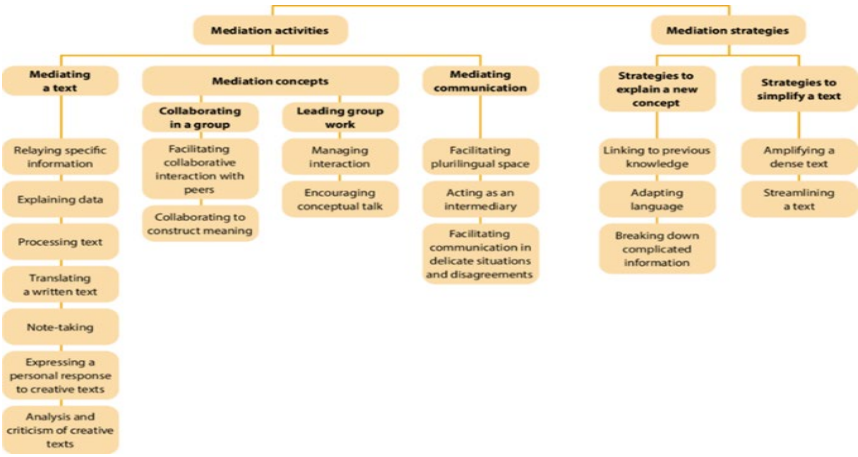


Figure 2 *New Categories for Mediation in the CEFR-CV (2020, p. 90)*

Mediating a text is defined as conveying the meaning of a text to someone

who cannot access it directly due to linguistic, cultural, semantic, or technical obstacles (Council of Europe, 2020). This text can not only be written, but also spoken or digital. It includes transmitting information to somebody who has no access to the original source and reformulating or paraphrasing the content to facilitate understanding (Stathopoulou et al., 2023).

Mediating concepts refers to "process of facilitating access to knowledge or concepts for others" (Council of Europe, 2020, p. 91). It involves establishing suitable conditions for exchanging of ideas more effectively in a community, fostering and managing collaborative interaction to create meaning and encouraging conceptual conversation (*CEFR*, 2018).

Mediating communication refers to supporting mutual understanding and enabling effective interaction among users or learners who may differ in their sociocultural background, linguistic norms, perspectives, or cognitive approaches (Council of Europe, 2020). The mediator here acts as an intermediary or bridge between their friends or colleagues in informal situations when there is gap due to cultural or social reasons.

Mediating strategies, on the other hand, covers *the strategies to explain a new concept* and *the strategies to simplify a text*. One of the scales of strategies to explain a new concept is *linking to previous knowledge* by explaining new information by creating a connection with what the receiver has already known and describing the message in different ways. The second scale, *adapting language,* refers to rephrasing a text so that its content can be integrated into another text with a different genre or register, often through the use of synonyms, comparisons, or simplified expressions (Stathopoulou et al., 2023). The last scale of strategies to explain a new concept is *breaking down complicated information* which can be described as to put the information into small pieces to make the complicated content simpler by being loyal to the whole framework. *Strategies to simplify a text* involve two scales which are amplifying a dense text and streamlining a text. *Amplifying a dense text* might be useful to expand the content by providing examples, making extra explanations

and introducing the background of the issue. While *streamlining a text* on contrast, one focuses only on the main idea and highlights the vital points without avoiding repetitions.

Updated version of *CEFR* with new descriptors of mediation has not only made the concrete mediation scales and descriptors accessible and measurable, but also its reflection to the curriculum and materials has become an expected development. Considering the whole project carried out by the Council of Europe to establish a common standard for developing language syllabi, curricula, assessments, and teaching materials across Europe (Council of Europe, 2001), it has also been necessary to adapt existing resources and ensure that tasks and materials are aligned with the *CEFR*.

In that sense, Turkish Ministry of National Education has been carrying out a project which aims to improve foreign languages over the country since 2021 (*YADEG*). The project involves many different types of activities and organizations. Within the project, the teachers have been involved in *CEFR* training based on a cascade system for a few years. In this way, the high majority of the English teachers in Türkiye have joined local training and gained an awareness and knowledge about the recent updates in *CEFR* and provided with guidance about how they can align their language skills and tasks to the *CEFR*. However, on the side of tertiary education, whether instructors have necessary knowledge about the recent developments in *CEFR* or not have been considered as a matter of research. The literature review reveals a lack of investigations specifically focused on the current circumstances within Türkiye's higher education system. Departing from this fact, in this study, it was aimed to investigate to what extent instructors working in the School of Foreign Languages at Pamukkale University in Türkiye are aware about the updates in *CEFR* and how mediation is being understood and incorporated into classroom practices in higher education.

Literature Review

Mediation, as a novel concept, has been taken the attention of the researchers and has led to studies in the areas of textbook analysis, developing mediation skills, adaptation the curriculum based on *CEFR* or aligning tasks to the *CEFR* and assessing their effectiveness and publishments of guides for language educators (Folinazzo, 2024; Gadomska, 2024; Jeon, 2024; Perevertkina et al, 2020; Polyakova & Garcia, 2021; Russell, 2023, Stathopoulou et al., 2023). In some international studies, teachers' opinions and perceptions have been also the main focus of some researchers (Alvarez & Hernandez, 2021; Pisarek, Siddall & Swierk, 2022).

In the Turkish context, Demir and Çekici (2023) aimed to find out opinions of the instructors who teach Turkish as a foreign language on mediation skills in the *CEFR*. 14 instructors who worked in Turkish Teaching Research and Application Centres at 11 different universities participated in the study. A qualitative research design was employed in the study by using a semi-structured interview with the participants. According to the findings related with the first research question of the study, the number of the instructors who taught mediating a text was found to be high. The findings based on the second and third research questions of the study demonstrated that there was no consensus among the instructors in terms of mediating a concept and mediating communication. Their findings indicated that teachers made greater use of communication mediation activities compared to those focused on mediating texts or concepts. A high majority of the participants stated that mediating should be taught and considered it as effective and useful from many aspects such as developing communication skills and fostering language skills. They provided suggestions to teach mediation such as using theatre plays and drama, case study methods, debates, peer learning and speaking clubs. In terms of textbooks, six of the instructors considered them partially sufficient, and eight of them stated that they found them insufficient.

Another study, conducted by Pisarek, Siddall, and Swierk in 2022, focused

on finding out the needs and perceptions of language teachers from four European universities on mediation skills in accordance with their language teaching procedures. The study involved 79 participating teachers from four institutions: Charles University (Czechia), Vytautas Magnus University (Lithuania), the University of Helsinki (Finland), and the University of Warsaw (Poland). The study employed an exploratory research model and used a survey to collect data. Descriptive statistics were used to analyse the quantitative data collected through the second section of the instrument, and thematic analysis was used to analyse the qualitative data collected through open-ended questions. According to the results of the study, most of the teachers reported that they were uncertain or disagreed on mediation in language teaching. A high majority of the teachers (% 91) stated that they found mediation important in language teaching. In terms of mediating concepts and mediating a text, the majority of teachers expressed that they include those kinds of activities in their teaching practice while in the context of showing respect and expressing views, all teachers were found to be certain with a high level of agreement. The results of the qualitative data demonstrated that the extent to which teachers feel ready themselves to train their students by using mediation strategies has some doubts. Their responses showed that even if they share opinion on the importance of mediation, they were not sure that mediation was a natural part of language teaching.

Another study was conducted by Alvarez and Hernandez (2021) to examine teachers' understanding of linguistic mediation and their perceptions and attitudes towards it in the Curriculum for Advanced English in Madrid. It was an exploratory study and employed a mixed method research design by involving both interview and focus groups in the data collection process. A total of 24 teachers who taught Advanced English in the second year of upper-secondary education were involved in the study. After all the participants completed the questionnaire, eight volunteers among them joined the focus group interviews. The focus group interview was used based on the concept of linguistic mediation, teacher training, materials and activities, group work, collaboration with

other teachers, linguistic mediation and translation and cultural mediation. According to results of the study, % 21 of the teachers did not know what the linguistic mediation was. Responses of the participants to the open-ended questions demonstrated that they could not describe linguistic mediation in a meaningful or sensible way. Only four of the participants reported that they considered involving linguistic mediation in their teaching plans. The findings of the focus group interviews showed that even if they did not know about linguistic mediation, they had been already using activities that included mediation skills without being aware of that. In addition, conceptual mediation activities that involve collaboration, teamwork and group leadership were found to be more relevant than textual and communication activities.

In a related study, Pavlovskaya and Lankina (2019) explored the evaluation of mediation skills in Content and Language Integrated Learning (CLIL) settings. They employed the updated *CEFR CV* (2018) scales, which integrate holistic assessment with analytical criteria. It was an empirical study that aimed to have a different approach to assessing oral performance of undergraduate students involved in group discussions at the Graduate School of Management, St. Petersburg State University, Russia. 42 students with B2+ and C1 English proficiency levels aged between 19 and 21 from the Management department participated in the study. The students were assigned to control and experimental groups at the beginning of the process. Both groups followed the standards English program and the experimental group were involved in additional exercises in mediation and self-assessment with *CEFR* descriptors. According to the findings of the study, the experimental group that studied with *CEFR* descriptors displayed a greater performance compared to the control group. It was concluded in the study that the global achievement mark for mediation and the analytical marks were interrelated, and that analytical marks could be supported by the global mediation mark, and vice versa.

One of the leading studies in the field conducted by North and Piccardo (2017), provides an overview of the Council of Europe's 2014–2017

project which aimed to revise the *CEFR*'s 2001 illustrative descriptor scales by incorporating areas such as mediation, online interaction, responses to literature, and plurilingual and pluricultural competences. The categories for these new descriptor scales developed in the project are as follows: Overall mediation, mediating a text, mediating a concept (collaborative work within a group, leading group work), mediating communication and mediation strategies (strategies to explain a new concept, strategies to simplify a text, plurilingual and pluricultural competence). The study employed a mixed method developmental research design by gathering both quantitative and qualitative data. The validation of the study was carried out within three phases by following a phase of validation for plurilingual/pluricultural later. According to the findings of the study, participants mostly reported positive responses for further update of some descriptors. The results indicated that the most preferred categories were plurilingual/pluricultural competence (across the member states), mediating a text, working collaboratively in groups, and online interaction. Nearly all the institutions considered that these two scales were helpful or very helpful, and 81% of the participants shared the same opinion. After the piloting implementation was completed, it has been possible to reach the *CEFR CV* with an extended version of the illustrative descriptors since August 2017.

In a different study, Jeon and Wolrak (2024) aimed to determine the extent of the syllabus content's alignment with the basic user-level descriptors of the *CEFR* and focused on analysing functional integration of a single textbook used in class, employing the mediation scale as an analytical framework to ensure the study's coherence. An English textbook designed for 6th-grade Korean elementary school learners was analysed. The analysis was carried out based on three types of mediation which are *mediating a text, mediating concepts* and *mediating communication*. According to the results of the analysis, 'mediating a text' was the textbook's most frequently associated task, with 73 instances. As the findings demonstrated, although the curriculum incorporated mediation tasks, there was a pressing need to expand their scope. This study indicated

that limiting learning activities to individual-text interactions did not fully capture the *CEFR*'s concept of communicative and cultural mediation.

The study which has been published recently by Gadomska (2024) reports on a model of integration of mediation skills into English Philology program in the process of both traditional and online communication. Mediation descriptors were chosen by employing a bottom-up approach within the study. Mediation-based activities were designed under different categories such as practical English courses, academic writing classes, specialization courses and translation, cultural, literary, diploma courses within the research. For each category, related descriptors of mediation were selected by the researcher, the tasks were designed aligned with the *CEFR* and sample activities for each category were presented throughout the study. The students were required to discuss materials and also design their own materials within the course which served to the action-oriented approach by taking mediation scales in the centre. For translation, cultural, literary and diploma courses, students had the opportunity of using different mediating skills while analysing and translating the texts.

As the mediation has emerged as a novel concept with the recent developments, language teachers' and instructors' attitudes and needs in this field have been considered significant to be explored. A review of the relevant literature reveals a substantial gap concerning higher education instructors' current understandings, perspectives, and pedagogical practices related to the latest CEFR mediation scales, particularly within Foreign Language Schools at Pamukkale University in Denizli. The present study has been conducted as an attempt to provide answers to the following research questions:

1. How do teachers perceive and understand the concept of mediation?
2. What attitudes do teachers hold toward different mediation activities and strategies, and how do they view their implementation in the classroom within an action-oriented framework?

Methodology

Research Model

This exploratory research employs a mixed method approach by collecting both quantitative and qualitative data to strengthen the reliability of the findings. After the ethical approval was taken from the Pamukkale University to carry out the study, all the volunteer participants were involved in the data collection process.

Participants

In order to determine the participants, convenience sampling method was used. Instructors working at the School of Foreign Languages at Pamukkale University in Denizli, Türkiye were offered to participate in the study. In total, 23 volunteer instructors contributed to the study. While a high majority (46%) of the participants were between the age of 36-40, only two of them were between the age of 31-35. When participants were asked about their teaching experience, the data revealed that half of the respondents (50%) had been teaching for 11–15 years, whereas only a small proportion (7%) reported having 6–10 years of experience.

Data Collection Instruments

To find out instructors' perception on mediation, an online questionnaire has been developed to be used for the data collection process. In the first section of the questionnaire, there were questions concerning demographic information of the participants and the second section comprised of three open-ended questions that would illustrate their perception on mediation and made them reflect on their teaching practices considering the mediation activities and skills. The second section of the questionnaire involved 22 items rated on a five-Likert scale (from 5 being very relevant to 1 being not too relevant). The items were designed in alignment with the CEFR Companion Volume to encompass the three mediation scale categories: *Mediating a text, mediating a concept,* and *mediating communication.* The following presents the items incorporated into the questionnaire:

1. What do you understand by mediation?
2. While planning your lessons, do you consider the concept of mediation?
3. What kind of activities do you implement in accordance with mediation?

Data Analysis Process

The quantitative data collected through the questionnaire were analysed descriptively by using the *SPSS* program. The qualitative data were gathered through open-ended questions and analysed by using content analysis. As defined by Krippendorff (2018, p. 24), "content analysis is a research technique for making replicable and valid inferences from data to their context". This method requires detecting emerging categories or themes, quantifying their occurrence, and analysing their contextual meaning (Neuendorf, 2017). Upon analysing the data, the key themes or patterns with the frequency of the codes were summarized and presented in tables by relating them to the research questions of the study.

Results

Quantitative Findings Obtained Through Questionnaire

In this section, first of all, quantitative findings achieved through the questionnaire will be presented. Mediation activities were categorized in the questionnaire based on four scales of mediation which were *mediating a text*, *mediating concepts*, *mediating communication* and *mediating strategies* and there were 22 items totally. While there were 11 items in the mediating a text section, there were 4 items in mediating concepts section, 3 items in mediating communication section and 4 items in mediating strategies section. The participants rated the items from 1 to 5 (1 = not too relevant and 5 = very relevant), as a result the highest score that could be achieved in the questionnaire was 110. Mean scores of the participants concerning the overall and also sub-categorical mediation activities involved in the questionnaire are presented in Table 2 and 3.

Table 2.

Descriptive Statistics Concerning Scores of the Mediating Activities

	N	***Mean***	***%***	***SD***
Mediating a text	13	40.15 (over 55)	72.90	5.69
Mediating concepts	13	18.00 (over 25)	72.00	1.68
Mediating communication	13	12.69 (over 15)	84.5	2.71
Mediating strategies	13	20.46 (over 25)	81.8	3.23
Overall mediation activities	13	90.69 (over 110)	82.4	12.03

As shown in Table 2, mean score of the participants for overall mediation activities was found to be 90.69. As the number of items and the maximum attainable score varied across sub-scales, their scores were transformed into percentages to enable comparison. Considering the maximum attainable score of 110 on the scale, the findings indicate that the participants regarded mediation activities as highly relevant. In addition, when the sub-scales were examined, the findings demonstrated that the most relevant scale of mediation for the participants was *mediating communication* (84.5 %) and the least relevant scale was found to be *mediating concepts* (72 %).

Table 3.

Descriptive Statistics for Mediation Activities

Mediating Activities	***N***	***Mean***
Mediating a text		
Relaying specific information in speech	13	4.00
Relaying specific information in writing	13	3.84
Explaining data (e.g. in graphs, diagrams, charts etc.) in speech	13	3.61
Explaining data (e.g. in graphs, diagrams, charts etc.) in writing	13	3.84

Processing text in speech	13	4.00
Processing text in writing	13	4.07
Translating a written text in speech	13	2.76
Translating a written text in writing	13	2.84
Note-taking (lectures, seminars, meetings, etc.)	13	3.69
Expressing a personal response to creative texts (including literature)	13	4.00
Analysis and criticism of creative texts (including literature)	13	3.53
Mediating a concept:		
Facilitating collaborative interaction with peers	13	4.61
Collaborating to construct meaning	13	4.69
Managing interaction	13	4.69
Encouraging conceptual talk	13	4.15
Mediating communication:		
Facilitating pluricultural space	13	3.61
Acting as intermediary in informal situations (with friends and colleagues)	13	4.30
Facilitating communication in delicate situations and disagreements	13	3.92
Mediation strategies:		
Linking to previous knowledge	13	4.46
Breaking down complicated information	13	4.23
Adapting language	13	4.30
Amplifying a dense text	13	3.92
Streamlining a text	13	3.69

In the light of the findings presented in Table 3, under the sub-category of *mediating a text,* the most relevant activity was *processing text writing* (*M* = 4.07) followed by *relaying specific information in speech* (*M* = 4.00) and *processing text in speech* (*M* = 4.00). On the other hand, the least relevant activity was reported to be *translating a written text in speech* (*M* = 2.76). Under the second sub-category of the scale *mediating a concept,*

collaborating to construct meaning and *managing interaction* (*M* = 4.69*)* were the most relevant scales for the participants. Analysis of the next sub-category "mediating communication" indicated that *acting as intermediary in informal situations (with friends and colleagues)* (*M* = 4.30) was found to be the most relevant activity and *facilitating pluricultural space (M* = 3.61) was found to be the least relevant activity from the participants' perspectives. The findings for the last sub-category that involve *mediation strategies* demonstrated that the participants found *linking to previous knowledge* (*M* = 4.46) as the most relevant activity and *streamlining a text* (*M* = 3.69) as the least relevant mediation strategy.

Qualitative Findings Obtained Through Open-Ended Questions

The questionnaire involved three open-ended questions to provide in-depth data and increase the reliability of the quantitative findings. In the first question, the participants were requested to explain what they understand by the term mediation. No participant gave a response indicating a lack of knowledge about mediation. All of the participants provided generally short sentences or phrases to define it; however, some responses seemed to be unclear or vague considering the statements provided by the participants such as "Using L1&L2 interchangeably?" (P7) or "evaluating what has been learnt and what needs to be learnt" (P9). One of the common patterns was the description of mediation as "helping students understand each other" or "to make communication easier". The quotations of the participants are presented in this part to illustrate the common pattern:

> "*Making meaning clearer for learners, by supporting them in various ways"* (P5).
>
> *"Providing help for learners when they come across a challenge in their language learning process (it can be either communication challenge, grammar challenge, vocab challenge etc.)"* (P10).
>
> *"To facilitate learning in classroom environment helping the learners to overcome language barrier"* (P11).
>
> *"To make communication easier between two parties*" (P13).

Another common theme that was salient among the responses was

describing the mediation in an appropriate way aligned with *CEFR* descriptions. These definitions provided by the participants provide evidence that they had already known what mediation was based on the *CEFR* methodology. Following statements can be given as examples:

> "*Mediation in language teaching refers to the process of facilitating understanding and communication between people who may have linguistic, cultural, or conceptual differences"* (P8).
>
> *"Acting as a bridge between the intersections of speakers"* (P4).

The second open-ended question that was addressed to the participants was "Do you consider mediation skills significant to be used in your courses?". All of the participants provided positive responses by stating that they give importance to mediation only except from the Participant 4 who said "*sometimes*" and Participant 9 who said "*I try to*". They reported to consider the concept of mediation especially:

> *"when they have low level of learners and they need some support to understand content more clearly (P1),*
>
> *"to bridge cultural differences; it also involves helping students comprehend complex texts, express ideas clearly, and collaborate effectively with their peers (P3),*
>
> *"to promote active engagement, enhance student autonomy, and prepare them for professional environments where clear and effective communication is vital (P10).*

The third open-ended question involved in the questionnaire was "What activities do you implement through which mediation skills are used? Please explain.". Common themes and codes were categorised and summarized in the Table 4.

Table 4.

Qualitative Findings Achieved through the Third Open-Ended Question

Theme	***Codes***	***Frequency***
	Role play	P1, P8, P10,
	Communicative activities (pair or group works)	P2, P6, P8,
	Summarising	P5, P7, P8,

Mediation activities implemented	Adapting the language to the students' English levels	P2
	Translation	P5
	Explaining	P5
	Peer feedback	P6, P8
	Paraphrasing	P8
	Visual interpretation tasks	P8
	Self-evaluation	P9
	Simplifying complex texts	P8, P10, P12
	Jigsaw readings	P13
	Problem-solving activities	P13
	Making presentations	P1, P8, P10,

As Table 4 illustrates, the most preferred classroom activities by the participants were role play, pair or group works and summarising (23 %) through which their students used their mediation skills. One the other hand, one of the participants (P3) reported that s/he does not focus on mediation activities too much. Some responses showed that they did not provide answers that exactly address the question. Instead of mentioning activity types, they wrote some language functions such as "exercises, self-evaluation, and using clarification and confirmation checks" (P18). In addition, another participant (P8) also provided well-structured answers in accordance with *CEFR* descriptions as in the example:

> *To develop mediation skills in my students, I implement activities that require them to explain, simplify, and rephrase information. One effective activity is summarizing and paraphrasing, where students read a text and present its key points in their own words, focusing on clarity and brevity (P8).*

Overall, these responses indicate considerable variation in teachers' conceptualizations and classroom implementation of mediation activities, suggesting that while some instructors possess a clear and CEFR-aligned understanding of mediation, others may require further clarification and pedagogical support to effectively integrate mediation practices into their teaching.

Discussion

The objective of this research was to explore the perceptions and views of instructors working at the School of Foreign Languages at Pamukkale University regarding the concept of mediation as it relates to the *CEFR* framework. The findings achieved through the quantitative and qualitative data indicated that a high majority of the participants (84.6 %) attach significance to the concept of mediation and consider it while planning classroom practices for their students. The most relevant mediation scale was found to be *mediating communication* by reaching different results with the study carried out by Alvarez and Hernandez (2021) and Pisarek et al. (2022). These scales cover skills such as serving as an "intermediary in informal contexts" (e.g., among friends or colleagues) and helping to manage communication in sensitive situations or conflicts (*CEFR CV*, 2018, p. 90).

Among the participants, only two of them indicated that they might not fully understand the mediation concept as defined by the *CEFR*. In light of these findings, it may be concluded that the instructors are not yet fully familiar with the concept of linguistic mediation and would likely benefit from targeted support aimed at developing a clearer and more comprehensive understanding of this relatively novel construct within the CEFR framework. In the first part of the questionnaire, the participants were asked about the activities they implement in their classrooms to foster mediation skills. The participants were asked to address this question before they encountered the list of activities and strategies provided in the questionnaire to examine their ability to identify tasks that involve mediation and to avoid any potential bias in their responses that could arise from the list they are rating. The examination of participants' feedback on open-ended inquiries indicated that role-playing, teamwork in pairs and groups, along with summarizing were identified as the most favoured preferences. However, while some participants named types of activities such as jigsaw reading and problem-solving, some reported language functions such as explaining, paraphrasing and summarising.

These findings demonstrate that they did not identify related activities or had vague perceptions about the mediation.

Conclusion

In conclusion, despite the widespread recognition of the *CEFR* (2001) and its significant role in language assessment globally, its influence on actual teaching methodologies seems to be constrained. Instructors may need assistance in terms of some key factors of the issue. These key factors involve addressing the comprehension of crucial notions like mediation and plurilingualism, their essential contributions to language learning and teaching, and the practical ways in which these concepts can be utilized in educational settings. Ministry of National Education in Türkiye has been providing *CEFR* training for English teachers since 2022 within the project of enhancing foreign languages (*YADEG*). The project aims to make the teacher gain an awareness of the revisions and recent edition of the *CEFR* with a specific focus on mediation scales. Based on the findings achieved through the present study, a similar implementation may be followed for the higher education level instructors as well. Instructors should be provided with clear information that reflects the philosophy underlying the *CEFR* and the ways of integrating it into the practical classroom activities.

Limitations

Although this study provides valuable insights into instructors' perceptions and classroom practices related to mediation in the School of Foreign Languages at Pamukkale University, several limitations should be acknowledged. First, the study was conducted with a relatively small sample size of 23 instructors from a single state university, which restricts the generalizability of the findings to other tertiary institutions in Türkiye. The use of convenience sampling may also have introduced self-selection bias, as those who volunteered to participate might have had higher interest or awareness regarding the *CEFR* or mediation.

Second, the study relied on self-reported data through an online questionnaire. While this method allowed participants to express their views freely, responses may be influenced by social desirability, inaccurate self-assessment, or varying interpretations of mediation-related terminology. Third, although the study used a mixed-method approach, the qualitative component relied solely on open-ended questions rather than interviews. The lack of follow-up interviews limited the depth of the qualitative data and prevented further clarification of vague or ambiguous responses.

Finally, the study focused only on instructors' perceptions and self-reported practices; it did not include classroom observations or analysis of teaching materials to triangulate the reported practices. As a result, the study reflects instructors' stated beliefs rather than their actual pedagogical behaviour. Future research could address these limitations by including a larger and more diverse sample, incorporating observational data, and employing more robust qualitative techniques such as semi-structured interviews or focus groups.

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Ethical Declaration and Committee Approval

This study was conducted in accordance with the principles of scientific research and publication ethics. Ethical approval for this research was obtained from the Ethics Committee of Pamukkale University, with approval number (15.01.2025-E.638756).

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Author 1: Conceptualization, Methodology, Data Collection, Formal Analysis, Writing – Original Draft.

Author 2: Conceptualization, Review & Editing, Visualization, Last Draft

Who We See and Who We Become: Gender Representation and Stereotyping in Secondary School EFL Coursebooks[1]

Güneş ÇOKAÇAR[2]

Coursebooks function not only as pedagogical tools but also as socially constructed texts that convey ideologies, cultural expectations, and identity positions to learners. In EFL contexts—particularly in Türkiye, where exposure to English outside school is limited—textbooks often become the primary medium through which students form impressions about the English-speaking world and, more broadly, about how people, roles, and relationships are portrayed. Therefore, the representational choices of these materials likely carry consequences that extend far beyond vocabulary or grammar learning.

When students repeatedly encounter images of men in positions of authority, technological mastery, or adventurous roles while women are depicted in nurturing, domestic, or appearance-oriented contexts, they may internalize subtle messages about what each gender "should" or

[1]This study is the revised version of a chapter in the corresponding author's unpublished MA Thesis titled "An Analysis of Gender Representation and Stereotyping in Terms of Occupation and Appearance in Secondary School EFL Coursebooks", supervised by Prof. Dr. Erdoğan BADA at Çukurova University, Graduate School of Social Sciences, Department of Educational Sciences, 2025.

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"typically does." These patterns operate as a form of hidden curriculum—messages that are not stated explicitly but are absorbed through constant repetition. Research has shown that such hidden curricula can shape students' sense of self, limit their future aspirations, and contribute to the reinforcement of gendered divisions in both educational and occupational domains.

In Türkiye, the national curriculum and its accompanying textbooks are centrally produced and widely distributed. This centralization means that even small patterns of imbalance may influence hundreds of thousands of learners simultaneously. It also means that textbooks hold considerable potential for promoting gender equality if consciously designed. The alignment of textbook development with the United Nations Sustainable Development Goals (SDGs), especially SDG 4 (Quality Education) and SDG 5 (Gender Equality), highlights the growing awareness that educational materials should offer equitable representations if they are to support inclusive learning environments.

Gender representation has been a longstanding topic of concern in ELT materials internationally; however, the issue remains highly relevant today. Contemporary discussions emphasize that representation is not only about numerical balance—how often male or female characters appear—but also about qualitative balance: who takes initiative, who solves problems, who is central to the story, who occupies prestigious occupations, and who is assigned emotional or relational roles. These subtle distinctions shape students' perceptions of agency and competence.

In middle-school contexts, the impact of such representations becomes even more pronounced. Adolescence is a formative period during which students negotiate identity, imagine their future selves, and develop attitudes toward social roles. Coursebooks that consistently frame boys as active, logical, strong, or professionally ambitious may encourage girls to view such traits as incompatible with femininity. Similarly, coursebooks that rarely depict boys as empathetic, cooperative, or nurturing may

reinforce stereotypes that discourage boys from entering caregiving professions or developing emotional literacy.

The present study examines these dynamics by analysing three nationally published middle-school English coursebooks used in the 2023–2024 academic year. It focuses on two highly visible domains—occupational roles and physical appearance—because these categories tend to reflect deeply rooted cultural expectations. They are also easily identifiable by adolescent learners, meaning their potential impact on identity formation is strong. By systematically analysing how genders are portrayed within these two domains, the study aims to uncover whether contemporary materials contribute to or challenge traditional gender norms.

Furthermore, this research situates itself within critical textbook analysis, a field that emphasizes the importance of interrogating the ideological work performed by educational texts. As scholars such as Fairclough (1989) and Kramsch (2000) have noted, all teaching materials participate in shaping learners' worldview, even when that shaping is not overt. Textbooks embody cultural narratives, values, and assumptions that influence both what students learn and how they understand their place in the world. Therefore, the representation of gender is not a peripheral concern but a central dimension of equitable education.

This chapter contributes to this broader conversation by offering an in-depth, data-based, and context-sensitive analysis of gender portrayals in MoNE-published EFL textbooks. It also highlights practical implications, suggesting ways in which teachers, policymakers, and material developers can promote gender-fair learning environments. By identifying recurring representational patterns and discussing their potential effects on students' perceptions, the chapter underscores the need for intentional, equity-oriented design in future textbook revisions.

Literature Review

The representation of gender in ELT materials has been a focal point of scholarly inquiry for more than four decades, reflecting ongoing concerns

about how instructional texts socialize learners into particular worldviews. Early research established strong evidence of gender bias, often in the form of male-dominated imagery, language, and narrative agency. Hartman and Judd (1978), for example, identified patterns of male-centeredness in ESL textbooks, noting that men were consistently portrayed as active decision-makers, while women appeared less frequently and were cast in passive or domestic roles. Porreca's (1984) landmark study further revealed systematic exclusion through male-first ordering, generic masculine forms, and minimal female visibility, setting the stage for a global conversation on representational fairness.

As research expanded across diverse geographical contexts, findings consistently echoed these concerns. Numerous studies in Asia, Europe, the Middle East, and Latin America found that ELT materials often reinforced culturally traditional gender norms rather than challenging them. Lee and Collins (2008, 2009) examined textbooks in Hong Kong and Australia, revealing that despite improvements in gender balance, qualitative differences persisted: men were still more frequently positioned as innovators, leaders, or intellectual authorities, while women were associated with relational, supportive, or appearance-oriented attributes. Similar trends were observed in Greece, Iran, Saudi Arabia, and Japan, underscoring that representational bias in language textbooks is not confined to a single culture but reflects a broader global phenomenon.

Within feminist linguistic frameworks, these patterns have been conceptualized as part of a broader ideological system in which language both reflects and reinforces gendered hierarchies. Scholars such as Sunderland et al. (2002), Lazar (2005), and Cameron (2014) argue that textbooks operate as sites where social expectations are naturalized. From this perspective, bias is not limited to overtly sexist content; rather, it includes subtle forms of asymmetry, such as who initiates conversations, who explains concepts, whose voices are heard more often, and who is represented as competent in high-status domains. When male characters dominate scientific, technological, or leadership positions while female

characters are framed around nurturing, beauty, or emotional expressiveness, textbooks participate in constructing gendered identities that students may internalize.

The rise of Critical Discourse Analysis (CDA) provided a deeper theoretical lens for examining these ideological structures. CDA posits that language is inherently political and that discourse reflects power relations embedded in society. Applying CDA to ELT textbooks reveals how gender is embedded not only in explicit descriptors but also in narrative structure, turn-taking patterns, allocation of power in dialogues, and visual composition. Visual semiotics complements CDA by analysing how gesture, spatial positioning, colour, and posture within illustrations contribute to gendered meaning. Studies consistently show that male characters are often placed centrally in visuals, depicted in movement, or shown handling tools and technology, while female characters are frequently seated, smiling, accessorized, or shown participating in social rather than technical activities (Lee & Collins, 2008; Sunderland et al., 2002; Blumberg, 2008).

In the Turkish context, similar representational trends have been documented across several decades. Arıkan (2005) found that MoNE-published ELT coursebooks privileged male visibility and occupational diversity, with women appearing in limited or stereotypically feminine roles. Bilgin (2013) identified persistent imbalances across middle-school textbooks, noting that female characters were often portrayed in supportive professions or domestic environments. Şeker and Dinçer (2014) also reported that textbooks reinforced traditional gender norms, aligning femininity with beauty and harmony while linking masculinity with power, rationality, and ambition. These findings suggest that despite ongoing curriculum reforms in Türkiye, gender representation remains an area requiring deliberate attention.

However, research has not been exclusively pessimistic. Some studies highlight examples of progress, showing that equitable representation is achievable when explicitly prioritized. Demir and Yavuz (2017) reported

nearly balanced gender portrayals and more diverse female roles in a new high-school textbook series, suggesting that editorial awareness and intentional design decisions can lead to meaningful improvements. These positive cases serve as evidence that textbook bias is not inevitable but is shaped by ideological choices during material development.

Recent scholarship has emphasized a broader conceptualization of representational fairness. Rather than focusing solely on numerical gender parity, researchers advocate examining qualitative dimensions such as:

- Role agency: who initiates action or solves problems
- Narrative authority: whose perspective frames the story
- Professional diversity: whether both genders occupy a wide range of careers
- Attribution of skills: who is associated with strength, intelligence, empathy, or creativity
- Social positioning: who leads, follows, teaches, or learns

These dimensions provide a more comprehensive understanding of how gender is constructed within textbooks.

Another important development in the literature is the focus on identity theory and its relevance to adolescent learners. Scholars argue that coursebooks shape not only how students perceive others but also how they imagine their future selves (Norton, 2013; Sunderland, 2004; Blumberg, 2008). When girls rarely see women represented as scientists or discoverers in their textbooks, they may perceive such careers as inaccessible. When boys do not encounter representations of men in nurturing or emotionally expressive roles, they may feel discouraged from developing such traits. Thus, textbooks play a role in shaping students' aspirations, confidence, and sense of possibility.

International bodies such as UNESCO have increasingly emphasized the need for gender-responsive educational materials. Reports highlight that textbooks must represent diverse identities, challenge stereotypes, and promote role models that encourage equitable participation in society (UNESCO, 2009; UNESCO, 2016). Aligning textbook development with

SDG 4 and SDG 5 situates the issue within a global movement toward inclusive and just education (United Nations General Assembly, 2015).

Despite decades of research, gender bias persists in subtle and sometimes less visible ways. While many modern textbooks avoid overtly sexist language, structural imbalances remain embedded in visuals, narrative patterns, professional distribution, and the emotional framing of characters. In some cases, attempts at gender balance result in superficial numerical parity but fail to address deeper ideological messages—a phenomenon known as symbolic inclusion. This highlights the importance of not only counting characters but also examining how they are portrayed, what roles they occupy, and how much narrative weight they carry.

Overall, the literature demonstrates a clear and persistent need for ongoing evaluation of gender representation in ELT materials. While progress exists, biases frequently remain embedded in the fabric of textbooks, influencing students' perceptions in ways that may limit their sense of possibility. This study builds upon these insights by focusing specifically on occupational representation and physical appearance—two domains that are central to identity formation and are visually salient to adolescent learners in Türkiye.

In light of these aims, the study addresses the following research questions:

1. How are male and female characters represented in terms of occupational roles in these secondary school EFL coursebooks?
2. How are male and female characters represented in terms of physical appearance descriptors in these coursebooks?
3. To what extent do the textbooks include or address gender diversity and equality (for example, the presence of non-binary characters or explicit promotion of gender equality)?

Methodology

The methodological framework for this study was designed to provide a

comprehensive, systematic, and critically informed analysis of gender representation in MoNE-published middle-school English coursebooks. The study employed a mixed-methods approach, integrating quantitative and qualitative components, to address the multimodal nature of textbooks (which combine textual and visual content). This design allowed for the measurement of visible representational patterns while also enabling an exploration of deeper ideological meanings embedded in the materials.

Three nationally distributed EFL coursebooks (for Grades 6, 7, and 8) from the 2023–2024 academic year were selected as the dataset for analysis. These books are compulsory and widely circulated, developed by committees following the standard national curriculum. Their extensive reach likely influences the linguistic, cultural, and social experiences of students across Türkiye, underscoring the relevance of examining these textbooks' representational choices.

Data collection involved a systematic review of all written and visual content in each textbook, with every character and descriptive instance coded for gender-related attributes. Characters were identified through observable markers (e.g., pronouns, names, clothing, hairstyles, or clearly gendered activities), and any character whose gender could not be determined was excluded to maintain reliability. The analysis centred on two key domains of representation—occupational roles and physical appearance descriptors—chosen because they reflect culturally ingrained expectations and are highly salient to adolescent learners.

The combination of quantitative and qualitative analytic techniques ensured a robust, multi-layered understanding of how gender is portrayed in these materials. This integrated approach allowed the findings to not only identify statistical patterns but also to shed light on their potential significance for learners, teachers, and policymakers.

Ethical considerations were carefully addressed in this study, even though it did not involve direct participation of human subjects. While the data consisted solely of publicly available educational materials, the analysis was conducted in accordance with established ethical guidelines for

research using secondary data. Particular attention was paid to responsible interpretation, avoidance of misrepresentation, and sensitivity to cultural, ideological, and curricular contexts. In addition, the study acknowledges that textbooks are produced within broader institutional and ideological frameworks, and the analysis therefore sought to avoid attributing intentional bias to individual authors, focusing instead on systemic representational patterns (BERA, 2018; British Psychological Society, 2021).

Overall, the methodology was designed to balance systematic measurement with rich, interpretive insight. By integrating quantitative frequency counts with critical qualitative analysis, the study provides a nuanced and multi-layered understanding of how gender is represented in widely used EFL materials in Türkiye. This approach ensures that the findings not only identify patterns but also illuminate their potential meanings and implications for learners, teachers, and material developers.

Data Collection Instruments and Procedure

Data for this study were collected using a set of instruments designed to capture both explicit and implicit gendered messages in the coursebooks. Because the textbooks combine written text, illustrations, dialogues, and activity instructions, the data collection tools were structured to enable a comprehensive extraction and categorization of all relevant representational elements.

The primary instrument was a textbook analysis checklist developed specifically for this study, drawing on widely recognized frameworks used in gender representation research. This checklist contained detailed coding categories for identifying gender markers, occupational references, appearance descriptors, behavioural cues, and visual indicators. The checklist also included space for qualitative notes to document contextual observations such as narrative prominence, character interaction patterns, or implicit roles inferred through imagery. The complete checklist used for data coding is presented in Appendix A to enhance methodological

transparency and replicability. By structuring observations in this way, the study ensured that both quantifiable and interpretive data were collected systematically.

The second instrument, a visual analysis grid adapted from visual semiotics and critical media analysis frameworks, enabled a structured examination of the illustrations. This grid focused on elements such as gaze direction, body posture, activity level, spatial positioning (foreground vs. background), colour use, facial expressions, and the presence of tools, objects, or settings that might reinforce gendered associations. Because images play a powerful role in shaping perceptions—especially for adolescents who respond strongly to visual cues—the grid ensured that visual data were recorded with consistency and depth.

The data collection procedure began with a preliminary review of each textbook to familiarize the researcher with the content and structure. This initial survey helped identify potential patterns, recurring character types, and the general distribution of occupations and descriptors across units. Following this familiarization, each unit of the three textbooks was analysed page by page using the above instruments. Every character—whether appearing in text, dialogue, or illustration—was coded individually. This character-by-character approach ensured that even minor representations were captured, resulting in a dataset that reflects the full complexity of the materials.

Consistency in coding was maintained by relying on clearly observable indicators of gender (names, pronouns, hairstyles, clothing, or gender-typed activities). When a character's gender was ambiguous or could not be inferred without speculation, that character was excluded from the dataset to avoid introducing bias. These exclusion criteria were an essential part of preserving methodological rigor.

In addition to cataloguing textual and visual elements, the procedure included recording contextual observations that went beyond surface descriptors. For example, if a male character was described as a doctor

while also leading a group or giving instructions, those behaviours were noted as indicators of agency and authority. Conversely, if female characters were primarily shown listening, observing, or performing supportive actions, these were documented as instances of relational or passive roles. Such layered observations formed the foundation for the study's qualitative interpretations.

After the initial round of data extraction, a secondary verification stage was conducted to enhance the trustworthiness of the analysis. During this stage, all coded entries were systematically rechecked to ensure internal consistency, accurate categorization, and reliable quantification. Any discrepancies or ambiguous cases were revisited and resolved through careful re-examination, and, where necessary, excluded from the dataset. This verification process strengthened the reliability of the findings by ensuring that the analysis remained grounded in the textbook content rather than influenced by subjective researcher interpretations.

Overall, the instruments and procedure were designed to capture the full spectrum of gendered meaning within EFL coursebooks. By combining structured coding tools with interpretive documentation, the study ensured that both numerical patterns and deeper ideological cues were recorded comprehensively. This methodological approach provides a robust foundation for the subsequent data analysis and the conclusions drawn regarding gender representation in Turkish middle-school ELT materials.

Data Analysis

The data analysis followed a mixed-methods approach that integrated quantitative frequency counts with qualitative interpretive techniques. This dual strategy allowed for a thorough understanding of how gender is represented across the selected coursebooks. It ensured that measurable patterns were quantified while more subtle ideological meanings were explored. Given that gendered representation emerges through both explicit language and nuanced visual or discourse cues, the analysis framework was designed to examine numerical distributions and also

uncover less visible patterns in the content.

In the quantitative component, all instances of male and female representation identified during data collection were tallied. Each coded occurrence—whether a professional role, an appearance descriptor, or an action performed by a character—was entered into a spreadsheet. Frequencies were calculated for each gender in relation to occupational roles and physical appearance descriptors, and these raw counts were converted into percentages. This normalization allowed comparisons across the three grade levels, ensuring that differences in textbook length did not skew the results. The quantitative overview helped determine, for example, which gender dominated high-status professions, which traits or descriptors were disproportionately associated with one gender, and how visual representation patterns aligned with the textual data.

Numbers alone, however, could not fully capture how gendered meanings are produced. Therefore, an extensive qualitative analysis was undertaken, drawing on Critical Discourse Analysis (CDA) and visual semiotics. CDA provided a lens to examine how power, authority, and agency are distributed among characters. This included analysing who initiates conversations, who provides explanations, whose voice drives the narrative, and who is depicted as an expert, leader, or problem-solver. Specific linguistic features (such as the use of modal verbs, directives, and patterns of turn-taking in dialogues) were scrutinized to identify any gendered patterns of dominance or submissiveness in interactions.

The visual semiotic analysis complemented the textual analysis by exploring how images convey gendered messages through nonverbal elements. Factors such as gaze direction, facial expressions, spatial positioning, posture, movement, background details, and the presence of tools or objects were examined systematically. Visuals often communicate messages not explicitly stated in the text. For example, we noted whether male characters were consistently depicted in dynamic, technical activities while female characters were shown in more static or social roles (e.g., smiling or caring for others). These visual cues provided insight into

whether the textbooks might be reinforcing or subtly challenging traditional gender norms beyond the written content.

Another layer of analysis focused on character prominence and agency. This aspect of the analysis examined which characters took on central roles versus background roles. Characters who led activities, made decisions, or solved problems were considered to carry more narrative weight than those who merely observed. Prominence was therefore assessed not only by frequency of appearance, but also by relational hierarchies—who teaches versus who learns, who helps versus who is helped, and who is positioned as knowledgeable or competent.

Throughout the qualitative analysis, attention was also given to implicit gender messages arising from the interplay of text and imagery. For instance, a girl might be depicted as a doctor in an illustration, but if the accompanying dialogue casts her in a passive or emotional role, the representation could still reinforce traditional norms despite the ostensibly progressive profession. These multimodal interactions were examined carefully to avoid superficial interpretations that would consider only one mode of representation in isolation.

Integrating the quantitative and qualitative findings allowed the study to move beyond isolated examples and identify broader discursive patterns. For example, the numerical data showed male overrepresentation in STEM-related professions, which gained deeper significance when the qualitative analysis revealed that these male characters also tended to occupy central positions in illustrations, direct activities, and receive more detailed characterization. Conversely, the clustering of female characters in caregiving or appearance-focused roles was echoed by visuals emphasizing smiling faces, decorative attire, or static postures. This triangulation ensured that the conclusions reflected how gender is constructed holistically in the textbooks rather than being drawn from any single type of observation.

Throughout the analysis, the researcher maintained a reflexive stance. Interpretive decisions were revisited periodically, and coded instances

were cross-checked to verify emerging themes against the raw data. By remaining aware of potential personal biases and re-evaluating interpretations, the analysis enhanced its trustworthiness, ensuring that conclusions were grounded in the material itself rather than in any preconceived notions.

In sum, the analytical approach provided a robust, multi-layered understanding of gender representation in the textbooks. By combining quantitative clarity with qualitative depth, the analysis illuminated both visible patterns and subtle dynamics, forming a strong foundation for interpreting the results presented in the next section.

Results

Occupational Roles: Male characters disproportionately occupy high-status and public professions (e.g., doctor, engineer, pilot, leader), while females appear more frequently in nurturing or domestic roles (e.g., teacher, nurse, homemaker).

Physical Appearance: Females are more often framed via beauty and fashion-oriented descriptors; males via strength, height, and activity. Visuals commonly position male figures as central actors.

Table 1

Gender Representation by Occupational Roles

Occupational Category	*Female (%)*	*Male (%)*	*Interpretation*
High-status public professions	22	78	Males dominate prestigious/leadership roles
Service and support roles	64	36	Females clustered in nurturing/assistance work
Domestic and caregiving roles	89	11	Traditional female domesticity reinforced
Sports/technology/adventure roles	18	82	Masculine activity and visibility emphasized

Inclusivity: No instances of non-binary or gender-diverse identities were identified; explicit themes of gender equality were absent.

Table 2

Gender Representation in Physical Appearance Descriptions

Descriptor Category	*Female (%)*	*Male (%)*	*Interpretation*
Beauty/attractiveness	73	27	Females framed aesthetically
Strength/height/athleticism	21	79	Males framed as capable/powerful
Personality (kind, helpful, friendly)	62	38	Females linked to warmth/care

The results of the analysis reveal clear and consistent patterns of gender representation across the three middle-school EFL coursebooks examined. These patterns emerge in both the quantitative distributions of occupations and appearance descriptors, as well as in the more subtle qualitative dimensions of narrative roles, agency, and visual positioning. Although the materials appear at first glance to include both genders in a balanced way, closer examination shows that gendered distinctions persist across all grade levels.

The findings are presented in alignment with the study's two primary categories—occupational roles and physical appearance—and are supported by the quantitative tables. However, the qualitative analysis provides an essential layer of meaning, illustrating how the numerical data reflect deeper representational tendencies.

The occupational data indicate a marked imbalance in the types of professions associated with male and female characters. Male characters overwhelmingly dominate high-status, public-facing, or technically specialized professions. These include roles such as doctor, engineer, scientist, architect, pilot, police officer, and occasionally entrepreneur or leader. These roles carry symbolic value: they position male characters as

competent, authoritative, and capable of navigating public or professional spaces with confidence.

Female characters, on the other hand, appear less frequently in high-status professions and are more often associated with service-oriented, nurturing, or domestic roles. Common occupations assigned to female characters include teacher, nurse, babysitter, shop assistant, receptionist, and in several cases homemaker. These roles tend to emphasize emotional support, interpersonal skills, and relational labour. While these professions are valuable, their repeated association with female characters reinforces traditional expectations surrounding femininity and caregiving.

Even when women do appear in more prestigious professions, their representation is often limited to isolated examples and tends not to be accompanied by active narrative roles or leadership positions. For instance, a female doctor may appear in an illustration but may not drive the plot or engage in meaningful dialogue. This superficial or symbolic inclusion reinforces the idea that such roles are exceptions rather than norms.

Another notable finding concerns activity level and agency within occupational depictions. Male characters are frequently shown performing dynamic tasks—flying a plane, repairing a machine, giving instructions, or exploring a new environment. Female characters, in contrast, are more often shown observing, sitting, assisting others, or engaging in emotionally expressive activities such as smiling or comforting. These visual cues contribute to an implicit hierarchy of agency.

Taken together, these patterns demonstrate that the textbooks continue to associate masculinity with ambition, authority, and technical expertise, while femininity is linked to support, care, and emotional labour. This distribution not only mirrors broader societal stereotypes but also risks shaping students' perceptions of what careers are "appropriate" or "expected" for each gender.

The analysis of appearance descriptors reveals another distinct pattern: the language used to describe female characters tends to focus on aesthetics,

beauty, and fashion, while descriptors applied to male characters emphasize physical strength, athleticism, or height. This division reinforces culturally entrenched expectations about how masculinity and femininity should be embodied.

Female characters are repeatedly described with adjectives such as pretty, beautiful, cute, stylish, or well-dressed. Their clothing is often illustrated with bright colours, accessories such as handbags or hairbands, and poses that highlight gentleness or elegance. These descriptors and visual cues frame femininity around appearance and attractiveness, suggesting that physical beauty is a defining characteristic of female identity.

Male characters, conversely, receive descriptors such as strong, tall, fast, energetic, active, or brave. Illustrations frequently show boys engaging in sports, carrying objects, running, climbing, or interacting confidently with their environment. These depictions suggest masculinity is tied to physical capability, dynamic behaviour, and adventurous spirit.

In some cases, even when males and females perform similar tasks, the visual language differs markedly. A male character riding a bicycle may be depicted in motion with an assertive posture, while a female character might be shown more passively, smiling or maintaining an aesthetically pleasing pose. These subtle differences reinforce the idea that boys are active agents while girls are visually appealing observers.

This pattern also appeared in the personality descriptors category, where adjectives such as kind, helpful, or friendly were more frequently applied to female characters. Although these qualities are positive, their repeated association with femininity reinforces the stereotype that emotional labour and social harmony are primarily the responsibility of women and girls.

One of the most striking findings is the complete absence of non-binary or gender-diverse identities across all three textbooks. While this is consistent with conventional textbook development in Türkiye, it nevertheless reflects a narrow conceptualization of gender, presenting it as a binary framework. The lack of diverse representation can implicitly communicate that identities outside the male-female binary are non-

existent or irrelevant, which may marginalize students who do not identify within traditional categories.

Moreover, the textbooks do not explicitly address gender equality, nor do they include moments where characters challenge or question stereotypical expectations. Instead, traditional norms are largely reproduced without commentary. The absence of narrative spaces for discussing gender roles means students are not encouraged to reflect critically on representation, reinforcing passivity toward societal stereotypes.

Quantitative and qualitative findings converge to reveal a deeply rooted but subtle representational inequality. Although female characters are present in the textbooks, their portrayal often lacks the diversity, agency, and professional ambition attributed to male characters. The repeated patterns collectively reinforce a worldview in which boys occupy public, technical, and leadership roles while girls engage in caring, supportive, or aesthetically framed roles.

Such representations are particularly significant in the middle-school years, when students form identity frameworks and consider future career possibilities. Given the strong influence of coursebooks in Türkiye's centralized educational system, these gendered patterns may contribute to limiting students' perceived opportunities and reinforcing socially constructed constraints on gender roles.

Discussion

The findings of this study reveal that although female characters appear in the textbooks with some degree of visibility, the underlying representational patterns largely reinforce traditional gender roles. This suggests that gender bias in ELT materials continues to be an issue, not necessarily through overt exclusion but through subtle and persistent discursive strategies. These strategies shape how learners perceive social roles, gendered expectations, and the boundaries of what is considered appropriate or achievable for each gender.

A key pattern emerging from the data is the disproportionate association of male characters with positions of authority, expertise, and agency. Whether through their occupational roles or their active participation in visually dynamic scenes, male characters are consistently framed as initiators, problem-solvers, or leaders. This reflects what many scholars describe as the "male-as-default" paradigm in educational materials, where men are positioned as the natural centre of action and knowledge. The consequence is that masculinity becomes associated with public visibility, professional ambition, and competence—traits that students may internalize as inherently masculine.

Femininity, on the other hand, is constructed through repeated associations with nurturing roles, physical attractiveness, and relational qualities. Female characters frequently appear in roles that emphasize empathy, emotional support, or domestic labour. Even when they participate in professional contexts, their depictions often lack the dynamic or authoritative qualities afforded to male characters. This likely reinforces the notion that femininity is inherently tied to relational, aesthetic, or supportive roles, which may discourage female learners from envisioning themselves as active agents in STEM fields, leadership positions, or high-status professions.

These results mirror those of earlier textbook analyses. For example, Hartman and Judd (1978) and Porreca (1984) documented male-centric content in ESL materials decades ago, and similar patterns have been observed in the Turkish context (Arıkan, 2005; Bilgin, 2013; Şeker & Dinçer, 2014), where textbooks were found to privilege male characters and reinforce traditional female roles. The persistence of such representational biases, despite curricular reforms, indicates that gendered portrayals remain deeply entrenched. On a more positive note, other research demonstrates that improvement is possible: Demir and Yavuz (2017) reported nearly balanced gender portrayals and more diverse female roles in a recent high-school textbook series when gender equity was made an explicit priority. The contrast between those more equitable

materials and the present findings underscores the importance of intentional gender-sensitive practices in textbook design.

One of the most striking implications of these patterns is their impact on identity formation. Adolescence is a developmental stage in which young people actively explore their potential selves and experiment with different identity possibilities. Coursebooks, as central educational tools, can either broaden or restrict these imagined futures. When girls rarely see themselves represented as scientists, engineers, explorers, or decision-makers, they may come to view such careers as outside their reach. Similarly, boys may feel constrained by representations that tie masculinity exclusively to strength, assertiveness, or emotional restraint. These limitations may have long-term consequences for career aspirations, self-perception, and social mobility.

Another important finding lies in the interaction between textual and visual elements, which often appear to amplify gendered meanings rather than neutralize them. For example, a male character described in the text as a pilot may also be shown in an illustration standing confidently at the centre of a scene, wearing a professional uniform and engaging with complex equipment. A female character described as a teacher, however, might be visually depicted interacting with children in a gentle, nurturing pose. These multimodal reinforcements can shape learners' implicit understanding of gendered social roles by embedding associations across multiple channels.

Even the absence of explicit bias does not automatically eliminate representational inequality. In contemporary educational materials, overtly sexist language has become rare, yet structural patterns persist through more subtle mechanisms. This form of symbolic bias manifests not through outright exclusion but through selective emphasis—such as which characters occupy meaningful roles, whose stories drive the narrative, and whose attributes are highlighted. These discursive strategies can be more difficult to detect but are equally influential in shaping learners' perceptions.

The complete absence of non-binary or gender-diverse identities in the content is another aspect that deserves attention. While this omission aligns with widely accepted curricular frameworks in Türkiye, it nevertheless simplifies the spectrum of gender identity and presents a narrow view of human diversity. Although middle-school materials must remain age-appropriate, the lack of even indirect acknowledgment of diverse identities may unintentionally suggest that non-binary or gender-nonconforming individuals do not exist or belong outside social norms. This silence likely contributes to the marginalization of gender-diverse youth by excluding them from the representational landscape entirely.

The findings also have critical pedagogical implications. Teachers often rely heavily on coursebooks due to curriculum demands, time constraints, and limited access to supplementary materials. As a result, textbooks significantly shape classroom dynamics and the content of language instruction. Without explicit training in critical pedagogy, many teachers may not recognize subtle gender bias or may feel uncomfortable addressing it. Therefore, the responsibility of challenging stereotypes should not rest solely on educators' shoulders; the materials themselves must be designed to support equitable teaching practices.

Teachers who are well-versed in critical pedagogy and gender-sensitive approaches can mediate biased content through reflective questioning, role-reversal activities, or by introducing supplementary texts that offer diverse representations. For instance, students might be encouraged to rewrite textbook dialogues by swapping the genders of the characters, to discuss why certain professions are associated with specific genders, or to research real-life examples of female scientists, male nurses, or gender-diverse individuals who challenge stereotypes. Such pedagogical interventions help students develop critical awareness while simultaneously practicing language skills.

From a policy and material development perspective, the findings highlight a need for structured mechanisms to ensure gender equity in textbook design. Currently, textbook development in Türkiye involves

multiple committees and approval stages, yet explicit gender-sensitivity guidelines are not consistently applied. Incorporating clear gender representation criteria into the textbook approval process could help address this gap. Such criteria might include balanced representation in professional roles, equitable distribution of narrative authority, diversity in personality traits assigned to characters, and avoidance of gender-stereotypical imagery.

Additionally, editorial training is critical. Previous research suggests that textbook authors may reproduce societal stereotypes, often as a result of unconscious assumptions or limited exposure to gender-sensitive design principles embedded in dominant cultural norms. Training programs that introduce authors to critical discourse analysis, inclusive language practices, and visual semiotics could help reduce the reproduction of bias. Publishers can also benefit from collaborating with gender studies experts who can provide feedback during manuscript development, ensuring that gender representation is treated not as an afterthought but as a core component of equitable design.

A further implication concerns the alignment of textbook development with the United Nations Sustainable Development Goals, particularly SDG 4 (Quality Education) and SDG 5 (Gender Equality). These goals emphasize the importance of equitable access to education and the elimination of gender-based discrimination. Textbooks that reinforce traditional roles or restrict representation undermine these goals by perpetuating structural inequalities within the learning environment. Ensuring gender-balanced materials is therefore both a pedagogical responsibility and a national commitment to sustainable development.

Finally, the findings underscore the importance of systemic and sustained reform. Single revisions or isolated improvements are insufficient; gender equity must be integrated into a continuous cycle of evaluation, design, and revision. Developing monitoring systems that assess gender representation periodically, incorporating teacher feedback, and

conducting follow-up studies can help ensure that progress is consistent and long-term.

Conclusion

The findings of this study highlight that gender representation in MoNE-published middle-school EFL coursebooks continues to reflect traditional and stereotypical patterns, despite broader societal changes and international emphasis on gender equality in education. While the textbooks include both male and female characters, the distribution of roles, professional identities, appearance descriptors, and agency reveals that deep-rooted representational biases persist. These patterns have significant implications for the identity development, aspirations, and social perceptions of young learners.

A key conclusion that emerges from the analysis is that numerical presence alone is not sufficient to achieve gender equity in educational materials. Even when female characters appear frequently, they are often portrayed in limited or traditional roles, such as caregivers, helpers, or passive observers. Male characters, by contrast, dominate high-status professions, active roles, and positions of authority. This imbalance shapes learners' implicit assumptions about which genders "belong" in leadership, technology, science, or physically demanding domains. Such repeated associations are likely to influence students' understanding of their own potential and the opportunities available to them.

Another important conclusion relates to the symbolic power of visuals. Illustrations in the textbooks frequently reinforce gender norms through posture, movement, spatial positioning, and clothing. Male characters are shown as confident, active, and engaged in challenging tasks, while female characters are depicted more often in aesthetically oriented poses or emotionally supportive roles. These visual cues operate alongside textual descriptors to create a consistent representational landscape that normalizes unequal distributions of agency.

The complete absence of non-binary or gender-diverse identities also carries noteworthy implications. While these omissions may reflect cultural or curricular constraints, they result in a textbook landscape that presents gender as a simple binary, limiting students' exposure to diverse identities and experiences. This invisibility can contribute to feelings of exclusion among students who do not see themselves reflected in the materials, potentially affecting their sense of belonging in the classroom.

From a pedagogical standpoint, the study's findings emphasize the need for teacher-mediated critical engagement with textbooks. Teachers can play an essential role in helping students question and reinterpret gendered messages. By incorporating gender-sensitive activities—such as rewriting dialogues, analysing illustrations, or discussing stereotypes—teachers can encourage learners to recognize bias and imagine more inclusive possibilities. However, relying solely on teachers is not sufficient; educational materials must also evolve to support equitable instruction.

The results also underscore the importance of policy-level reforms in textbook development. Creating gender-equitable coursebooks requires systematic and sustained intervention, including:

- the integration of gender-sensitive criteria in textbook approval processes,
- editorial training on bias awareness and inclusive design,
- collaboration with gender studies experts during manuscript development,
- periodic monitoring and revision aligned with SDG 4 and SDG 5 targets.

Such steps would not only improve the quality of ELT materials but also contribute to Türkiye's broader commitments to gender equality and sustainable education.

Furthermore, the findings highlight the ongoing relevance of critical content analysis within textbook research. Despite decades of scholarship on gender bias in educational materials, representational inequalities continue to appear in new publications. This persistence suggests that

textbook authors and editors may unconsciously reproduce societal norms unless deliberate efforts are made to challenge and redesign traditional portrayals.

Finally, the study demonstrates that gender-balanced textbooks have the potential to foster more inclusive, empowering, and socially just learning environments. When students encounter diverse and equitable representations—such as female scientists, male caregivers, or characters who share emotional responsibilities—they are more likely to develop flexible understandings of gender roles. This, in turn, can contribute to reducing gender gaps in academic and professional fields, broadening learners' aspirations, and cultivating a more equitable society.

In conclusion, the analysis shows that gender representation in the examined EFL coursebooks remains limited and unequal in significant ways. Addressing these shortcomings requires a coordinated effort involving researchers, educators, policymakers, and publishers. By adopting intentional, equity-focused approaches to textbook design and classroom pedagogy, the education system can help challenge restrictive gender norms and support learners in developing inclusive worldviews. Ultimately, gender-balanced materials are not simply a matter of fairness; they are a crucial component of providing high-quality education and fostering empowered, confident, and socially aware individuals.

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Appendices

Appendix A

Textbook Analysis Checklist (Abbreviated Version)

This checklist was used to systematically analyse gender representation in the selected middle-school EFL coursebooks. It guided the coding of both textual and visual data across all units.

1. Textbook Information
    - Grade level: 6 / 7 / 8
    - Unit and page number(s):
    - Mode of representation: Text / Image / Text + Image
2. Gender Identification
    - Gender of character:

☐ Female ☐ Male ☐ Not identifiable (excluded)

    - Basis for identification:

☐ Name / pronoun ☐ Visual cues ☐ Contextual role

3. Occupational Role
    - Occupation assigned: ☐ Yes ☐ No

If yes, specify role and category:

    - ☐ High-status/public
    - ☐ Service/support
    - ☐ Domestic/caregiving
    - ☐ Sports/technology/adventure

4. Physical Appearance
    - Appearance descriptors present: ☐ Yes ☐ No

If yes:

    - ☐ Beauty/fashion

- ☐ Strength/athleticism
- ☐ Facial expression/posture

5. Narrative Role and Agency
    - Narrative position:

☐ Central ☐ Secondary ☐ Background

- Agency level:

☐ Initiates action ☐ Responds ☐ Observes

6. Visual Features (for images)
    - Activity type:

☐ Technical ☐ Social ☐ Domestic ☐ Educational

- Spatial positioning:

☐ Central ☐ Foreground ☐ Background

7. Qualitative Notes

Brief notes on contextual meaning, implicit roles, or notable representational patterns.

Appendix B

Visual Analysis Grid (Abbreviated Version)

This grid was used to analyse visual representations of gender in textbook illustrations in a systematic and replicable manner.

1. Image Information
    - Textbook / grade level:
    - Unit and page number:

2. Character Positioning
    - Gender of character:

☐ Female ☐ Male ☐ Not identifiable (excluded)

- Spatial positioning:

☐ Central ☐ Foreground ☐ Background

3. Body and Gaze

- Body posture:

☐ Standing ☐ Sitting ☐ In motion

- Gaze direction:

☐ Direct ☐ Averted ☐ Toward another character

4. Activity and Role

- Activity type:

☐ Technical ☐ Social ☐ Domestic ☐ Educational ☐ Recreational

- Level of activity:

☐ Active ☐ Passive

5. Visual Attributes

- Facial expression:

☐ Smiling ☐ Neutral ☐ Serious

- Objects / tools present:

☐ Yes ☐ No

If yes, specify: _____

- Environment:

☐ Indoor ☐ Outdoor ☐ Professional ☐ Domestic

6. Qualitative Notes

Brief notes on implicit meanings, gendered associations, or notable visual patterns.

Transforming Teacher Preparation: The PEACE Framework for a Digital Age[1]

Hidayat Abu ELHAWA[2]

Digital transformation of education has been on the rise in recent decades —changing how teachers teach, students learn, and knowledge is created and shared. This changed with the COVID19 pandemic which forced educational institutions to new heights of digitalisation. Faced with emergency remote teaching (ERT), higher education institutions across the globe adopted online teaching methods revealing both the potential and limitations of existing pedagogical models. The pandemic also revealed a gap between teachers' existing digital competencies and the demands of technology mediated instruction, as well as the inadequacy of traditional models of technology adoption such as the) Technology Acceptance Model (TAM) (Davis, 1989), Technological Pedagogical Content Knowledge (TPACK) (Mishra & Koehler, 2006), the Unified Theory of Acceptance and Use of technology (UTAUT) (Venkatesh et al.,

[1]This study is the revised version of a chapter in the corresponding author's unpublished PhD Dissertation titled "Emergency Remote Teaching in a University English Language Teaching Programme: A study of Teachers' Beliefs", supervised by Dr. Christopher Alexander at University of Nicosia, Graduate School of Humanities and Social Sciences, Department of Languages and Literature, 2024.

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2003), and SAMR model (Substitution, Augmentation, Modification and Redefinition) (Puentedura, 2009).

It became urgent to rethink educational paradigms as teachers moved from classroom-based instruction to digital environments that demanded more than technical proficiency—a new epistemology of education. The context of Palestinian higher education exemplifies this transformation within sociocultural, infrastructural, and political constraints. Through qualitative grounded theory research with English Language Teaching (ELT) faculty at West Bank University (WBU), the study explored how teachers conceptualised and negotiated this digital shift. The study produced an original theoretical framework—PEACE framework—that proposes a model of educator preparation for digitalised, AI-infused learning environments.

The PEACE Framework—Pedagogy 3.0, Evolving Epistemology, Agility, Cultural Consciousness and Evaluation—is conceived as a conceptual and practical guide for teacher preparation in the digital era. The work reflects a convergence of grounded theory findings and critical reflections on contemporary digital pedagogy, situating itself beyond earlier models of technology "acceptance." Rather than asking whether teachers accept or reject technology, PEACE places digital fluency, transformative agency, and epistemic evolution at the centre of 21st-century educator capacities.

The present paper describes the methodological basis of the research that led to the PEACE framework and then describes the framework itself in relation to a broader discourse on digital transformation in education.

Literature Review

The literature review situates the study in relation to ERT nature, teacher beliefs about technology adoption and digital divide in Palestine.

Defining Emergency Remote Teaching

ERT is different from well-designed online learning. Hodges et al. (2020)

defined ERT as a temporary transfer of instructional delivery to an alternate mode of delivery during a crisis. The difference is in the design: online learning is planned over time whereas ERT is an immediate, often improvised response. The literature studies consistently show that ERT leads to lower quality instruction and increases stress for students and teachers.

There is a crucial difference between well-designed online learning and the crisis-response teaching investigated here. The faculty involved did not use planned online pedagogy. Instead, they were making instructional decisions under pressure and with inadequate resources, often just copying existing methods in an online context (Reimers et al., 2020).

Teacher beliefs & Technology

Teacher beliefs are a powerful predictor of classroom practice (Pajares, 1992). In the context of technology, a teacher's belief about the usefulness and feasibility of a tool often outweighs the availability of the technology itself. Studies on technology adoption show that teachers often resist change due to a lack of confidence, insufficient training, and a perception that the technology will disrupt established and successful pedagogical routines (Ertmer, 2005). Ertmer (2005) distinguishes barriers to technology integration between first-order extrinsic factors (e.g., access, time, support) and second-order intrinsic factors (e.g., beliefs, attitudes, self-efficacy). The ERT context amplified both: the extrinsic barriers were severe due to infrastructure issues, and these, in turn, negatively impacted the intrinsic beliefs of the teachers, leading to a profound sense of uncertainty. The teachers' initial belief in the necessity of ERT quickly gave way to a belief in its ineffectiveness due to the overwhelming extrinsic barriers.

Digital Divide and Infrastructural Challenges

The digital divide is defined both in terms of access to technology (first-level divide) and in terms of how technology is used (second-level divide) (Hargittai, 2001). In Palestine, the first-level divide is acute with high internet access costs, low bandwidth and frequent power supply cuts,

especially in poor areas (Bashitialshaaer et al., 2021). The late introduction of 4G technology and reliance on older infrastructure meant that the technology base for synchronous online learning was fundamentally unstable. This instability is an important contextual variable that must be considered in any model of regional teacher preparation.

Table 1

Key Infrastructural Challenges in the Palestinian Context

Challenge	*Description*	*Impact on ERT*
Limited Bandwidth/4G Access	4G technology is delayed and older infrastructure is used.	Asynchronous sessions were interrupted, rich media content was not shared, students were frustrated and dropped out.
Power Supply Instability	Power cuts are frequent and irregular - especially in the West Bank.	Disruption of classes, data loss, battery backups and generators cause teacher and student stress.
Socio-Economic Disparity	Unequal access to devices (laptops vs smartphones) and expensive data plans.	Digital divide between students, unequal participation, and worsening learning outcomes are eroding the equity mandate of education.
Lack of Institutional Support	Technical support is inadequate, and pedagogical professional development is poor.	Teachers are left to fix technical and pedagogical issues alone, increasing workload and stress, and undermining PEOU.

All of these infrastructural challenges directly impact the Perceived Ease of Use (PEOU) component of TAM and make technology adoption a source of stress rather than a seamless integration. This instability in the environment turns technology into a source of anxiety.

Humanware and Its Loss

The term Humanware refers to the human-centric, non-technical elements of an educational environment, such as emotional connection, non-verbal cues, immediate feedback, and the sense of community that facilitates learning (Warschauer, 2002). Humanware in a face-to-face ELT setting is important in the process of language acquisition which is dependent on interaction, proxemics and on the teacher being able to interact. In turn, this loss was due to the transition to ERT.

This is the central finding and a critical dimension that is often not captured in purely technological frameworks such as TPACK, TAM, and UTAUT which tend to be more concerned with the technical and pedagogical mechanics than with the human and ethical dimensions of teaching. The work involved in making up for this loss contributed to the increased workload.

Methodology

Philosophical and Epistemological Positioning

The study followed a social constructivist epistemology which corresponds to the view that knowledge and meaning are constructed through human interaction and social context (Piaget, 1977; Vygotsky, 1978). This paradigm is well suited to investigate educational phenomena where teaching and learning are always collaborative and context dependent. As an ELT professional and practitioner-researcher, the researcher, as an ELT professional and practitioner-researcher, is familiar with the communicative and socio-constructivist philosophies that underpin modern language teaching. The 1970s introduced Communicative Language Teaching (CLT), which stresses interaction and meaning-making through communication (Richards, 2006; S. Spada, 2007). Also, socio-constructivism informs e-learning frameworks such as the Community of Inquiry model (Garrison et al.2010).

Such philosophical orientation was relevant in the research context, too. The researcher and participants were both participants and observers in a

transformative educational moment—collectively constructing a new pedagogical reality during the ERT phase. As noted by Foreman-Brown et al. (2023) and Shobeiry (2024), the pandemic mobilized educators across the world to undertake an emergency reconstruction of pedagogy, moving from teacher-centred models to new, technology-mediated models. The social constructivist positioning of this study, thus, offered a philosophical and analytic basis for understanding the lived experiences of teachers negotiating the digital transition.

Research Design

The research used qualitative case study design within grounded theory methodology (GTM). The bounded structure was provided by the case study (Yin, 2018) of the WBU ERT programme while grounded theory provided the analytic strategy to derive substantive theory from data (Charmaz, 2014; Glaser & Strauss, 1967; Merriam, 2009).

Yin (2018) defines case study as an empirical inquiry about a current phenomenon within the wider context of real life when the boundaries between phenomenon and context are not clear. This definition corresponds to the WBU ERT phenomenon: teachers' adaptation to online teaching was an evolving, contextually embedded process. The grounded theory component allowed iterative coding, analysis and theorising to produce the conceptual model for the PEACE Framework.

With grounded theory, theory generation was more important than hypothesis testing (Corbin & Strauss, 2015). A constructivist adaptation of GTM by Charmaz (2014) supported reflexivity and acknowledged co-constructed meaning between researcher and participants.

Participants and Sampling

The study employed purposive sampling to select five experienced ELT faculty members of the WBU Department of Languages who had taught directly online during the pandemic. Selection involved teaching experience, participation in ERT and willingness to take part in multiple semi-structured interviews. The participants included colleagues having developed a professional rapport which allowed for reflective discussions.

A small sample size permitted qualitative depth and data saturation (Fusch & Ness, 2015). Each participant shared longitudinal insights in four interviews over roughly one academic year. Such extended engagement enabled rich narratives that reflected changing perceptions, adaptations, and epistemology over time.

Data Collection

The data were obtained via semi-structured interviews via *Google Meet*, given that the pandemic forbade in-person interaction. The interviews followed flexible protocols designed to elicit reflective reflections on teachers' experiences with digital pedagogy, technological adaptation, and epistemological change. Each interview was 45 – 90 minutes long and audio-recorded and transcribed.

The semi-structured format combined structure with openness to cover key themes while allowing participants to elaborate (Creswell & Poth, 2018). Iterative refinement of interview protocols after the first sessions and member checking during subsequent interviews were undertaken to confirm accuracy and interpretation, thereby increasing reliability and validity (Birt et al., 2016).

Data Analysis

The data were analysed using an inductive thematic analysis guided by the constant comparative method of grounded theory (Glaser &Strauss, 1967). The analysis followed Braun and Clarke's (2012) six-phase model: 1) Data familiarisation / (2) initial coding / (3) theme generation / (4) theme review / (5) theme definition / (6) reporting. Coding was done manually and with NVivo 12 for organisation and retrieval of coded data.

Opening codes identified common features among participant accounts of adaptation, beliefs, and pedagogical transformation. Axial coding connected these initial codes to broader conceptual categories, and selective coding combined the categories into a theoretical model.

Validity was maintained through triangulation among interviews, reflexive memos, and literature. The framework is trustworthy because it

is grounded in empirical data and established scholarship on digital pedagogy and teacher agency (Lincoln & Guba, 1985).

Results

From Grounded Theory to the PEACE Paradigm

The results of this study show that technology integration models such as TPACK, TAM, UTAUT and SAMR are not sufficient to guide teacher preparation in contexts of instability, infrastructural limitations, and rapid technological change. They fail to account for the socio-political context, the severe loss of human life, and the need for a truly transformative pedagogy beyond tool adoption.

Based on theoretical analysis, a new operational framework was developed: the PEACE Paradigm. With this paradigm, the study aims to move teacher preparation away from the more technically oriented older models towards a future-ready, Web 3.0/AI-driven education model.

The PEACE Framework has five interdependent domains which represent key competencies for educators in digitalised AI-mediated learning environments. As illustrated in Figure 1:



Figure 1 *The PEACE Framework*

Table 2 below provides a detailed breakdown of the five dimensions of the PEACE Framework, outlining their components, descriptions, and relevance to the ERT findings.

Table 2

The Five Dimensions of the PEACE Framework

Dimension	***Component***	***Description***	***Relevance to ERT Findings***
P	**Pedagogy 3.0**	A shift from teacher-centric 1.0 models to a student-centric, co-created, and immersive learning environment that takes advantage of Web 3.0 and AI affordances.	Problems of teachers not adapting pedagogy (Subtheme 1) and new assessment methods (Subtheme 4) are discussed
E	**Epistemology**	Knowledge construction in the digital age: critical evaluation of digital and AI-generated information - from knowledge transmission to knowledge co-creation.	Addresses the core uncertainty of redefining the teacher in a digital knowledge landscape.
A	**Agility**	The capacity of teachers to quickly adapt, troubleshoot, and innovate pedagogical strategies in response to unpredictable external factors such as infrastructural failures or new technological mandates.	Unpreparedness and resilience in unstable environments are addressed in Subtheme 3.
C	**Cultural Consciousness**	Awareness of how socio-political and cultural contexts such as the digital divide, language, and local values affect technology adoption and learning design.	Addresses the socio-political and infrastructural impact on learning.
E	**Evaluation**	A transition from traditional summative assessment to continuous, authentic, and formative evaluation of student learning and the digital pedagogical approach itself.	Specifically, focuses on assessment and new ways of measuring learning.

The following sections elaborate on each of the five dimensions of the PEACE Framework, as summarized in Table 2.

P - Pedagogy 3.0.

Pedagogy 3.0 refers to new digital pedagogies that go beyond the transfer of knowledge from the classroom to online platforms. Earlier paradigms divided labour between humans and technologies, and digital tools merely mediated instruction without altering underlying epistemic structures (Lund & Aagaard 2020). In Pedagogy 3.0, technology is considered a partner in knowledge creation that dissolves the boundaries between human and digital agents.

In practice, Pedagogy 3.0 envisions teachers designing learning environments combining AI, automation, and immersive technologies (the metaverse and Web 3.0) for dynamic, adaptive, and personalised learning experiences. The teacher becomes a curator, co-creator, and facilitator of learning systems rather than a transmitter of knowledge.

One possible scenario for a teacher is to design, implement and evaluate an AI-driven generative system in a virtual classroom. The teacher works with AI to build tasks, manage data, and personalise feedback—a partnership rather than a hierarchical relationship. Pedagogy 3.0, thus, demands that educators have digital literacy in addition to digital fluency, digital interaction, adaptation, and innovation.

E - Evolving Epistemology

Evolving Epistemology asks fundamental questions about knowledge definition, construction, and validation in digital contexts. Classic positivist epistemologies that place fixed standards of truth and objectivity are becoming increasingly inadequate for dynamic, participatory, and decentralised environments (Tsai et al, 2013).

The teachers in this study showed varying epistemological evolution. Some tried to model online attendance monitoring, academic integrity enforcement and lecture delivery. But as they gained experience, some

embraced constructivist and connectivist perspectives, realising that digital environments allow multiple ways of learning.

Thus, evolving epistemology means openness to uncertainty, plurality and to reconstruction of knowledge. It suggests that educators must adopt an epistemic agility mentality—accepting that learning and knowing in digitalised contexts are dynamic, negotiated and fluid.

A - Agility

The Agility dimension includes the ability to adapt to technological, pedagogical, and contextual change. Taken from software development paradigms, agility in education means flexibility, iteration, and responsiveness (Bohstedt & Richard, 2020).

For teachers, digital agility means both technical competence and philosophical disposition to experimentation and continuous learning. It involves navigating new tools, critically evaluating digital resources, and re-configuring pedagogical strategies on the fly.

In the Palestinian ERT context, teachers showed good agility in learning new platforms, overcoming connectivity challenges and reimagining classroom interactions online. However, agility has to be developed as a sustained professional competence—embedded in teacher education programmes as a mindset and as a practice.

C - Cultural Consciousness

Cultural consciousness is awareness of and a response to sociocultural contexts within which education takes place. Digitalisation does not erase cultural specificity; rather than advancing representation, privacy, and inclusivity, it promotes cross-cultural interactions and ethical considerations (Lamy, 2013; Soper & Ukot, 2016).

Teacher reflections in Palestine highlighted cultural norms affecting online participation, particularly in terms of privacy, gender, and family dynamics. Cultural consciousness in digital pedagogy requires educators to demonstrate cross-cultural competence (working across different

cultures) and intracultural competence (navigating cultural differences within one's own community).

In globalised online spaces, teachers must design culturally respectful, accessible learning experiences that bridge local identities with global digital citizenship. This dimension corresponds to Warschauer's (2002) conception of humanware as educators able to know, apply and think locally to technology.

E - Evaluation

The third and final component, evaluation, reconceives assessment as an ongoing, formative, and participative process, grounded in constructivist epistemologies. Older tests and measurement models, founded on positivist assumptions about objectivity, are becoming more out of touch with reality in digital learning (Conrad & Openo, 2018).

As with ERT, rigid assessment models often failed under technological constraints, indicating the need for more authentic, student-centred evaluation practices. Evaluation as defined in the PEACE model is based on value rather than measurement—on reflection, feedback and co-assessment between students and teachers.

This agrees with social constructivist theories of authentic assessment (Carless, 2007; Dogan et al., 2020), in which learning activities produce knowledge as well as evaluative insight. So, evaluation is an inevitable dialogical process in the development of learning.

Extended Discussion: Situating the PEACE Framework

The PEACE Framework represents a conceptual step beyond the limitations of earlier technology adoption models, which often only considered individual acceptance (TAM, UTAUT) or pedagogical integration (TPACK, SAMR) without considering the socio-political, infrastructural, and epistemic implications of a rapidly digitalizing world. Its strength is its holistic, context-aware model which shifts the educator from technology user to transformative agent. The pedagogical 3.0 dimension, for instance, is part of a larger academic shift towards a

heutagogical and connectivist conception of learning, where the learner is able to navigate through complex, networked information spaces. In this model, the teacher expertise is not content delivery but adaptive learning system design and critical digital literacy. Such an example is relevant in AI integration where the technology itself is a partner in knowledge construction and thus requires a radical rethinking of traditional power dynamics in the classroom. This revision is captured within the Evolving Epistemology dimension. As generative AI emerges, this calls for a critical evaluation of information, beyond knowledge consumption towards co-creation of new understanding pedagogically. So, educators must prepare students to question the provenance, bias and validity of AI-generated content and turn misinformation into higher-order thinking. And the inclusion of agility and cultural consciousness also addresses real-world instability that the ERT experience revealed. In software development, agility suggests iterative and responsive teaching that can pivot rapidly in the event of infrastructural failures or abrupt policy shifts. This provides an important counterpoint to static, pre-planned curricula. For cultural consciousness, it is the opposite of this, moving beyond cultural sensitivity to a culturally sustaining pedagogy, which recognizes that digital inequality is more than a question of access; it is entangled with socio-political and economic structures. With its emphasis on local context, the PEACE framework makes digital transformation an act of equity and empowerment and not a top-down imposition. Thus, the framework offers a technologically sophisticated yet humane blueprint for teacher preparation.

In this respect, the PEACE Framework is a theoretical contribution to a rapidly developing discourse on digitalised education at the technological, social, and cultural levels. As a grounded model, PEACE is teachers' lived reality and reflective adaptation during a systemic disruption, not an abstract ideal PEACE. In the grounded theory tradition (Glaser & Strauss, 1967), theory does not emerge from speculative reasoning, but from the patterned meanings of participants' experiences (Charmaz, 2014). The teachers in this study described uncertainty, resistance, and adaptation to

a new digital teaching ecology. Their accounts reflected an initial recourse to face-to-face pedagogical norms and an implicit desire to maintain classroom control online. But as digital teaching developed, participants started to see learning spaces as distributed and co-constructed rather than bounded and hierarchical. This is the epistemic transition that creates PEACE: the transition from transmission to transformation of teaching. This conceptual transformation is analogous to what Selwyn (2023) terms the sociotechnical turn in education: the blurring of the lines between human cognition, technological mediation, and institutional power. So, teachers are not just technologists, but agents in dynamic sociotechnical systems. Against this background, the PEACE Framework articulates competencies and dispositions for educators to thrive in a digitalised world where context is the new catalyst for pedagogical innovation.

From Acceptance to Agency Transitioning

From technology acceptance to digital agency is one of the most critical conceptual shifts in the PEACE model. Older frameworks—TAM (Davis, 1989), TPACK (Mishra & Koehler, 2006)—are useful for understanding the psychology of technology use but increasingly inadequate for an era where technology is embedded in all teaching practices. The PEACE Framework departs from these models and argues that acceptance is no longer a marker of digital readiness. The framework instead positions the teacher as a digital agent—a professional who uses technology but also defines epistemological, cultural, and ethical contours of digital learning environments. This agentic stance corresponds to that of Lund and Aagaard (2020), who argue that digitalisation requires a reconfiguration of labour between human and technological actors. In this new context, technologies are collaborators rather than passive tools that produce educational meaning.

Agency is thus multidimensional within PEACE Framework:

- Epistemic agency reflective awareness of how knowledge is constructed in digital contexts.

- Pedagogical agency in the form of adaptive, learner-centred AI environments.
- Cultural agency through awareness of sociocultural dimensions of digital pedagogy.

With this triadic model of agency, teacher identity becomes more than user identity—it is a creative partnership with technology.

Pedagogy 3.0 and the Ontology of Digital Learning

In the PEACE Framework, Pedagogy 3.0 is more than a pedagogical update: it's an ontological shift. In an era of continuous connectivity, algorithmic intelligence, and virtual reality, it changes teaching and learning. As opposed to Pedagogy 1.0 and Pedagogy 2.0, which were about transmission and interaction, Pedagogy 3.0 is about co-creation and co-agency between human and digital actors. AI-driven systems are cognitive extensions for teachers who adopt Pedagogy 3.0. Then, they design digital ecosystems that personalise learning, collect multimodal data and work across physical and virtual boundaries. In that paradigm, the educator is the expert of digital complexity—human empathy in balance with technological precision. Such a vision corresponds to Siemens' (2004) theory of connectivism: learning is about building and traversing networks of information and relationships. Teachers create these networks so students can navigate, critique and synthesise distributed knowledge. Thus, teaching becomes less about content delivery than networked intelligence orchestration.

Evolving Epistemology: The Heart of Digital Transformation

Evolving epistemology is the intellectual basis of PEACE. Teachers' epistemological beliefs about knowledge and knowing guide their pedagogical decision-making (Hofer & Pintrich, 1997). Tsai et al. (2013) also found that many educators started out with positivist assumptions about control, correctness, and academic integrity, which are rooted in pre-digital education practices. Later, exposure to digital modalities promoted more flexible constructivist orientations. Evolutionary epistemology requires what Referred to as epistemological elasticity, this

denotes the capacity for context-dependent modes of knowing. In a digital world where tools like AI generate, remix, and visualise information dynamically, teachers must balance certainty and ambiguity. Their traditional validation standards must be balanced with new epistemic criteria such as transparency, adaptability and participatory credibility (An & Oliver, 2021). And this developing epistemology has ethical implications as well. As AI systems shape curriculum and assessment educators need critical literacies about algorithmic biases, data privacy and epistemic authority. So, the PEACE framework sees epistemological awareness not as cognitive but moral and political consciousness.

Agility as Professional Disposition

The professional virtue of adaptability is also promoted in the agility part of the PEACE Framework. In software engineering, agility means iterative development and change readiness (Highsmith, 2009). And in education, it goes beyond technical adaptability to include emotional resilience, pedagogical flexibility, and meta-cognitive self-regulation. Teachers who demonstrate digital agility can adapt to technological disruptions without reverting to old pedagogies. They show pedagogical improvisation—the ability to try things out, fail things and learn constantly. This is similar to Schön's (1987) reflective practitioner disposition adapted for the digital age: teachers learn by reflecting on action in constantly changing digital contexts. Lifelong professional development goes along with agility. Experiential modules in teacher education programmes based on PEACE must include AI tools, virtual simulations, and multimodal instructional design for experimentation with AI tools. So, the goal is to make educators not just digitally literate but pedagogically innovative—capable of shaping change rather than reacting to it.

Digital Ethics & Cultural Consciousness.

Cultural consciousness is necessary in a globalised educational system. In many cases, digital classrooms break down geographical and cultural boundaries to become hybrid spaces where different norms, languages and

identities meet (Kumaravadivelu, 2012). Teachers, therefore, need to demonstrate what Risager (2018) calls transcultural competence—the capacity to mediate between cultural perspectives while being ethically respectful of difference. And for Palestinian educators, cultural consciousness also means dealing with political realities and socio-economic gaps that affect digital access. In this study, the teachers often cited privacy, gender dynamics and family structures as factors shaping online participation. These contextual insights suggest that technology integration is never culturally neutral. In PEACE, cultural consciousness is seen as a meta-competency of awareness, empathy, and ethical reflexivity. It means designing digital learning environments that are inclusive, accessible, and local as well as intercultural. And as Warschauer (2002) puts it, the digital divide is also social and cultural. By placing cultural consciousness at the heart of digital pedagogy, PEACE keeps educational innovation human centred.

Evaluation as Learning

Reimagining evaluation within the PEACE model challenges testing and accountability paradigms. Assessment has to move from standardised measurement to continuous dialogic evaluation that values process as much as product in digitalised education (Conrad & Openo, 2018). It is this conception that corresponds to the principles of learning-oriented assessment (Carless, 2007) and authentic assessment (Doğan et al., 2020). This means multimodal, collaborative assessment—peer review, digital portfolios, reflective blogs, and AI-supported feedback analytics—with learner engagement and metacognition in mind. Also, evaluation in PEACE is based on human and machine judgement. AI will embed itself more deeply in learning management systems, so teachers need to learn to interpret algorithmic assessments critically and ethically. And they must ensure that technology does not replace the human interpretive dimension of evaluation.

Implications for Teacher Education

The PEACE Framework has a policy and programmatic implications for teacher education.

1. Curriculum Design: Teacher preparation programmes should have PEACE as a structural component, so that future educators acquire competences in all five domains. Modules could be "Digital Epistemologies in Education," "AI and Pedagogical Design" and "Cultural Dimensions of Digital Learning".
2. Professional Identity Formation: It is necessary for educators to reconceive of themselves as digital agents of change. This is the transition from survivalist ("coping with technology") to agentic ("co-creating with technology").
3. Institutional Policy: Universities need to invest in digital agility and innovation, for example in AI-enhanced professional development and in institutional cultures of pedagogical experimentation.
4. Research and Evaluation: Continuous research is needed to test the PEACE framework in different disciplines and cultural contexts.
5. Ethical Training: Teacher education must be about ethics of digitalisation—privacy, data governance and algorithmic fairness—and not just peripheral topics.

Challenges and Limitations

The PEACE Framework is a robust model for digital transformation, but some challenges are worth considering.The small sample size - five ELT instructors in one Palestinian university - limits generalisability. Future studies must cross institutional boundaries and be more transferable. Second, PEACE is a product of dynamic grounded theory. Its strength is flexibility, but this fluidity may also hinder operationalisation in policy or practice. third, especially in contexts of low resource, may prevent full realization of Pedagogy 3.0 ideals. Also, technological change - especially

in generative AI - requires constant theoretical revision. Frameworks like PEACE need to keep up with new technologies and social changes.

Future Research Directions

Future scholarship should seek multi-institutional validation of the PEACE Framework using mixed-methods designs to measure teacher efficacy, student engagement and institutional innovation. Cultural/geopolitical comparative studies might reveal how local epistemologies relate to global digitalisation trends. Action research might also use PEACE as a professional development framework to document educator beliefs and practices over time. Longitudinal studies could explore how the framework fosters adaptive expertise and resilience in fast changing digital ecosystems. Also, relevant for interdisciplinary research are the intersections of PEACE with cognitive science, human-AI interaction and digital ethics that open larger debates about how we will learn in intelligent environments. With the PEACE Framework for digitalised education, a new paradigm of teacher preparation is proposed: digitalisation is no longer an auxiliary trend but an essential feature of modern education. The model is based on the grounded theory research and relevant to the lived experience of Palestinian educators. The teacher is reconceived in PEACE as a creative, inclusive, and ethical digital agent—an educator working in and through digital systems. Its five domains—Pedagogy 3.0, Evolving Epistemology, Agility, Cultural Consciousness and Evaluation—build the competencies for this transformation. By adopting PEACE principles, teacher education can move beyond technology "acceptance" to become educators who shape epistemological and ethical landscapes of digital learning. In doing so, it contributes to pedagogical innovation as well as to the human project of combining technological progress with educational objectivity. Based on the grounded empirical research, the PEACE Framework develops a theoretical as well as a practical model for teacher preparation in digitalised education. It goes beyond technology "acceptance" models to digitalisation as ontological condition for knowledge—teaching—

learning. In the age of AI, teachers must move beyond technology users to digital agents—professionals who co-create pedagogical meaning with intelligent systems while being culturally, ethically, and epistemically aware. For this reason, the PEACE model combines digital fluency, epistemological openness, agility, cultural sensitivity, and holistic evaluation. As education systems worldwide grapple with AI, Web 3.0 and global digital interconnectivity, the PEACE Framework offers a new model for teacher preparation. Future research should apply and refine the framework across contexts, testing its adaptability to different disciplines and sociocultural contexts. Ultimately, PEACE is both an acronym and a philosophy which promotes a pedagogical ethos that is human-centred and digitally adaptive.

Conclusion

The PEACE Framework proposes a new model of teacher preparation in digitalised education, beyond technology acceptance models, and considering digitalisation as an ontological condition for knowledge, teaching, and learning. Based on empirical research with Palestinian educators, the model reimagines the teacher as a creative, inclusive and ethical digital agent. Its five domains - Pedagogy 3.0, Evolving Epistemology, Agility, Cultural Consciousness, and Evaluation - build competencies for this transformation. Integrating digital fluency, epistemological openness, agility, cultural sensitivity, and holistic evaluation in PEACE builds a human-centred model of teacher education in a context of global systems grappling with AI, Web 3.0, and digital interconnectivity. Further research must validate and refine this framework in diverse sociocultural and disciplinary contexts.

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Competency-Based English Training Module for Healthcare Professionals: A Needs Analysis Study[1]

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In an era of globalization, English has become the lingua franca of international communication, particularly in science, technology, and healthcare. The ability to communicate effectively in English is indispensable for healthcare professionals who interact with patients, colleagues, and researchers from diverse linguistic and cultural backgrounds. As healthcare services transcend national borders, communication in English increasingly determines not only the accessibility but also the quality and safety of healthcare delivery. Consequently, English language competence has emerged as a critical professional skill in the medical field, enabling accurate diagnosis, treatment coordination, and patient satisfaction.

Türkiye has become one of the leading destinations in medical and health tourism due to its highly qualified healthcare workforce, advanced

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medical infrastructure, affordable treatment options, and cultural hospitality. The country attracts thousands of international patients seeking medical treatment each year. However, despite these strengths, one of the major challenges faced by healthcare providers is the lack of adequate English communication skills among staff. Studies conducted in Türkiye reveal that language barriers between healthcare professionals and international patients can lead to miscommunication, patient dissatisfaction, and even medical errors (Nebioğlu, 2018; Dömbekci, 2019; Aba et al., 2019). Addressing these challenges requires a targeted approach to language education that reflects the realities of healthcare communication.

Although English is a compulsory subject in Turkish schools, the effectiveness of English education remains limited in practice. Several studies highlight that English is taught as a foreign language with insufficient emphasis on practical communication, interaction, and contextual usage (Yaman, 2018; Işık, 2020). Grammar-based instruction, lack of qualified teachers, and the absence of exposure to authentic English-speaking environments hinder the development of communicative competence. For healthcare professionals, this translates into difficulties when interacting with international patients, interpreting medical documents, or participating in global academic and professional networks.

Given the communicative nature of healthcare settings, English proficiency must extend beyond grammatical knowledge to include functional and interpersonal dimensions of communication. The Common European Framework of Reference for Languages (CEFR) (2001) provides a comprehensive framework for defining language competence in terms of linguistic, pragmatic, and sociolinguistic skills. Applying this framework to healthcare English instruction allows for a more holistic understanding of professionals' needs and supports the design of learning materials that focus on real-world interactions in medical contexts, such as patient interviews, consultations, and interdisciplinary collaboration.

Therefore, possessing English communicative competence plays a pivotal role in enhancing the quality of healthcare services and fostering the professional development of healthcare professionals.

This study was designed to identify the English language needs of healthcare professionals working in public and private hospitals in Türkiye. A mixed-methods approach that combined quantitative surveys and qualitative interviews was used. The research explored participants' self-assessed competencies, learning experiences, and challenges in English communication in their professional lives. The findings provide insight into the factors that facilitate or limit foreign language proficiency, including educational background, exposure to English, motivation, and practical opportunities for language use.

Based on the results of this needs analysis, a Competency-Based English Training Module for healthcare professionals was developed. The module is structured around the communicative competence dimensions defined by CEFR and integrates real-life hospital scenarios, dialogues, and medical cases. Thus, the aim was to enhance the English language performance of medical professionals in workplace contexts. By strengthening linguistic, pragmatic, and sociolinguistic competencies, the proposed module aims to help healthcare professionals communicate more effectively with international patients, contribute to global health collaboration, and elevate the quality and inclusivity of healthcare services within Türkiye's growing health tourism sector.

Literature Review

Health tourism is defined as the travel of individuals to a country other than their own in order to receive medical treatment and benefit from related healthcare services. In this type of tourism, it is crucial that patients have access to high-quality medical care and treatment, as well as supportive services that enhance their rest and recovery process. In recent years, the number of foreign patients visiting Türkiye for health tourism has increased. Various push and pull factors influence patients' mobility

in this field. Türkiye offers numerous attractive features, including traditional tourism opportunities, ease of transportation, affordable treatment costs, post-treatment accommodation options, and overall low cost of living (Nebioğlu, 2018).

Communication with those who come to Türkiye for medical reasons is most commonly established in English, which serves as the lingua franca. Every healthcare professional involved in the treatment and care process is required to communicate with patients in English. Although interpreters are often assigned by health tourism companies to assist patients during their treatment and accommodation processes, direct communication between healthcare professionals and patients enhances trust and confidence. Therefore, it is essential that healthcare professionals receive English language training and actively use the language. Improving the English proficiency of healthcare professionals such as doctors, nurses, and technicians will increase the quality of both treatment and service delivery. A study on the development of health tourism in Türkiye concluded that staff training in foreign languages is a necessity (Dömbekci, 2019). This finding highlights the importance of foreign language proficiency in improving services for international patients within the health tourism sector.

In a previous study conducted with Turkish healthcare professionals who had experience with foreign patients, the most significant challenge identified was communication problems. This study revealed that participants most frequently experienced difficulties in communication with patients and their relatives (Demirer, 2010). Similar findings were reported in studies conducted by Dökme (2016) and Yiğit (2016), which also emphasized communication challenges with patients and their families. Possible explanations include healthcare staff's limited foreign language proficiency, the high number of patients arriving particularly from non-English-speaking Middle Eastern countries, and intercultural differences. The inability of patients to communicate in any language other than English, combined with doctors' and nurses' inadequate English

skills, negatively affects the treatment process. Communication failures between patients and doctors may lead to misdiagnoses or inappropriate treatments. Consequently, such problems can cause disappointment and dissatisfaction among patients who travel abroad seeking recovery. Therefore, it is imperative that healthcare professionals acquire sufficient English proficiency to ensure effective communication with patients. To ensure that international patients leave Türkiye satisfied with their medical experience, it has been suggested that foreign language training for healthcare staff should be expanded (Aba et al., 2019).

Although English education is compulsory in primary and secondary schools under the Turkish Ministry of National Education, communication problems persist in practice. Scholars argue that there are several challenges in English language education in Türkiye (Yaman, 2018; Koru & Akesson, 2012; Işık, 2020). These include the status of English as a foreign rather than a second language, inadequacies in teacher qualifications, the time and patience required for language acquisition in foreign language environments, existing prejudices against English learning, the limited quality of local textbooks despite recent efforts, and the ineffective use of assessment tools that fail to support learning outcomes. Koru and Akesson (2012) highlighted the contributions of English language education to the personal and professional development of professionals in Türkiye:

> Providing English language training to career-oriented adults may help address some of Türkiye's deficiencies in the short term. Bureaucrats, doctors, and other professionals could greatly benefit from professional English training, which would enhance their participation in international conferences, enable them to read academic articles, and help them follow international news (p. 7)

Eliminating language barriers in the healthcare sector, where communication is of utmost importance, will enhance the value and quality of healthcare services. Research indicates that inefficiencies in foreign language education in Türkiye stem from issues in teaching approaches, policy planning, teacher training, instructional materials, and

assessment systems (Işık, 2020). The key to successful English learning lies in developing all core skills: reading, writing, listening, speaking, grammar, and vocabulary effectively and holistically. Recently, English learning materials have been designed across both print and digital media to support each of these skills. However, the extent to which these materials contribute to professional English remains a topic of discussion. According to Hutchinson and Waters (1990, p. 85), materials are tools that facilitate the achievement of learning objectives and enable the learning process. Gözütok (2006, p. 301) defines materials as objects, symbols, descriptions, or written documents that serve as carriers of information between source and receiver, encompassing all written, visual, mechanical, or electronic instruments. Instructional materials and tools are selected and used to facilitate the achievement of the course objectives. (Işık & Altmışdört, 2010).

The Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR), translated and implemented by the Turkish Ministry of National Education's Board of Education and Discipline, plays a vital role in English language teaching and assessment in Türkiye. The general approach of the CEFR is summarized as follows:

> Language use, including language learning, comprises actions performed by individuals as social agents. These individuals develop a range of competences, both general and communicative. They draw upon these competences to engage in language activities involving the production and/or reception of texts related to specific themes within certain domains, under various conditions and constraints, by activating strategies deemed most appropriate for carrying out the tasks at hand. The monitoring of these actions by participants contributes to the consolidation or modification of their competences (CEFR, 2001, Section 2.1).

According to the CEFR, communicative language competences are categorized into three components: "Linguistic competence," "Pragmatic competence," and "Sociolinguistic competence."

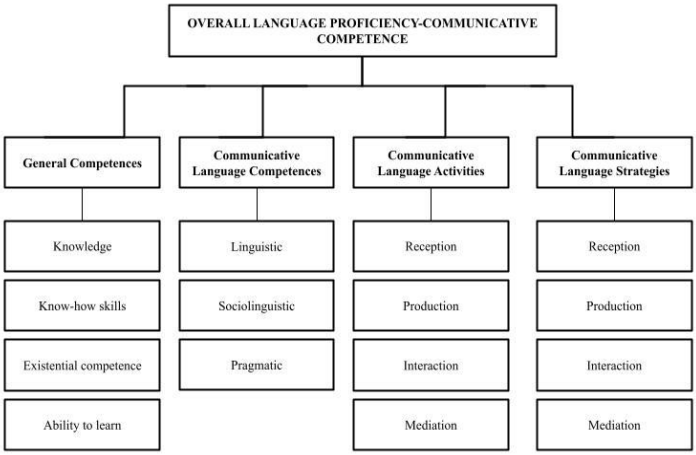


Figure 1 *The Structure of the CEFR Descriptive Scheme*

Based on the language needs identified through research, this study aims to develop a Competency-Based English for Specific Purposes (ESP) material for healthcare professionals. The proposed material is designed to contribute to the improvement of healthcare workers' professional English competence.

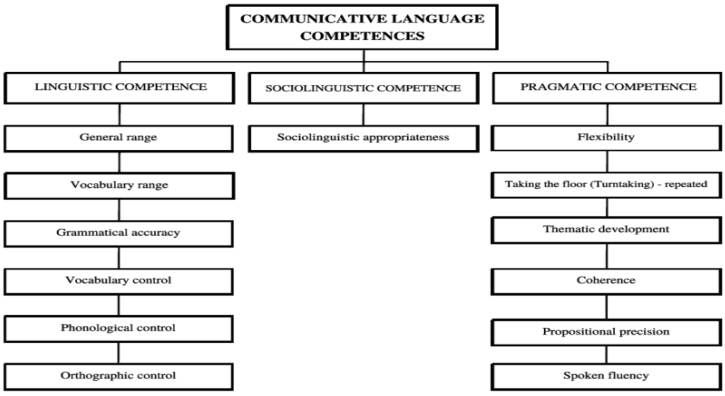


Figure 2 *Communicative Language Competences*

Methodology

Research Design

This study employed a mixed methods research design combining quantitative and qualitative approaches. The quantitative component adopted a descriptive cross sectional survey model to identify healthcare professionals' English language proficiency levels and communicative needs at a single point in time. The qualitative component consisted of semi structured interviews designed to explore participants' experiences, perceived challenges, and contextual factors influencing English use in healthcare settings. This complementary integration of methods enabled both breadth of data and depth of interpretation.

Accordingly, the study was guided by the following research questions:

1. What are the self-perceived English language proficiency levels of healthcare professionals working in public and private hospitals in Türkiye in terms of reading, writing, listening, and speaking skills?
2. In which professional situations do healthcare professionals most frequently need to use English when communicating with foreign patients and colleagues, and what specific communication difficulties do they report in these contexts?
3. Which educational, experiential, and affective factors (previous English education, exposure to English, motivation, practice opportunities etc.) do healthcare professionals identify as facilitating or limiting their English language learning and use?
4. How do healthcare professionals' English language needs and self-efficacy perceptions relate to the dimensions of communicative competence defined in the CEFR (linguistic, pragmatic, and sociolinguistic competences)?
5. How can the needs analysis findings be translated into a competency-based Medical English training module that effectively supports healthcare professionals' communication in

workplace settings, particularly within the context of health tourism in Türkiye?

The study was conducted with the approval of the Ethics Committee for Social and Human Sciences Research at İstinye University.

Participants and Sampling Strategy

The target population consisted of healthcare professionals working in public and private hospitals in Türkiye. A total of 232 participants completed the online questionnaire, and 12 volunteered for follow up interviews. Inclusion criteria were being an active healthcare worker and having professional contact with foreign patients or international colleagues. No restrictions were placed on age, gender, or specific healthcare role to ensure representation of the sector as a whole. A convenience sampling strategy was used due to the demanding schedules of healthcare workers; hospital administrators and professional networks facilitated access to participants.

Data Collection Methods

Data were collected using two primary methods: an online survey and semi structured interviews. The survey gathered demographic information and self-assessed English competences across reading, writing, listening, speaking, and vocabulary domains. The questionnaire also included open ended questions to capture personal reflections. Interviews provided deeper insight into the challenges and needs identified in the survey. Content validity of the adapted scale was supported through expert review, and reliability was ensured through internal consistency checks. Interview protocols followed a standard set of guiding questions but allowed participants to elaborate freely.

Instruments and Tools

The survey instrument was based on the English Language Proficiency Scale developed by Ocak, Küçükçınar, and Karakuyu (2022) and adapted for healthcare contexts. Items were modified to include medical English tasks such as understanding anamnesis forms, describing treatments, and

communicating with foreign patients. The final instrument consisted of demographic items, 20 Likert scale items, and two open ended questions. Three experts in Applied Linguistics and healthcare education reviewed the adapted scale for clarity, relevance, and field appropriateness. Semi structured interview protocols were developed by the researchers to elicit information on communicative challenges, professional expectations, and perceptions of English learning experiences.

Data Collection Procedure

The questionnaire was administered online via Google Forms over a four-week period. Participants accessed the survey through links distributed by hospital units, professional WhatsApp groups, and institutional email lists. Informed consent was obtained digitally prior to participation. Interview volunteers were contacted individually, and interviews were conducted via Zoom at a time convenient for each participant. Interviews lasted approximately 20-30 minutes and were audio recorded with permission. Quantitative data were analysed descriptively, while qualitative responses were subjected to thematic analysis to identify recurrent patterns and explanatory factors.

Results and Discussion

Demographic Data

Considering the demographic characteristics of the healthcare professionals who participated in the study, several findings emerged. To evaluate their English communication skills, participants were asked to provide demographic information in the survey. Figure 3 below illustrates the gender distribution of the 232 healthcare professionals who took part in the study. As shown, 84.1% of the participants were female, while 15.9% were male.

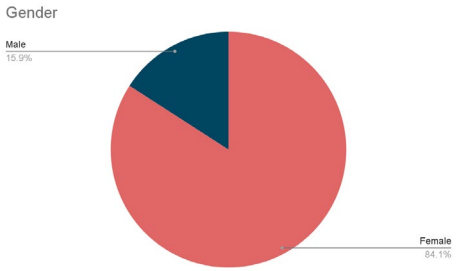


Figure 3 *Gender Distribution of Healthcare Professionals Participating in the Study*

The healthcare professionals who participated in the study were asked to indicate their age. As shown in Figure 4, 33.2% of the participants were between 25-30 years old, while 25% were aged 35 and above. Additionally, 21.6% were between 18–25 years old, and 20.3% were between 30–35 years old.

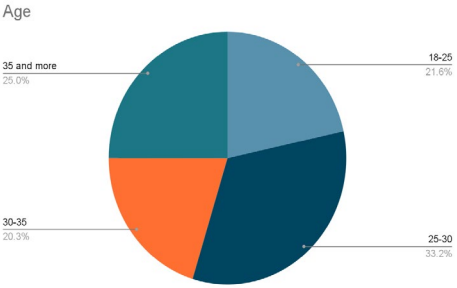


Figure 4 *Age Distribution of Healthcare Professionals Participating in the Study*

The study was conducted with the participation of healthcare professionals from a wide range of occupational backgrounds. Among the 232 respondents, the majority (77.9 percent) were Nurses, EMTs, Paramedics, Public Health Officers, and Midwives. Smaller groups included Head Nurses or Supervising Nurses (4.8 percent), Physicians (3 percent), Anesthesia, Dialysis, or Health Technicians (3 percent), Dietitians (2.2 percent), Interns or Trainees (1.7 percent), Physiotherapy Technicians (1.3

percent), and Physiotherapists or Ergotherapists (0.9 percent). The remaining participants consisted of various roles such as Medical Secretaries, Documentation Specialists, Health Consultants, Academicians, Radiotherapy Technicians, Students, Branch Managers, Medical Faculty Students, Heads of Health Services Departments, Nurse Child Development Specialists, and Other Nurses, each representing 0.4 percent of the sample. This distribution reflects the diverse and multidimensional structure of the healthcare workforce included in the study.

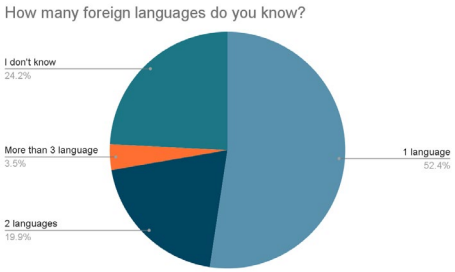


Figure 5 *Foreign Language Knowledge Distribution of Healthcare Professionals*

The healthcare professionals who participated in the study were asked how many foreign languages they knew. This question aimed to understand their language abilities and how multilingualism affects their professional lives. According to the responses of 231 participants, 52.4% reported knowing one foreign language, 19.9% reported knowing two, 3.5% reported knowing three or more, while 24.2% stated that they did not know any foreign language (See Figure 5).

Findings from the English Self-Efficacy Scale

Healthcare professionals who participated in the study were asked questions based on the English Self-Efficacy Scale. The purpose of this section was to assess their confidence and competence in using English in professional contexts. Through the scale, participants' individual

performance levels, language needs, and attitudes toward English were identified. The findings provided insight into their overall English proficiency and areas requiring improvement. Participants responded to each statement using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). A rating of 1 indicated a strongly negative view or complete disagreement with the statement, while a rating of 5 reflected a strongly positive view or full agreement.

Table 1

Summary of Quantitative Findings (Descriptive Statistics)

Question	***Mean***	***SD***
I can answer questions about the texts I read in English (Medical English, everyday English).	3.40	1.06
I can understand an anamnesis or epicrisis that I read in English and summarize it in Turkish.	3.34	1.05
I can find a diagnosis based on the patient's medical history reported in English.	3.28	1.10
I can correctly answer true/false questions about an English text I read.	3.36	1.08
I can communicate and assist patients without needing an English translator.	3.15	1.13
I can understand what patients and their relatives say in English without listening to it again.	3.18	1.11
I can understand the lyrics of an English song I listen to.	3.50	1.02
I can understand English in a video I watch.	3.36	1.06
I can understand English telephone conversations/listenings/podcasts.	3.26	1.10
I can understand the dialogue in an English movie I watch without subtitles.	3.17	1.15
I can understand an English listening passage even if there is a word in it whose meaning I don't know.	3.33	1.12
I can sing in English.	3.85	1.02
I can tell patients in English what they should/shouldn't do.	3.55	1.05
I can give directions in English.	3.60	1.00

I can speak English with my foreign colleagues on the phone/online.	3.40	1.07
I can answer questions asked during patient treatment/care in English.	3.35	1.08
I can use my mobile phone and computer in English.	3.76	1.03
I can write a few paragraphs of English text on a particular topic without help.	3.45	1.12
I can use my social media accounts in English.	3.87	0.98
I can type in English in online games.	3.65	1.10

Healthcare professionals were asked to evaluate their ability to understand and respond to questions related to English texts, both general and medical. A total of 232 responses were collected. The findings revealed that 42.7% of participants reflected their **pragmatic competence** by confirming that they understood main ideas and expressing them clearly.

Participants were also asked to assess their ability to understand and summarize English anamnesis reports and epicrises. Among the 232 participants, 54.3% selected strongly agree or agree, indicating a combination of **linguistic** and **pragmatic competences**. This means that over half of the healthcare professionals are capable of interpreting medical reports and summarizing them accurately in English. These findings demonstrate a satisfactory level of professional comprehension and written communication skills among the respondents.

When participants were asked to determine a diagnosis based on a patient's medical history written in English, 60.3% reported positive responses. This indicates that the majority of healthcare professionals possess a strong level of **linguistic competence**, particularly in understanding technical vocabulary related to diagnosis and treatment. Their responses reflect the ability to apply medical English effectively in a clinical context. Consequently, this competence plays a crucial role in accurate patient evaluation and case interpretation.

In another item, participants were asked to assess their ability to correctly answer true/false questions related to English reading passages. According to the findings, 44.2% of the participants indicated their ability to answer

true or false questions while reading texts, comprehension of text structure and set logical connections within passages.

When healthcare professionals were also asked to evaluate their ability to communicate and assist patients in English without the help of an interpreter, a total of 50.8% of participants relied on their ability to communicate without an interpreter. This suggests that they are able to engage in clear, understandable patient communication and reflects a moderate but essential level of English proficiency that supports practical, real-world interaction in healthcare environments. This is also an indicator of **pragmatic competence**, which is particularly valuable in health tourism and international patient care settings.

When participants were asked whether they could understand the lyrics of an English song, 56.3% of the participants agreed, indicating that more than half of the respondents can interpret common idiomatic expressions and understand cultural nuances in the English language. It also reflects an awareness of tone, humour, and informal communication patterns. This sociolinguistic understanding enhances their overall communicative flexibility in multicultural settings. This finding gives us information about the **sociolinguistic competence** of the participants.

Participants were asked about their ability to understand English phone conversations, listening passages, and podcasts. According to the findings, 51.9% agreed that they can comprehend general and professional spoken English. These participants are able to follow discussions on both concrete and abstract topics, reflecting adequate listening comprehension skills. This ability also supports effective communication with international colleagues and patients in real-world medical situations, an implication of the **linguistic competence** of the participants.

When asked about understanding spoken English in films without subtitles, 57.6% of healthcare professionals agreed that they can understand authentic spoken language, including humour, irony, and cultural references. The results also show that they are comfortable following natural, idiomatic speech that often appears in media. These

findings indicate a practical command of English that extends beyond strictly professional use and their **linguistic**/**sociolinguistic competences**.

In another question, participants were asked whether they could understand English listening passages even if they contained unfamiliar words. A total of 59.8% of participants agreed that they can infer meaning through context and maintain comprehension. This reflects an ability to process the general sense of communication even when their vocabulary is limited. Such a competence, **pragmatic competence,** proves that effective communication under real-life conditions where a complete understanding of every word is not possible.

Healthcare professionals were asked to evaluate their ability to explain to patients in English what they should or should not do in their daily hospital routines. According to these findings, 56.3% of participants agreed that they can deliver instructions clearly and maintain coherence in spoken English. Moreover, this ability contributes to improved communication with patients and ensures safety and clarity in healthcare interactions. These abilities are indicators of **pragmatic competence.**

Another question examined participants' ability to give directions or provide instructions in English within the hospital. According to the findings, 51.1% agreed that they are capable of using English appropriately for workplace communication and can adapt their speech to formal or semi-formal situations. Such flexibility demonstrates a functional command of English suitable for professional environments. These skills are indicators of both **linguistic** and **sociolinguistic competences**.

When asked about communicating in English with foreign colleagues during phone or online conversations, 64% of participants agreed and strongly agreed that they can sustain interaction, respond appropriately, and manage conversational flow effectively. This high percentage highlights their readiness for international collaboration in healthcare showing their **linguistic**, **sociolinguistic**, and **pragmatic competences**. Participants were additionally asked whether they could verbally respond

in English to questions posed by foreign patients during treatment or care. The findings showed that 62.3 percent reported being able to do this, indicating self-perceived strengths across **linguistic, sociolinguistic, and pragmatic competences.** This suggests that they consider themselves capable of communicating clearly and appropriately in patient interactions.

When asked whether they use their mobile phones and computers in English, 43% of the participants reported that they can integrate English into their digital routines but primarily at a basic functional level. It also indicates that English is part of their daily interaction with technology, in other words **linguistic competence**. However, there remains a need for improvement in digital literacy using English in professional contexts.

To evaluate writing skills, participants were asked whether they could write a few paragraphs in English on a specific topic without assistance. The findings indicate that 55.2% agreed that they can produce coherent, organized, and accurate written texts. Their ability to express ideas in writing reflects practical language competence suitable for documentation and report preparation, which reflects **linguistic and pragmatic competences.**

Finally, participants were asked about their use of English on social media and in online games. The results revealed that 43.5% and 45.2% of participants, respectively, reflected their **linguistic competence**. By reporting that they use English in informal, everyday contexts beyond the workplace. Such engagement with the language contributes to maintaining fluency and vocabulary retention. However, it also shows that their English exposure often remains within informal domains rather than academic or professional use.

Interpretation of Open-Ended Questions

At the end of the questionnaire, open-ended questions were included to allow participants to elaborate on their personal experiences and opinions in depth. The questions asked were: "*What factors have facilitated or hindered your English learning during your education? In your opinion,*

how does this education affect your professional life in the hospital?". Of the 232 healthcare professionals, 97 responded to these open-ended questions. The responses were grouped under two main categories: "Factors Enhancing Foreign Language Proficiency" and "Factors Limiting Foreign Language Proficiency."

Within these two categories, participants' opinions were thematically analysed. Accordingly, the factors that facilitated and hindered participants' English learning are presented below:

Table 2

Interpretation of Open-Ended Questions

Factors Enhancing Foreign Language Proficiency	***Factors Limiting Foreign Language Proficiency***
Private tutoring and language courses	Deficiencies in the education system
Preparatory education	Lack of educational materials
Student-centered teaching approach	Lack of practice opportunities
Exposure to the foreign language	Lack of motivation
Cultural interaction and practical use	Prejudices toward language learning

Factors Enhancing Foreign Language Proficiency

Private Tutoring and Courses: Healthcare professionals stated that attending English courses and receiving private tutoring helped them improve their language proficiency and that this education directly benefited their professional performance. It was noted that private English courses facilitate learning by employing diverse teaching methods and practical approaches. Furthermore, individualized instruction allows learners to focus on specific communication skills relevant to their field. Such personalized learning environments foster confidence and encourage active language use.

Preparatory Education: Healthcare professionals who attended English preparatory classes before high school or undergraduate studies reported finding this experience beneficial for language learning. Unlike

mandatory education, preparatory classes are often student-centred and include instructors who are native speakers of English, both of which have a positive impact on language acquisition. The exposure to authentic language input during these programs enhances listening and speaking competencies. Therefore, early and intensive preparatory education contributes significantly to later language proficiency.

Student-Centred Education: Replacing traditional, grammar-based, and rote-learning models with student-centred approaches that emphasize listening and speaking skills leads to greater success in English learning. This approach encourages students to learn the language through experience and interaction, allowing for more permanent and functional language development. Moreover, communicative and task-based methods motivate learners to engage more actively in the learning process. As a result, the overall effectiveness of language education is substantially increased.

Exposure to the Foreign Language: Healthcare professionals are directly and indirectly exposed to English in their professional environments. The language of medicine contains both Latin and English terminology, increasing exposure to foreign languages. Additionally, many medical tools and technological devices used in hospitals have English interfaces, while most academic publications and international research in the field are written in English. Continuous exposure to English in professional contexts supports vocabulary development and reinforces comprehension.

Cultural Interaction and Practice: The acceptance of international patients in hospitals, participation in Erasmus programs, and overseas training opportunities increase cultural interaction among healthcare professionals in Türkiye. These factors enhance speaking practice and encourage real-life communication in English. Moreover, frequent exposure to English through the internet, online games, TV series, movies, and music contributes to improving listening and pronunciation skills.

Such ongoing cultural and linguistic interaction supports both fluency and intercultural competence.

Factors Limiting Foreign Language Proficiency

Deficiencies in the Education System: Healthcare professionals reported that shortcomings in the education system make English learning difficult. They expressed that the mandatory education system focuses excessively on memorizing grammar rules. Repetitive curricula throughout years of compulsory and higher education were criticized for not promoting active language use. Participants also noted that English was rarely applied in real-life contexts and that teaching English through Turkish negatively affected learning outcomes. Lessons taught by native English-speaking instructors were found to be significantly more effective in promoting practical communication skills.

Lack of Educational Materials: Another factor hindering English learning is the inadequacy of instructional materials. Participants stated that materials used in both courses and schools were repetitive and impractical. Many educational modules were reported to lack focus on comprehension and speaking, limiting opportunities for active use of English. The absence of engaging, context-based materials that encourage learners to apply language skills in authentic situations negatively impacts both motivation and retention.

Lack of Practice: Theoretical English instruction in schools that lacks practical application negatively affects the learning process. In Türkiye, English is often taught exclusively among Turkish speakers, where both students and teachers share the same native language. This limited linguistic environment restricts exposure to authentic English communication. It was emphasized that learning becomes significantly more effective when learners have the opportunity to practice with native or proficient speakers of English.

Lack of Motivation: Since compulsory education does not arise from individual interest or curiosity, it can negatively influence motivation for English learning. When English is only actively used in formal education

and not maintained in daily or professional life, it hinders the achievement of desired learning outcomes. In addition, the absence of immediate professional necessity may reduce learners' commitment to improving their skills. Sustained motivation is essential for continuous progress in language proficiency.

Prejudices: Participants noted that they often experience prejudice, fear of failure, and anxiety about making mistakes during the process of learning English. Such emotional barriers can limit participation and reduce self-confidence in communication. Furthermore, financial concerns were expressed due to the high cost of language courses and materials. Time constraints arising from work responsibilities and other priorities were also cited as obstacles to continuing English education. These combined factors contribute to reduced engagement in long-term language learning.

Findings from the Interview Data

The interview data reveal several interconnected themes regarding the English language needs of healthcare professionals in Türkiye. Participants consistently emphasised that English proficiency is not merely an additional skill but a professional necessity driven by the internationalisation of healthcare services, scientific communication, and health tourism. Their accounts highlight that up-to-date medical literature, international guidelines, and evidence-based practices are mostly available in English; therefore, insufficient language skills directly limit access to new knowledge and hinder professional development.

Another strong theme emerging from the interviews is the impact of Türkiye's growing health tourism sector. Participants frequently referred to encounters with international patients and foreign colleagues working through exchange programmes, training activities, or visiting Turkey for treatment. These experiences underline that healthcare professionals must not only understand medical terminology but also communicate with clarity, empathy, and accuracy in English. Interviewees reported that when

communication occurs in a multilingual environment, misunderstandings can lead to delays in treatment, misinterpretations of patient needs, or uncertainty among team members. Several participants linked communication problems to decreased motivation and increased stress in the workplace, highlighting the emotional burden of language barriers.

The interviews also indicate that English competencies vary across institutions and roles, but the need is shared widely. Nurses, emergency medical technicians, paramedics, midwives, and other frontline practitioners, those who interact with patients most frequently, reported the greatest need for practical English communication skills. Participants described being able to follow general and medical texts when contextual cues are present and expressed confidence in understanding common terminology. However, they also pointed out gaps in spontaneous speaking, especially during high-pressure clinical interactions or when dealing with unfamiliar accents.

Participants' descriptions of their learning experiences further illuminate structural challenges. Since English is taught as a foreign language in Türkiye, interviewees reported limited opportunities for real-life practice. They emphasised that, although exposure through media and social platforms contributes to vocabulary development, it does not fully prepare them for professional exchanges that require precision and immediacy. Consequently, some participants rely on digital translation tools when faced with communication breakdowns an approach they acknowledged as helpful but insufficient in clinical settings where accuracy is critical.

Overall, the interview data indicate that while Turkish healthcare professionals demonstrate willingness and motivation to use English, the current level of competence is not always adequate for the demands of internationalised healthcare environments. The findings suggest a clear need for competency-based, profession-specific English training that integrates medical scenarios, patient communication, and interdisciplinary collaboration in English.

An Educational Model Derived from Healthcare Professionals' Needs Analysis

The module design was developed based on the research findings that identified English language proficiency levels, learning needs, and communication challenges faced by healthcare professionals. The study revealed that most participants used English only to a limited extent in both daily and professional contexts, and that speaking, listening, and writing skills required significant improvement. Furthermore, the factors negatively affecting language learning included an overly theoretical education system, a lack of practical application, insufficient learning materials, low motivation, and prevalent biases. In light of these findings, the Competency-Based Healthcare English Modules (See Module contents below) were designed to enable healthcare professionals to use English effectively and functionally in professional settings.

The module is tailored for healthcare workers at the B1-B2 English proficiency level. It covers key professional themes such as hospital departments, medical staff, basic anatomy and physiology, patient registration and admission processes, diseases and treatments, surgical procedures, emergency situations, hospital equipment, and patient education. This structure not only enhances participants' command of medical terminology but also holistically develops their ability to communicate in English within their work environment. The content of each module is directly aligned with the needs and shortcomings identified in the study. For example, **Module 1 (Hospital Tour)** and **Module 3 (Patient Admission and Registration)** address the challenges healthcare professionals experience when communicating with foreign patients and colleagues in hospital settings. The findings revealed that participants often struggled with sociolinguistic appropriateness and turn-taking skills; thus, these modules were built around roleplay, listening, and interactive learning activities to bridge those gaps. **Module 2 (The Human Body)** and **Module 4 (Diseases and Treatments)** respond to the observed lack of technical vocabulary. While participants were somewhat familiar with

medical terminology, they faced difficulties using it accurately and contextually. These modules employ visual, auditory, and textual materials to strengthen vocabulary acquisition (lexical control) while integrating it with medical knowledge, thus reinforcing linguistic competence. **Module 5 (Surgical Procedures)** and **Module 6 (First Aid and Emergency Situations)** aim to develop the ability to use English in high-pressure environments that require rapid decision-making and effective communication. The research underlined that linguistic inadequacies can compromise patient safety. Therefore, these modules emphasize pre- and postoperative communication, emergency protocols, and first aid terminology, thereby enhancing **pragmatic competence** through simulation and scenario-based practice. **Module 7 (Hospital Equipment)** and **Module 8 (Patient Education and Discharge)** focus on addressing the deficits in digital literacy and patient education identified in the study. Participants reported difficulties operating English-based medical devices and creating or understanding patient information materials. These modules incorporate visual aids and interactive simulations to integrate language learning with technological proficiency.

In conclusion, this module design directly responds to the key findings of the research, linguistic inadequacy, lack of practical application, need for instructional materials, and low motivation. The Competency-Based Healthcare English Module offers not only language instruction but also a holistic learning model that empowers healthcare professionals to communicate confidently, effectively, and with intercultural awareness in their professional environments. In this respect, it represents a strategic contribution to Türkiye's growing capacity in healthcare tourism and international patient services.

Recommended Competency-Based Module of the research is as follows:

Module 1: Hospital Tour

Course Description	This course introduces students to hospital departments through authentic materials designed to meet reading, writing,

	speaking, and listening needs. It also introduces healthcare staff and their responsibilities.
Course Content	Hospital departments, hospital staff.
Learning Outcomes	Introduce themselves and their professions in English. Identify and describe hospital departments and give directions.
Target Language Competence	Linguistic: Vocabulary, lexical control. Sociolinguistic: Appropriateness. Pragmatic: Thematic development.
Course Materials	Online hospital simulations, videos introducing staff, posters of hospital units, roleplay activities introducing professions, hospital map matching activity.

Module 2: The Human Body

Course Description	This course enables learners to name and describe parts and systems of the human body in English and express their functions.
Course Content	Terms and concepts related to the human body and its functioning.
Learning Outcomes	Learn English equivalents of basic professional terminology. Describe how the human body and systems work in English.
Target Language Competence	Linguistic: General range, vocabulary, lexical control. Sociolinguistic: Appropriateness. Pragmatic: Thematic development, coherence, cohesion.
Course Materials	Anatomical diagrams and visuals, animations and videos illustrating the human body, quiz test.

Module 3: Patient Admission and Registration

Course Description	This module focuses on the patient admission process using materials that develop all four language skills. Dialogues from real hospital contexts are included.
Course Content	Doctor appointment processes, patient greeting and registration, asking and answering questions.
Learning Outcomes	Communicate with patients in English. Ask and respond to questions. Tell the time and give directions.

Target Language Competence	Linguistic: Vocabulary, general range. Sociolinguistic: Appropriateness. Pragmatic: Thematic development, turn-taking.
Course Materials	Sample patient registration form, patient history fill-in-the-blanks, call center telephone conversation.

Module 4: Diseases and Treatments

Course Description	This module teaches about different diseases and their treatment methods in English through reading, writing, listening, and speaking tasks.
Course Content	Types of diseases, physical examination, diagnostic and imaging methods used in hospitals.
Learning Outcomes	Describe diseases and treatments in English. Explain diagnostic and therapeutic methods and tools. Guide patients appropriately in English.
Target Language Competence	Linguistic: Vocabulary, lexical and phonological control. Sociolinguistic: Appropriateness. Pragmatic: Turn-taking.
Course Materials	Film/series scenes set in hospitals, doctors' consultation notes, visuals of medical devices, nurse shift notes, matching exercises for treatment methods, sample patient treatment plan.

Module 5: Surgical Procedures

Course Description	This module covers surgical interventions, medical instruments, and communication in English before, during, and after surgery.
Course Content	Types of surgeries, equipment, precautions, and rules; preoperative patient communication practice.
Learning Outcomes	Identify surgical procedure names. Recognize surgical instruments. Communicate effectively with patients and colleagues before, during, and after surgery.
Target Language Competence	Linguistic: Vocabulary, general range. Sociolinguistic: Appropriateness. Pragmatic: Thematic development, coherence, cohesion.
Course Materials	Surgical animations, instrument matching activities, film/series dialogues, listening task describing procedures, operation room rules poster.

Module 6: First Aid and Emergency Situations

Course Description	This module focuses on English terminology and communication used in emergencies, especially listening and speaking skills.
Course Content	Emergency vocabulary, communication techniques, first aid rules.
Learning Outcomes	Use English terminology related to first aid. Describe safety measures and emergency applications. Explain tools used in emergencies in English.
Target Language Competence	Linguistic: Vocabulary, general range. Sociolinguistic: Appropriateness. Pragmatic: Thematic development, fluency, turn-taking.
Course Materials	First aid manuals, 112 emergency call dialogues, roleplay of calling an ambulance, emergency report writing, CPR guides, Heimlich manoeuvre animations, hospital emergency codes poster.

Module 7: Hospital Equipment

Course Description	This module helps students identify and describe hospital equipment and their functions in English, focusing on reading, writing, speaking, and listening skills.
Course Content	Introduction to hospital equipment and their functions.
Learning Outcomes	Identify hospital equipment in English. Describe their functions and usage. Explain equipment operation to patients and colleagues. Conduct research about medical devices in English.
Target Language Competence	Linguistic: Vocabulary, lexical and orthographic control. Pragmatic: Thematic development.
Course Materials	Visuals of devices (glucometer, sphygmomanometer, ECG, defibrillator, monitor, pulse oximeter), equipment manuals, MRI safety posters, oxygen mask animations, medical brochure.

Module 8: Patient Education and Discharge

Course Description	This module aims to enable students to communicate effectively with patients in English to reduce, improve, and prevent illnesses.

Course Content	Patient and family education, diabetes education, nutrition, maternal and child health, infection prevention.
Learning Outcomes	Educate patients according to their age, occupation, and sociocultural background. Provide guidance according to patients' conditions. Understand patients' needs in English.
Target Language Competence	Linguistic: Vocabulary, lexical and orthographic control. Sociolinguistic: Appropriateness. Pragmatic: Thematic development, flexibility, turn-taking.
Course Materials	Roleplays and demonstrations, diabetes education, blood pressure tracking booklet, posters on diet and healthy habits, infection control brochures, isolation rules posters.

Conclusion

This study examined healthcare professionals' English language education and the situations they encounter in their professional lives in relation to this education. The data were collected from 232 healthcare professionals through questionnaires and interviews. Participants underlined the importance of English in their professional lives, as in all other fields. Factors that support and hinder English learning were identified. It was found that insufficient English communication skills lead to negative outcomes for both healthcare staff and the patients they care for. Although English is taught for many years, the limited use of the language in daily and professional life was questioned, and the consequences of this limitation in the health context were identified. At the same time, shortcomings and areas for improvement regarding the English teaching methods used in Türkiye were revealed. It was observed that teaching English mainly through grammar and memorisation does not contribute to communication. On the contrary, it was stated that focusing on the four skills of speaking, listening, reading, and writing would be more beneficial. Furthermore, it was determined that factors such as lack of practice and shortage of suitable materials reduce efficiency in the language learning process. In addition, psychological factors such as

prejudices and loss of motivation also act as barriers to progress in learning English.

The analysis of the quantitative scale items and qualitative interview data reveals a multidimensional picture of healthcare professionals' communicative competences in English. When interpreted through the CEFR framework, the findings indicate that participants demonstrate partial yet uneven development across linguistic, pragmatic, and sociolinguistic competences.

Linguistic competence was found to be moderately strong in areas involving recognition of vocabulary, understanding of common medical terminology, and the ability to follow written materials such as anamnesis reports, epicrises, or nurse shift notes. More than half of the participants reported being able to comprehend written medical information in English and infer meaning even when unfamiliar words appeared. This suggests that lexical recognition, general range, and inference skills are functional. However, limitations were observed in productive linguistic skills, particularly in writing extended texts or expressing complex clinical explanations. This reveals a gap between receptive and productive linguistic control, indicating the need for targeted vocabulary expansion and structured practice in producing medically appropriate written and spoken outputs.

Pragmatic competence emerged as the most variable domain. The participants generally reported confidence in performing routine communicative functions such as giving directions, answering basic patient questions, and participating in short workplace exchanges. These competencies indicate developing skills in coherence, turn-taking, and thematic development. However, when communication required managing unexpected situations, elaborating explanations, or expressing nuanced clinical instructions, the reported confidence declined. Interviews showed that pragmatic competence was particularly strained in emergency situations, informed consent discussions, and interdisciplinary communication. The ability to sustain discourse, adjust registers, and

manage interactional flow remained inconsistent, underscoring the need for simulation-based and scenario-driven instruction.

Sociolinguistic competence revealed an interesting contrast. The participants appeared comfortable interpreting informal English in songs, films, and social media, suggesting familiarity with everyday idiomatic expressions and informal cultural references. Yet, sociolinguistic appropriateness in professional settings remained limited. Many participants expressed concern about using incorrect forms of address, misunderstanding politeness conventions, or failing to adjust tone for patient age, emotional state, or cultural background. These findings highlight that while exposure to popular culture supports informal sociocultural awareness. Intercultural sensitivity and professional register control therefore constitute important developmental needs.

Overall, the study shows that healthcare professionals possess a fragmented communicative profile in English: receptive linguistic skills are moderately strong, everyday sociolinguistic awareness is developing, but productive linguistic competence and professional pragmatic competence lag behind. These gaps directly informed the design of the Competency-Based Medical English Module proposed in this study. The module addresses these deficiencies through integrated vocabulary instruction, scenario-based speaking practice, culturally sensitive communication tasks, and structured modelling of professional discourse.

This study demonstrated that healthcare professionals from diverse educational backgrounds share a common and significant need for English, particularly due to the increasing internationalisation of healthcare services in Türkiye. Although participants showed motivation to learn a foreign language, many reported limited active speaking skills and insufficient opportunities for effective language learning. The analysis of linguistic, sociolinguistic, and pragmatic competences revealed in the findings formed the core of the needs analysis and directly informed the design of the instructional module. Guided by the CEFR and grounded in a Competency-Based Language Teaching approach, the resulting Medical

English module incorporates authentic materials and real workplace scenarios that reflect the professional realities of healthcare settings. By targeting the specific competences identified in the study, the module aims to enhance professional communication, support collaboration with international colleagues and patients, and facilitate access to current medical literature. Overall, the study provides a structured and practice-oriented solution for improving English communication skills and strengthening the quality of healthcare services within Türkiye's evolving health tourism context.

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Ethical Declaration and Committee Approval

This research was conducted in accordance with ethical standards for studies involving human participants. Participation was entirely voluntary, and informed consent was obtained from all respondents prior to data collection. No personal identifying information was collected or disclosed.

The study was reviewed and approved by the **Social and Human Sciences Research Ethics Committee of İstinye University** (Approval No: 40, Date: 27/05/2024).

Proportion of Authors' Contribution

Author 1: Conceptualization, Methodology, Data Collection, Formal Analysis, Writing Original Draft.

Author 2: Conceptualization, Review & Editing, Visualization, Writing Final Draft.

Bridging Personalization and Inclusion: Integrating Artificial Intelligence in University-Level English Language Teaching

Kübra ŞIK[1]

The quick progression of Artificial Intelligence (AI) technology has started to alter the landscape of education, particularly English Language Teaching (ELT). Large Language Models (LLMs), such as GPT-based systems, as well as adaptive learning environments, are the new technologies of influence that can change the design, delivery and experience of language teaching. All of these technologies are contributing to a re-imagining of the traditional teacher-centric models of education and the move toward more learner-centred, adaptive, and inclusive pedagogies. The ability to process natural language, analyse learner performance, and provide adaptive feedback enables AI applications to respond dynamically to students' linguistic skills, cognitive profiles, and affective responses in ways that have the potential to personalize instructional content (Zawacki-Richter et al., 2019). As AI becomes more prevalent in language teaching, it is increasingly affiliated with the larger shift toward personalized learning and inclusive learning environments.

In ELT, AI-enhanced learning systems offer a novel opportunity for personalized learning, primarily through the potential to customize

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content and feedback for specific learners. Intelligent tutoring systems, for example, can analyse and identify weaknesses in areas of grammar, vocabulary, or coherence, and provide tailored feedback and suggestions for improvement. In addition, speech-recognition languages can support a learner's accuracy in pronunciation and improvements in oral fluency. In addition to aiding language development, AI supports affective learning by offering instantaneous and judgment-free feedback, which can enhance confidence and self-regulation. However, the pedagogical potential of AI goes beyond this to include issues of inclusivity. Inclusive AI applications—those that facilitate, for example, diverse language repertoires, learning differences, and accessibility—are being recognized as pathways to democratize education. For learners with disabilities, a multilingual background, or limited resources, such systems can provide multimodal input, translation assistance, captioning, and adaptive interfaces (Holmes et al., 2022). Therefore, personalization and inclusivity are mutually reinforcing dimensions of AI-based learning that are not only educationally relevant but also an ethical responsibility for equitable access to quality education.

The implementation of AI tools in ELT relates to global trends in the higher education sector towards learner autonomy, engagement, and self-directedness. AI features and analytics enable instructors to track progress with greater reliability and to produce differentiated tasks aligned to students' zones of proximal development. These affordances resonate with the sociocultural stance of Vygotsky (1978), which identifies mediated interaction and scaffolding as fundamental to cognitive development. In a similar vein, the Universal Design for Learning (UDL) framework (CAST, 2018) provides theoretical knowledge for understanding how AI can cultivate representation, engagement, and expression to meet all learners' needs. In addition, current scholarship on Critical AI Literacy (Jones, 2023) argues for the need to equip teachers and students to question the ethical, social, and epistemological aspects of AI, including algorithmic bias, data privacy, and transparency.

Nevertheless, we are still unable to understand the pedagogical and ethical complexity of AI integration into ELT. Concerns about algorithmic opacity, the potential for bias reproduction, and insufficient technological means suggest that AI does not guarantee or promote equitable outcomes. While AI's efficiency and dramatically adaptive qualities have been acknowledged, there has been less attention to the experiences of educators and learners who are meaningfully engaging with the AI tools in real classroom settings. As such, the study's purpose was to analyze the pedagogical value of AI tools, specifically, AI-powered responsive or personalized tools that promote inclusion in ELT contexts at the post-secondary level. The study is informed by Vygotsky's sociocultural theory, the UDL framework, and Critical AI Literacy and examines teachers' and students' conceptual and practical engagement with AI-supported pedagogical and assessment experiences for the potential to promote individualized learner growth and educational equity.

Literature Review

AI and Personalization in Language Learning

The advancement of personalized learning through artificial intelligence marks a substantial shift away from the uniformity and standardization associated with traditional forms of instruction. Rather than following a specified curricular sequence or general periodic assessments, AI-guided adaptive systems personalize learning according to each individual learner's performance as it develops based on each learner's evolving performance, cognitions, and prior knowledge. This shift from a standardized access model to a flexible and data-driven structure supports constant recalibration of learning pathways—where each interaction, success, or failure can be used as information used to promote growth. In this way, artificial intelligence performs the role of personalizing the temperature of learning and what is available to learners next by tailoring content, pacing, and feedback to an individual's development pathway.

Adaptive AI systems utilize state-of-the-art machine-learning algorithms

to analyse large amounts of learner data and alter instructional variables (e.g., task difficulty, sequencing, modality preferences, timing of feedback) (Heil et al., 2020). Within the realm of English Language Teaching (ELT), we have observed this happening in the form of AI writing assistants, intelligent tutoring systems for teaching, AI pronunciation tools, and autonomous feedback that allow for individualized learning supports delivered in real time. These tools reportedly enhance learner motivation, persistence, and self-regulatory behaviours, and help create a sense of agency in the learning endeavour. For example, a common operating feature of AI-based feedback systems is that they tend to replicate the nuance and contextual sensitivity in which human assessors operate to provide responses that are pedagogically constructive, semantically relevant, and grammatically correct (Zhang & Wu, 2024).

By adapting to the learner, AI-enabled environments promote learner autonomy and metalinguistic awareness so the learner can monitor and adjust their trajectory through an interactive process. This process corresponds closely with what Vygotsky (1978) referred to as the Zone of Proximal Development (ZPD), portrayed as technology supporting learners just beyond their independent ability—an intelligent mediation that supports the distance between current performance and an individual's capacity to develop.

Inclusive Education and AI Integration

Inclusivity remains one of the most enduring and foundational principles of contemporary educational thought. It emphasizes equal access, meaningful participation, and maximized engagement for all learners. Considering cognitive, linguistic, and socioeconomic differences, the idea of inclusivity extends to engagement, or being present, as well as the removal of barriers that lead to disengagement. In today's discourse surrounding pedagogy, inclusivity expands further than removing barriers to a physically accessible learning environment. The epistemic and technological dimensions of inclusive pedagogy ensure that learners with

a range of lived experiences are engaged, represented in learning, and supported in digital environments, including learning environments enhanced by AI. AI will continue to inspire new models of educational practice that encourage curiosity and inquiry, but the collaboration between AI and a model of practice like inclusive pedagogy creates transformative opportunities, as well as ethical dilemmas that require continued investigation within the scholarly realm.

The Universal Design for Learning (UDL) framework offers a powerful justification for conceptualizing inclusive pedagogy in the age of intelligent technologies. UDL is an evidence-based instructional design approach that advocates for flexible learning environments based on anticipated variability among learners, rather than adapting settings to learners' differences once tasks are underway (CAST, 2018). Similar to the 3 'principles' of UDL, inclusion is framed around offering multiple means of representation, engagement, and expression, thereby asserting that all students can have access to and provide evidence of knowledge in a variety of ways. Emerging AI systems are increasingly operationalizing UDL principles by providing multilayered representations of content, rich ongoing feedback, and expanded options for assessments. Adaptable AI tools can change text complexity to beyond, provide translation of language input, or deliver auditory and visual supports to accommodate different learning dispositions and needs. Definitely, AI is synonymous with inclusivity because it can customize learning and accommodate beyond learning paths without labelling differences.

Several studies show the positive impact of AI for inclusion methods used at school for students of disabilities, and multilingual emergent learners. AI-enabled assistive technologies such as predictive text, eye-tracking input devices, or natural language processing applications encourage communication and participation for students with physical, cognitive, or sensory impairments (Holmes et al., 2022). In addition, programs such as speech to text, automatic captioning, or AI supported translation help students who experience hearing impairment or literacy issues with

accessibility. These technologies offer ongoing scaffolding and actionable feedback throughout the learning process, while simultaneously mitigating obstacles—including both linguistic and physical barriers. For multilingual emergent learners, AI's ability to mediate academic engagement through real-time translation, semantic processing, and predictive vocabulary support enables more inclusive participation and affirms the legitimacy of learners' diverse linguistic repertoires within instructional contexts. (Kukulska-Hulme, 2020). In fact, in English Language Teaching (ELT), this inclusion fosters a sense of motivation, self-efficacy, and accountability in learners' willingness to practice or engage in another language without being judged.

While AI has the power to democratize education, there are also valid ethical concerns to keep in mind. Scholars warn that if AI systems are put into practice without sufficient oversight, they can inadvertently reinforce systemic inequities (Williamson & Piattoeva, 2022). Algorithmic bias, derived from either unrepresentative training data or narrow cultural assumptions, can create unjust predictive outputs that favour particular learner populations. The lack of transparency in AI decision-making processes means that it is unclear how educational recommendations, feedback, or assessments are developed, thereby limiting accountability. In addition, inequitable access to the digital infrastructure—such as reliable internet and sophisticated devices—continues to create a digital divide that can thwart the inclusivity that AI claims to achieve. Each of these problems illustrates the need for ethical reflection and critical inquiry to be included when bringing AI into the education landscape.

One emerging framework, called Critical AI Literacy, provides a productive engagement to address these concerns. Critical AI Literacy aims at empowering educators and learners to unpack how AI works, what values it upholds, and what it means for fairness and autonomy (Jones, 2023). The development of Critical AI Literacy means understanding algorithmic logic, identifying bias, and cultivating ethical agency as to how AI can be used. In ELT, developing an ability to critically engage

with AI enables teachers to make thoughtful decisions to use technology—in an ethical way—while enabling learners to responsibly and intentionally engage with AI tools. These practices invite, promote, and foster not only linguistic and digital competence, but also reflective awareness, empathy, and a sense of social responsibility.

In summary, how AI contributes to inclusivity in ELT rests on a careful balance of technological progress, as well as ethical attentiveness. If framed within the UDL framework, as well as critically engaged, AI can be a tool for empowerment that promotes diversity, supports learner agency, and promotes educational justice.

Pedagogical Challenges and Opportunities in Higher Education

The practical implications of applying AI in English Language Teaching (ELT) contexts at the post-secondary level are still complicated, and in many cases, undetermined. While there is an emerging body of observational research both outside of and within the context of higher education that shows encouraging outcomes, for instance, higher levels of engagement, more accurate learning diagnostics, higher performance as a result of adaptive learning analytics (Zawacki-Richter et al., 2019), the lived experience in classrooms is much more varied. Multiple studies indicate that while AI-facilitated tools can personalize instruction effectively, many instructors feel ill-equipped to engage with these technologies or to evaluate recommendations based on algorithmic logic in a pedagogically meaningful way. Zhou (2022) argues that instructors frequently report that they are unsure about institutional policies, ethical issues, and pedagogical legitimacy concerning AI platforms such as *Chegg* services, virtual tutors, and automated assessments. This anxiety is compounded by the lack of well-defined institutional policies that outline how professional or AI-facilitated tools should be included in curriculum, assessment, and support for teaching and learning.

Teacher readiness and digital competence are therefore considered pivotal factors to determine when AI integration will be considered as empowering or as undermining the processes of learning. Studies in the

literature indicate that the successful implementation of AI into the classroom setting not only relies on teacher technical ability, but also on an understanding of the synergy of the affordances of AI within pedagogical contexts, similarities and differences between the socially situated identities of student learners, and continuity with learning trajectories (Rahimi & Zhang, 2022). Further, if Other Non-Performing (ONP)-based AI tools are introduced without understanding the congruence of the contexts mentioned above, there is a risk that the technology interferes with, rather than enhances, the meaningful engagement in the learning processes. However, given that teachers are supported and prepared to examine the role of AI systems in coursework flexibly, they may engage in instructional decision-making that uses AI systems as a scaffold, rather than a replacement of pedagogical judgement or instruction.

In short, the intersection of personalization and inclusion suggests the necessity for inclusive frameworks that are morally constituted to respond to learner diversity, facilitate equitable opportunities for access to curriculum, and responsibly integrate *Ask-Chat GPT* into the ethical use of technology. To this end, institutions will need to formulate nuanced policies that endorse the expansion of the many affordances of innovation within transparent approaches to ethical care and accountability.

From this point of view, this study is focused on how inclusion and personalization are practiced within an AI supported Project within a university ELT context. The goal is to develop guidelines that are based on theory and substantiated by empirical data for the incorporation of AI that is pedagogically sound, ethically responsible, and inclusively grounded, both in terms of contributing to the academic discussion, and for improving practice in AI-mediated language teaching and learning.

Methodology

Research Design

This research utilized a qualitative research design for investigating the

role of AI-enhanced tools in personalized and inclusive English Language Teaching (ELT) in university settings. Multiple case study design was adopted to provide rich descriptions of the lived experiences of instructors and students in authentic classroom settings. This design enabled the examination of the relationship between pedagogical practices, student engagement, and technological mediation (Creswell & Poth, 2018). The study was theoretically framed by Vygotsky's Sociocultural Theory (1978) that foregrounded mediated learning and social interaction and the Universal Design for Learning (UDL) framework (CAST, 2018) that provided a foundation for analysing inclusive teaching practice, and Critical AI Literacy perspectives (Jones, 2023) that guided the interpretation of participants' critical awareness and ethical considerations for using AI tools.

Research Questions

The study was guided by the following research questions:

1. How are AI-enhanced tools utilized to foster personalized and inclusive instruction in university-level ELT contexts?
2. What are the perceived benefits and challenges of integrating AI-driven personalization and inclusion from the perspectives of instructors and students?
3. How can AI integration frameworks in ELT be designed to align with pedagogical, ethical, and inclusivity principles?

Participants

The sample consisted of five English Language Teaching instructors and ten undergraduate students enrolled in an English preparatory program at a public university. The instructors had different experiences using AI-based language tools, including novice users to those with near-proficient technological skills. The student participants were chosen through purposeful sampling to ensure a diverse range of linguistic and learning profiles, which included international multilingual learners and students

with a range of digital literacy levels (Patton, 2015). All of the participants gave informed consent before the data collection began.

Data Collection

Two primary data collection instruments were employed:

1. Semi-structured interviews with instructors and the students were conducted to capture their experiences, perceptions, and attitudes toward AI-enhanced personalization and inclusivity in ELT. The interview questions focused on instructional practices, perceived benefits, challenges, and ethical concerns regarding AI tools such as *ChatGPT*, adaptive grammar platforms, and speech recognition software. Each interview lasted between 45 and 60 minutes and was audio-recorded with permission.
2. Classroom observations were conducted over a six-week period to document real-time AI tool integration and learner interaction. Observation protocols targeted the use of AI tools in feedback provision, pronunciation support, and adaptive language exercises. Field notes emphasized pedagogical strategies, inclusivity measures, and patterns of student engagement.

Data Analysis

All qualitative data were transcribed verbatim and thematically analysed according to Braun and Clarke's (2021) six-steps process. New codes were developed inductively from the data and deductively from the theoretical frameworks on which the study was built. The analysis included multiple cycles through coding, categorization, and theme development in order to discover patterns that recurred relating to AI-assisted personalization, inclusive design, and pedagogical ethics. The data organization and code management were facilitated using *NVivo 14*.

To support trustworthiness, the study utilized triangulation from multiple data sources (the interviews and observations), member checking with participant validation of the interpretations, and peer debriefing with two independent experts in technology-enhanced ELT. Reflexive journaling

was also maintained to acknowledge researcher bias and positionality (Lincoln & Guba, 1985).

Findings

The interpretation of the interviews and the observations of the classrooms identified three broad themes: (1) personalization and agency of learning with AI tools, (2) inclusive pedagogical design and accessibility, and (3) ethical and pedagogical concerns in integrating AI. The findings shed light on how teachers and students understood and experienced how AI supported learning in equitable and adaptive ways in ELT classrooms.

Personalization and Learner Autonomy through AI Tools

Both participants and facilitators uniformly acknowledged the potential of AI-assisted tools to adapt learning experiences to learners' specific needs, levels of ability, and individual pacing. The feedback that adaptive tools provided through *ChatGPT* and *Grammarly*, was especially valued in terms of developing self-directed learning. One instructor offered:

> *"I noticed students who normally would not be active during class began to play around with the language more often when they received immediate feedback from AI. They felt like they were actively engaged in the learning process." (Instructor 3, Interview)*

Classroom observations provided further confirmation of increased student interaction with AI writing tools to revise their drafts before sending them to the teacher. Observational notes documented high levels of engagement with the students:

> *"During a pair-work activity, two students independently consulted AI-generated feedback windows to refine their paragraph organization and check lexical choices, even though no instructor assistance had been requested." (Observation Note, Week 1)*
>
> *"Several learners initiated the use of AI pop-up suggestions to adjust verb forms and clarify sentence structure, demonstrating autonomous engagement with the tool in the absence of teacher guidance." (Observation Note, Week 2)*
>
> *"In one class, four students engaged in account of AI feedback and feedback popups in order to revise sentences and verify grammar and wording definitions without any teacher prompting". (Observation Note, Week 3)*

Students, as well, noted feeling a greater sense of ownership of their progress in learning to write. One student shared: *"AI made me feel like I could learn at my own speed. I didn't have to wait for the teacher to correct me — I could fix my mistakes right away" (Student 7, Interview)*.

This notion highlights that AI-supported personalization, not only promoted accuracy and fluency in writing, but also supported learner autonomy, which is in line with the principles of Vygotsky's Zone of Proximal Development (ZPD), as the guided scaffold can shift to independent master.

Inclusive Pedagogical Design and Accessibility

The second theme discussed how AI tools can help generate more inclusive learning environments in classrooms. Instructors used multimodal AI applications to support learners with diverse linguistic and cognitive profiles, including text-to-speech, translation, and adaptive vocabulary systems. A teacher reflected: *"Some of my students struggle with reading tasks because of attention issues. Utilizing AI readers allowed them to engage with the text auditorily and that modality made comprehension much easier" (Instructor 1, Interview)*. Data collection observation reports also showed multilingual students who benefitted significantly from translators supported by AI: *"Two students used Chat GPT's translation function to compare sentence structures in English and Turkish, and then discussed which sound was the most natural" (Observation Note, Week 4)*. AI also supported the principles of Universal Design for Learning (UDL) because they allowed students multiple means of engagement and ways to express themselves when learning. For example, a student with a specific learning disability shared: *"I could pick out pronunciation patterns using the AI voice tool that I didn't realize before. Almost like a tutor who isn't going to get tired" (Student 2, Interview)*. This data suggests that instruction mediated by AI can enact inclusive design possibilities that invite varied points of access for learning, promote equitable learning for neurodiverse learners, and create equitable language experiences for multi-lingual students.

Ethical and Pedagogical Tensions in AI Integration

Even with the perceived advantages, both groups communicated their uneasiness regarding overdependence on AI, privacy of personal data, and opportunities for resource inequality. A number of instructors shared that they were worried about the opaque nature of algorithms and whether or not critical thinking would be compromised. As one instructor articulated: *"There are times when students copy what AI says, without even questioning its validity. It's as if they start to believe the machine is always right, which is concerning" (Instructor 4, Interview)*. Another participant highlighted issues of access and digital inequality: *"Not every student has steady internet and good devices. So, although AI may help some students, it also disadvantages others" (Instructor 2, Interview)*. Similar to instructors, students articulated their understanding of the emotional aspect of AI feedback. One student stated: *"AI can't really know when I'm frustrated or confused. It provides answers without regard for feelings" (Student 10, Interview)*. These competing feelings draw on the need for teacher mediation and the need for ethical literacy, supporting Jones' (2023) belief that critical AI literacy is needed to balance innovation with human-centred pedagogy.

Synthesis of Findings

The findings indicate that AI tools can be leveraged for personalized and inclusive ELT practices, as long as they are installed in a pedagogy of intention. It was this combination of human instruction with AI mediation that fostered engagement, autonomy, and accessibility. However, the potential drawback of AI is that it can perpetuate inequities and diminish learners' reflective autonomy when teachers or program developers are not questioning its use.

The data suggest that teacher readiness and institutional support for the necessary mechanisms to integrate sustainably is critical. As was shown in the cases of qualified teachers of pedagogical experience, the most effective classrooms utilize a combination of AI feedback and dialogic interaction, with the technology serving to enhance rather than supplant

the teacher. Therefore, Table 1 shows the summary of the key findings for the study.

Table 1

Summary of Key Findings

Theme	***Emergent Insight***	***Representative Evidence***
Personalization and Autonomy	AI feedback promotes self-regulated learning and motivation.	"It gave them a sense of control over their learning process." (Instructor 3)
Inclusive Design and Accessibility	AI facilitates multimodal and differentiated instruction.	"Using AI readers allowed them to follow the text auditorily." (Instructor 1)
Ethical and Pedagogical Tensions	Risks of bias, overreliance, and unequal access persist.	"Not all students have stable internet… it widens the gap." (Instructor 2)

These findings contribute to building a pedagogical framework that enables personalized and inclusive AI integration in ELT by design, and where technology has been engaged with critical mediation to be guided by and in support of humanistic and equitable educational values.

Discussion and Conclusion

The current study explored how AI-enhanced tools are being used to support personalized and inclusive English Language Teaching (ELT) practices at the post-secondary level. The results reveal a dual narrative wherein, on the one hand, AI enhances differentiated learning, autonomy, and accessibility, and on the other hand creates ethical and pedagogical dilemmas that are challenging to manage. In essence, AI in ELT, and education, requires reflective, ethical, and context-sensitive teaching frameworks.

AI as a Catalyst for Personalization and Learner Autonomy

The results showed that AI feedback technologies and adaptive systems were useful in promoting personalized learning pathways, supporting previous studies of AI's capacity to individualize instruction toward the

unique needs of learners (Heil et al., 2020; Li, 2023). The learners received timely, data-driven feedback that showcased errors, established alternatives and prompted revisions. This helpful immediacy encouraged an iterative approach to language production as students revisited, reconstructed, and refined their writing. This iterative engagement is consistent with Vygotsky's (1978) notion of the Zone of Proximal Development (ZPD) in which learning best takes place involving scaffolding that supports learners slightly past their current level of competence. The adaptive quality of AI served as a type of dynamic scaffolding, allowing students to make small, incremental steps in their learning while also experiencing an increasing sense of autonomy around decision-making. Multiple reflections by learners about experiencing a sense of control using the AI systems reinforces the idea that personalization builds intrinsic motivation while enhancing learners' self-efficacy (Rahimi & Zhang, 2022). Indeed, these perceptions suggest that AI, particularly when utilized adjectively, may foster increasingly empowered learning conditions that are consistent with sociocultural principles along with learner-centred pedagogy.

Nevertheless, the research also uncovered areas of significant tension in the personalization process. While AI increased autonomy, personalization may have become superficial in instances where learners relied too heavily on automated recommendations. In these instances, students tended to accept the feedback without engaging in deeper metacognitive reasoning regarding why certain corrections were the case. This tendency aligns with Zhang and Wu's (2024) claim that reliance on AI writing assistants could hinder the development of sophisticated linguistic awareness, as cognitive responsibility shifted from the learner to the system. Consequently, the pedagogical benefits of personalization are lost, and students may miss opportunities to internalize aspects of the language or foster strategic thinking.

As a result, if we wish to personalize the experience in ELT, it is imperative that educators oversee the way learners engage with AI and

design instructional tasks that allow for metacognitive engagement. When (and if) using adaptive technologies, teachers have to be very intentional in mediating their use in ways that AI-supported feedback supplements no replace the metacognitive decision-making that simply occurs in writing. Finding the right balance between scaffolded reading and human interaction is crucial in protecting the deeper cognitive development of learners, while providing authentic opportunities for language development.

AI and Inclusive Pedagogical Design

The potential for AI to foster inclusivity was notable in the data. The use of multimodal learning tools like text-to-speech and translation tools was aligned with the values of the Universal Design for Learning (UDL) framework (CAST, 2018), providing multiple means of engagement, representation, and expression. This finding echoes the claims of Holmes et al. (2022) that, when used judiciously, AI technologies can improve access for learners from diverse abilities and linguistic backgrounds.

However, technology alone cannot guarantee inclusivity. The inequalities with respect to access to technology and infrastructure confirmed Ng's (2021) concern that algorithmic systems can unwittingly perpetuate exclusion if and when the contextual barriers are overlooked. Thus, equity in contextual barriers cannot be overlooked with AI integration for ELT—it is important to guarantee that not only the tools are considered, but also teacher preparation and inclusive infrastructure are in place.

Ethical, Critical, and Pedagogical Implications

The participants' fears around algorithmic bias, emotional detachment, and data privacy raise a broader ethical discussion around the educational use of AI. As teachers stated, "the students think the machine is right each and every time," indicating a need to develop a Critical AI Literacy (Jones, 2023). Teachers need to equip learners to question, analyse, and engage ethically with AI-generated feedback. This complements Williamson and Piattoeva's (2022) sentiment about critical interrogation of AI systems as

central to human capacity for agency in the data-activated educational setting.

From an instructional standpoint, these results point to the idea that AI tools are more effective when they work as part of dialogic and scaffolded teaching, rather than simply being evaluated. In accordance with Rahimi and Zhang (2022), this study supports the ongoing professional development of teachers in AI Literacy, as this acts as an important bridge between technological capability and pedagogical intention.

Conclusion and Future Directions

This study concludes that tools with AI can help advance personalized and equitable ELT by applying pedagogical frameworks that include human decision-making, ethical consideration, and being responsive to local contexts. AI should not be seen as a replacement for teachers or to establish minor or major changes to their work, but as an added resource to enhance what they do to personalize learning and instruction for the diverse needs of learners. The implications of this report add to the growing body of research into AI-mediated language learning, offering a holistic model that incorporates Sociocultural Theory, UDL, and Critical AI Literacy as grounds for ethical and equitable blending of AI into educational contexts. Future studies should investigate the longer-term effects of AI-assisted personalization on learner identity, as well as include comparative studies of algorithmically adaptive feedback to teacher-mediated or feedback loops. In any case, if systems of education see an ever-increasing use of AI to determine and construct learning, the vision must be human-centred: using AI technology to expand, not limit access, equity, reflection, and transformative language learning.

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Ethical Declaration and Committee Approval

This study was conducted in accordance with the principles of scientific research and publication ethics. The participants were given the consent form indicating that they are volunteer to participate in the study.

When AI Robots Teach: Exploring the New Dynamics of Learning

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The integration of artificial intelligence (AI) bots into educational environments marks a paradigm shift in teaching and learning dynamics, challenging conventional pedagogical frameworks and human-centered instructional models. This study critically examines the emerging roles of AI-driven bot feedbacks, interrogating their capacity to mediate knowledge, facilitate personalized learning, and augment cognitive and socio-emotional engagement among learners. Drawing on interdisciplinary research from educational technology, cognitive science, and human–bot interaction, the investigation situates AI teaching agents within the discourse of educational equity, identity, and ethical practice. It explores how AI bots transform classroom interactions, reconfigure teacher-student relationships, and reshape the boundaries between human intuition and algorithmic logic in pedagogy. The analysis foregrounds both the affordances—such as adaptive scaffolding, real-time feedback, and cross-cultural accessibility—and the critical challenges, including

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algorithmic bias, dependency risks, and the nuanced negotiation of authority in learning spaces. Ultimately, the study argues for a reconceptualization of professional teaching identities and instructional design principles, advocating for hybrid human-AI pedagogical ecosystems that leverage technological sophistication without compromising the reflective, relational, and ethical dimensions of education.

Introduction

The rise of artificial intelligence (AI) in the field of education signifies a crucial shift in the processes of knowledge creation, dissemination, and mediation. AI teaching bots, which operate as interactive agents with capabilities for affective recognition and adaptive feedback, transform the relationship between humans and teachers. Instead of supplanting educators, these technologies prompt a rethinking of professional roles, ethical considerations, and pedagogical frameworks. This research investigates the pedagogical, emotional, and ethical ramifications of AI-driven instruction through the perspective of human-bot interaction (HRI) and hybrid pedagogical environments.

AI technologies within educational settings are not simply tools; they are engaged participants in the learning process, capable of influencing interactions, reinforcing behaviours, and mediating knowledge in real-time. The incorporation of AI into classrooms challenges conventional beliefs regarding teaching and learning, especially the idea that authority, expertise, and empathy are exclusive to human traits. By mimicking affective responses and delivering personalized feedback, AI bots broaden the scope of educational interventions, creating avenues for differentiated instruction and ongoing assessment. Nevertheless, these advancements also provoke intricate inquiries concerning relational dynamics within classrooms: How do students view machine-generated guidance? How do educators manage their authority when it is shared with non-human

entities? Tackling these inquiries is essential for comprehending the changing landscape of pedagogy in the age of AI (Belpaeme et al., 2018).

Furthermore, the incorporation of artificial intelligence within educational environments intersects with wider social, cultural, and ethical considerations. Concerns regarding algorithmic bias, data privacy, and cultural inclusivity emphasize the necessity for critical examination of the design and implementation of AI. In various educational settings, cultural norms and expectations influence the acceptance and efficacy of AI technologies, affecting both student involvement and teaching methodologies. This research positions AI teaching bots within the context of higher education in Türkiye, investigating how local pedagogical customs, hierarchical structures, and ethical factors interact with algorithmic intelligence. By analysing these intersections, the study offers a refined understanding of AI as both a technological and sociocultural entity in modern education (Floridi & Cowls, 2021).

The integration of AI also prompts essential inquiries regarding the future of professional teaching roles. As bots increasingly assist in instructional delivery, educators must cultivate new skills in technological mediation, critical analysis of algorithmic results, and ethical supervision. This shift challenges conventional teacher identities while creating avenues for professional development and reflective practice. By examining these dynamics, the research underscores how human–AI collaboration can enhance pedagogical adaptability, responsiveness, and creativity, rather than diminishing the importance of human judgment in education (Biesta, 2017).

Ultimately, comprehending the role of AI in education necessitates a focus on both current classroom methodologies and the long-term effects on educational systems. In addition to enabling personalized learning experiences, AI possesses the capacity to transform curriculum development, evaluation methods, and institutional regulations. Nevertheless, to fully harness these advantages, it is essential to ensure alignment with ethical standards, cultural awareness, and educational

principles. Consequently, this research aims to shed light on not only the practical ramifications of AI teaching bots within Turkish universities but also their wider pedagogical, emotional, and ethical implications, thereby contributing valuable perspectives to global conversations regarding the integration of AI in educational contexts.

The rapid shift of artificial intelligence (AI) is beginning to alter educational environments globally, leading educators and researchers to reconsider how learning, teaching, and human interaction are being transformed. Among the most intriguing developments are AI teaching bots, which combine computational intelligence with physical presence to provide personalized, adaptive instruction. In contrast to previous educational technologies that functioned mainly as digital tools or content delivery mechanisms, these embodied agents are capable of engaging the affective, cognitive, and relational aspects of learning simultaneously. Their existence not only introduces novel forms of automation but also reconfigures traditional hierarchies of authority, trust, and empathy within the classroom (Belpaeme et al., 2018; Biesta, 2017).

As AI systems become more involved in classroom instruction, the idea of algorithmic adaptivism has surfaced to characterize a new pedagogical framework in which learning environments are dynamically influenced by both human intuition and machine logic. This framework emphasizes adaptivity—not only in terms of personalized content but also in relational and emotional responsiveness. However, this blending of agency complicates established concepts of teaching expertise, emotional authenticity, and ethical responsibility. Educators, once regarded as the sole holders of pedagogical authority, now share their responsibilities with algorithmic systems that can simulate empathy and provide performance feedback. As a result, questions emerge regarding whether such systems can truly embody pedagogical care or if their involvement represents a new kind of technological mimicry that threatens to undermine the moral foundation of education (Selwyn, 2023; Floridi & Cowls, 2021).

Moreover, the emotional aspects of AI-mediated education have garnered significant interest. Traditionally, teaching has been rooted in empathy, intuition, and emotional connection—traits that embody the human element of learning. Nevertheless, as AI bots emulate behaviours linked to empathy, scholars have engaged in discussions regarding whether these actions represent true understanding or simply algorithmic mimicry. The concept of algorithmic empathy encapsulates this conflict between emotional imitation and moral genuineness. While the ability to recognize emotions may boost motivation and engagement, it simultaneously poses challenges to the ethical underpinnings of the teacher-student relationship by obscuring the distinction between genuine care and artificial emotion (Kory & Breazeal, 2014; Dillenbourg, 2019). This complexity prompts further investigation into how emotional and ethical factors evolve when machines take on educational roles traditionally held by humans.

In addition to emotional factors, ethical and sociocultural aspects are crucial for comprehending the educational ramifications of AI. Researchers have pointed out that algorithmic systems are never completely impartial; they embody the values, assumptions, and cultural narratives ingrained in their design (Benjamin, 2019). Algorithmic bias and a lack of transparency can result in disparities in the distribution of feedback, the interpretation of student data, and the shaping of learning paths. These challenges become particularly pronounced in cross-cultural settings, where varying educational customs and power dynamics affect views on authority and authenticity. The Turkish higher education context, noted for its profound respect for teacher authority and a strong focus on relational interaction, offers a particularly fertile ground for examining how AI teaching bots navigate moral and emotional legitimacy in educational practices.

Beyond ethical considerations, the incorporation of AI in higher education unveils profound philosophical and ontological transformations in the conceptualization of knowledge, agency, and learning. The existence of AI teaching bots contests the notion that teaching is solely a human

activity and prompts inquiries regarding the limits of agency within educational frameworks. Posthumanist viewpoints (Braidotti, 2013; Fenwick & Landri, 2012) propose that learning emerges as a process within a network comprising both human and nonhuman participants. From this perspective, AI agents transcend the role of mere tools, acting as co-creators of pedagogical significance, influencing the dynamics of interaction, attention, and emotion. This comprehension encourages educators to transcend binary distinctions—human versus machine, authentic versus artificial—and to contemplate how these entities collaboratively forge new modalities of learning and comprehension.

Ultimately, there is an increasing demand to reconceptualize the teacher's role in hybrid human–AI settings. Instead of being supplanted by automation, educators are redefined as interpreters, moderators, and ethical stewards of algorithmic frameworks (Prieto et al., 2021; Holmes et al., 2023). Their expertise now encompasses the interpretation of data-driven insights, the management of emotional intricacies, and the critical assessment of technological mediation. This redefinition necessitates that educators develop algorithmic literacy—the capacity to comprehend, critique, and ethically navigate AI systems—while maintaining the reflective and moral core of teaching. Consequently, the challenge lies not in resisting AI integration but in humanizing it: ensuring that intelligent technologies augment, rather than diminish, the relational, ethical, and affective foundations of education.

Literature Review

Pedagogical frameworks have transitioned from behaviourism and constructivism to what contemporary scholars refer to as algorithmic adaptivism. In contrast to earlier instructional technologies, AI teaching bots integrate computational intelligence with a physical presence, thereby engaging learners on both cognitive and emotional levels (Belpaeme et al., 2018). Their ability to interact adaptively challenges conventional notions of teaching, prompting significant inquiries regarding authenticity,

empathy, and the distribution of authority (Biesta, 2017; Selwyn, 2023). Studies on human–bot interaction (HRI) indicate that authority within the classroom becomes shared between human and nonhuman participants, thereby transforming educators into facilitators of intricate learning environments (Latour, 2005; Prieto et al., 2021). Simultaneously, ethical issues surrounding algorithmic bias, transparency, and cultural inclusivity emphasize the necessity for critical examination in AI-enhanced pedagogy (Benjamin, 2019; Floridi & Cowls, 2021).

In addition to the redistribution of authority, the incorporation of AI in education poses challenges to the relational and emotional aspects of teaching. Students engage not only with the informational content presented by bots but also with their perceived social presence and emotional behaviours (Leyzberg et al., 2018; Kory & Breazeal, 2014). Algorithmic empathy—the imitation of emotional responsiveness—has the potential to enhance engagement and motivation; however, it concurrently raises concerns regarding the genuineness of emotions within educational settings. To comprehend the influence of AI on affective learning, an integrative approach that encompasses cognitive, emotional, and social factors is essential (Dillenbourg, 2016). This viewpoint highlights the necessity of viewing AI not merely as a neutral instrument but as an active agent that significantly influences classroom dynamics.

Recent research highlights the capacity of artificial intelligence to enhance personalized and inclusive learning experiences. Adaptive algorithms are capable of customizing content, pacing, and feedback for individual learners, thereby facilitating differentiated instruction that caters to a variety of needs (Chen et al., 2022; Holmes et al., 2023). In environments characterized by large class sizes or diverse skill levels, AI teaching bots can offer immediate feedback and support learning experiences that may be challenging for teachers to provide alone. Nevertheless, researchers warn that algorithmic personalization could unintentionally perpetuate biases or reinforce inequalities if not meticulously designed (Benjamin,

2019). Thus, the integration of AI in a pedagogically responsible manner necessitates human oversight, cultural awareness, and ethical consideration to ensure that technology enhances rather than limits learning opportunities.

Moreover, the cultural and contextual aspects of AI integration play a vital role in influencing educational outcomes. The acceptance of AI-mediated instruction by students is shaped among local cultural norms, academic traditions, and views on teacher authority (Belpaeme et al., 2018; Broadbent et al., 2018). In educational systems that are hierarchical or centred around the teacher, bots may be viewed primarily as supportive assistants rather than independent instructors, underscoring the necessity of situating AI research within particular sociocultural frameworks. By incorporating insights from Human-bot Interaction (HRI) theory and hybrid pedagogical approaches, this body of literature lays the groundwork for exploring the ethical, emotional, and relational aspects of AI teaching bots in Turkish higher education.

Another significant aspect discussed in the literature pertains to the ethical and moral ramifications of artificial intelligence in educational settings. Researchers have posited that instruction facilitated by AI prompts inquiries regarding accountability, transparency, and the authority of decision-making within classrooms (Floridi & Cowls, 2021; Selwyn, 2023). Decisions made by algorithms—such as tailored feedback or evaluations of performance—may harbour implicit biases, which could potentially influence the educational paths of learners. Furthermore, ethical dilemmas emerge concerning the imitation of empathy and emotional responsiveness in AI-driven bots, which might affect student trust and engagement, while also obscuring the distinctions between genuine human interaction and algorithmic mediation (Kory & Breazeal, 2014). These discussions underscore the urgent need for frameworks that direct ethical design, culturally aware implementation, and critical oversight of AI within educational frameworks.

Also, recent studies highlight the significance of teachers as facilitators within hybrid learning environments. Instead of being supplanted, educators are increasingly anticipated to interpret and contextualize feedback generated by AI, manage relational dynamics, and ensure that technology enhances pedagogical objectives rather than dictating them (Prieto et al., 2021; Biesta, 2017). This transition emphasizes the notion of distributed authority, wherein instructional power and accountability are shared among both human and nonhuman participants, thereby transforming conventional understandings of teaching expertise. By emphasizing the collaborative potential inherent in human–AI interactions, these investigations indicate that successful integration relies on teacher agency, reflective practices, and ethical awareness, positioning educators as pivotal orchestrators of hybrid pedagogical settings.

While AI teaching bots offer thrilling advancements, researchers caution that their integration should be understood through posthuman and sociomaterial learning theories that challenge human-centred perspectives on agency and knowledge creation.

Scholars in posthumanism, such as Braidotti (2013) and Fenwick and Landri (2012), argue that education increasingly occurs within networks comprising humans, technologies, and physical environments, where agency is distributed rather than concentrated. In this framework, AI teaching bots serve not merely as tools but as co-constitutive entities that reshape pedagogical interactions, emotional atmospheres, and even the boundaries of knowledge.

This perspective prompts educators to reconceptualize teaching as a collaborative endeavour that includes both human and nonhuman contributors. From a posthuman standpoint, AI is seen as part of a broader cognitive ecology where learning is interconnected, relational, and interdependent, rather than merely a direct transfer of knowledge.

Building on this theoretical realignment, investigations into distributed cognition and actor–network theory (ANT) yield significant insights regarding the co-construction of knowledge and authority within hybrid

learning environments. As articulated by Latour (2005), agency must be perceived as the result of interactions among diverse actors—both human and technological. In classrooms where AI bots are present, this implies that pedagogical decision-making arises from the dynamic interaction between teachers' interpretive judgments, students' involvement, and algorithmic outputs. Empirical research (Prieto et al., 2021; Luckin, 2022) indicates that when educators actively engage with AI recommendations—rather than merely accepting them—the outcome is a more equitable and ethically conscious classroom ecology. Therefore, theories of distributed cognition not only elucidate the shifts in authority but also emphasize the ethical obligation of educators to interpret algorithmic behaviours into actions that hold pedagogical significance.

The convergence of AI ethics and affective computing broadens this discussion by exploring the ethical ramifications of emulating emotions within educational settings. Although emotional recognition algorithms facilitate responsive feedback and foster empathetic interactions, they also pose the danger of instrumentalizing affect—diminishing emotional comprehension to mere data patterns and probabilistic models (McStay, 2018). Researchers like Zawacki-Richter et al. (2022) and Benjamin (2019) caution that the simulation of emotions could lead to the commodification of care, converting empathy into an automated act that lacks the reflexivity crucial for ethical teaching. In light of this, the developing notion of algorithmic empathy aims to reconcile emotional responsiveness with transparency, recognizing the artificial essence of AI while still promoting emotional connections. Consequently, ethical pedagogy in AI-enhanced environments must transcend mere considerations of accuracy or engagement to encompass moral authenticity—the congruence of technological design with fundamental human values such as trust, respect, and dignity.

An additional developing area of literature investigates the cross-cultural aspects of AI acceptance and relational adaptation. Research carried out in East Asian and Middle Eastern settings (Mubin et al., 2016; Broadbent

et al., 2018) indicates that cultural views on hierarchy, collectivism, and emotional expression influence how students perceive the roles of AI tutors. In cultures that prioritize relational harmony and deference to authority, AI bots are frequently accepted as extensions of the teacher's presence, facilitating interactions rather than supplanting human instruction. In contrast, within more individualistic educational frameworks, students may anticipate that AI agents operate independently, promoting personalized and self-directed learning. These differences underscore the importance of a context-sensitive approach to AI pedagogy—one that embeds technological design within local epistemologies, emotional norms, and societal expectations. In the realm of Turkish higher education, where relational and emotional aspects of teaching are deeply culturally significant, the integration of AI must thoughtfully reconcile innovation with cultural relevance and pedagogical authenticity.

Ultimately, recent studies highlight the necessity of rethinking teacher identity in light of the increasing presence of intelligent systems. As AI bots take on responsibilities in assessment, feedback, and emotional support, educators are confronted with the task of redefining their professional skills beyond mere content knowledge. Researchers such as Selwyn (2023), Knox (2020), and Holmes et al. (2023) advocate for the development of algorithmic literacy—an awareness of how AI systems operate, the biases they may carry, and their impact on student agency. Teachers evolve from being simple facilitators to becoming essential mediators, connecting algorithmic functions with human significance. This transformation positions educators as reflective practitioners who can both utilize AI's adaptive capabilities and critically examine its epistemological foundations. In conclusion, the body of literature aligns on the idea that effective AI integration relies not solely on technological advancement, but also on the ethical, emotional, and interpretive efforts of teachers, whose role as moral guides is crucial in blended learning environments.

Methodology

This research employs a qualitative interpretive research design rooted in an interpretivist epistemology, with the goal of examining how educators and students understand AI-mediated teaching practices in higher education. The study aims to reveal the lived meanings, interpretive judgments, and ethical considerations of participants as they interact with AI teaching bots in educational settings.

The incorporation of AI in education is not just a technological advancement but also a relational, cultural, and ethical issue. To comprehend how authority, emotional legitimacy, and pedagogical responsibility are navigated in hybrid human–AI contexts, it is essential to use these contexts that can capture nuance, reflexivity, and culture-sensitive meaning-making. This study is consistent with literature in human–bot interaction (HRI), posthuman pedagogy, and sociomaterial learning theory, which view learning as an emergent process that unfolds across both human and nonhuman participants.

Research Context

The research was carried out at three universities in Türkiye, including both public and private universities that had incorporated AI-driven teaching tools into language and communication courses. These universities differed in size, teaching culture, and level of technology adoption, enabling the study to reflect a variety of institutional viewpoints while staying contextually relevant.

The context of higher education in Türkiye provides a particularly significant backdrop for exploring AI-mediated teaching methods, as it is marked by strong cultural norms regarding teacher authority, relational engagement, and ethical responsibility. These contextual elements shaped both the research design and the results.

Participants and Sampling Strategy

Educators participated in the study were selected through purposive sampling, which ensured that information-rich cases with extensive

experience in AI-enhanced instructional settings were included. This sampling approach allowed the study to gather diverse perspectives on AI-mediated learning while emphasizing depth rather than breadth. All the participants engaged on a voluntarily basis and provided informed consent before the data collection process began.

Data Collection

The research utilized three complementary qualitative data sources that emphasize participant interpretation over direct behavioural observation.

1. Reflective Classroom Field Notes

The researcher created systematic reflective field notes during and right after AI-integrated class sessions. These notes concentrated on:

- Notable changes in instructional authority between educators and AI tools
- Instances of pedagogical mediation where teachers interpreted or recontextualized AI feedback
- Student responses to AI-generated guidance, especially concerning trust, hesitation, or reliance
- Ethical or emotional conflicts arising during AI-mediated interactions

The field notes were both descriptive and interpretive, highlighting pedagogical significance rather than verbatim interaction. The researchers capture classroom dynamics through reflective synthesis.

2. Semi-Structured Interviews

In-depth semi-structured interviews served as the main source of data. Separate interview protocols were created for educators, facilitating role-specific reflections while ensuring conceptual coherence. The interview questions explored:

- Views on AI-generated feedback and its educational legitimacy
- Experiences regarding shared or contested authority between humans and AI systems

- Emotional reactions to algorithmic guidance and simulated empathy
- Ethical issues concerning transparency, bias, and reliance
- The perceived influence of AI on teaching identity and learning agency

The interviews were conversational and flexible, allowing participants to elaborate on topics they deemed most important. The duration of each interview lasted around 25–35 minutes and was transcribed verbatim for subsequent analysis.

3. Teacher Reflective Accounts

Educators were encouraged to submit written expressed reflective accounts after engaging in AI-integrated teaching. These reflections concentrated on:

- Instructional decision-making in response to AI outputs
- Challenges faced when trying to align algorithmic feedback with cultural or ethical standards
- Shifts in professional identity and pedagogical responsibility

These reflective accounts provided a vital interpretive layer, shedding light on how teachers actively negotiated machine logic within human-centred teaching frameworks.

Ethical Considerations

Prior to data collection, ethical approval was secured. The study followed these principles:

- Informed consent and voluntary participation
- Anonymity and confidentiality, ensuring all identifying details were removed
- Non-intrusive data collection, steering clear of recordings or surveillance-based observation
- Participant agency, permitting individuals to withdraw at any point

Special care was taken to ensure that the presence of AI systems—and the study itself—did not affect assessment practices or power dynamics within classrooms.

Data Analysis

Data were examined using inductive thematic analysis. The analysis unfolded through an iterative, multi-phase process:

1. Initial coding

Transcripts, field notes, and reflective accounts were coded line-by-line to pinpoint meaning units associated with authority, emotion, ethics, agency, and pedagogical mediation.

2. Pattern development

Codes were compared across participant groups and institutional contexts to uncover recurring patterns and contrasts.

3. Thematic construction

Higher-order themes were crafted through constant comparison, triangulation across data sources, and reflexive memoing. Themes were fine-tuned to ensure conceptual coherence and alignment with the study's theoretical framework.

To enhance trustworthiness, the analysis included methodological triangulation, peer debriefing, and member reflection, enabling participants to validate the resonance of emerging interpretations.

Rather than aiming for generalizability, the study prioritizes theoretical and analytical depth, offering insights applicable to comparable AI-enhanced educational contexts.

Results

The classroom notes and semi-structured interviews uncovered multiple interrelated patterns that demonstrate how AI teaching bots transform pedagogical, emotional, and ethical dynamics within higher education contexts. The results emphasize not only the practical benefits of AI—

such as reliable feedback and enhanced student engagement—but also the methods by which educators and learners navigate authority, authenticity, and trust in hybrid learning environments. Collectively, these findings offer a detailed comprehension of how human–AI interaction manifests in practice, establishing the thematic basis for the ensuing discussion.

Finding 1: Human–AI Co-Teaching Requires Interpretive Pedagogy

Teachers acted as ethical interpreters of algorithmic behaviour. This supports literature on hybrid authority (Latour, 2005; Prieto et al., 2021).

Finding 2: Algorithmic Empathy Enhances Cognitive Engagement but Not Affective Authenticity

While simulated emotions improved student motivation, they did not replace relational warmth—consistent with Kory & Breazeal (2014) and Dillenbourg (2019).

Finding 3: Cultural Context Shapes Human–bot Interaction

Respect for teacher authority in Türkiye resulted in bots being framed as assistants rather than autonomous instructors.

Finding 4: Ethical Design and Transparency Are Urgently Needed

Concerns about bias, opacity, and data privacy align with Benjamin (2019) and Floridi & Cowls (2021), reinforcing the need for transparent AI systems.

Theme 1: Distributed but Asymmetric Authority

Teachers and bots collaboratively established classroom authority. bots managed routine feedback and pacing, while teachers facilitated understanding:

Student excerpt*: "I appreciate how the bot specifies exactly what I did incorrectly, but I wait for the teacher to clarify what it truly signifies for my learning."*

Teachers interpreted bot outputs to conform to cultural expectations of human authority within Turkish higher education.

Theme 2: Algorithmic Empathy and Its Limits

Numerous students appreciated the bot's nonjudgmental demeanour, yet they questioned its emotional genuineness:

Student excerpt: *"The bot give answers, but I recognize it is not authentic. It feels encouraging yet also peculiar."*

Teachers voiced concerns that simulated empathy could obscure the differences between authentic care and algorithmic imitation.

Theme 3: Enhanced Engagement and Inclusivity

Bots fostered participation among shy or reluctant learners:

Excerpt: *"During pronunciation exercises, students who seldom volunteer engaged freely with the bot without fear of judgment."*

Theme 4: Ethical Ambiguity and Opacity

Participants often conveyed unease regarding:

- The decision-making process of the bot
- The potential bias in feedback
- The risk that excessive dependence could lead to a technocratic approach to pedagogy

Teacher excerpt: *"I am concerned that students place more trust in the bot than they comprehend why the bot assesses them in this manner."*

Collectively, these findings demonstrate that AI-enhanced classrooms function as intricate hybrid ecosystems where authority, emotion, culture, and ethics converge in fluid interactions. The balance of authority between humans and bots—though collaborative—remains uneven, with educators maintaining interpretive and cultural leadership while bots handle routine feedback. On an emotional level, students gain cognitive benefits from the consistency and encouragement provided by algorithmic empathy; however, they are acutely aware of its limitations and seek human validation to comprehend their learning experiences. Cultural norms within Turkish higher education further influence these dynamics, positioning bots not as independent instructors but as supportive pedagogical aides whose effectiveness relies on teacher mediation. Overlaying these relational and cultural aspects are ongoing ethical issues

concerning algorithmic transparency, bias, and the potential for excessive dependence on machine-generated evaluations. Ultimately, the interaction of these themes indicates that successful human–AI co-teaching relies on interpretive pedagogy—where educators critically frame, contextualize, and humanize bot feedback—ensuring that technological advancements enhance rather than supplant the relational, reflective, and ethical foundations of education.

The integrated findings indicate that AI teaching bots significantly alter the dynamics of classroom interaction through a multifaceted relationship involving authority, emotion, cultural expectations, and ethical considerations. Notes and interviews reveal that both teachers and bots collaboratively establish instructional authority; however, this distribution is fundamentally unequal. bots are responsible for managing routine tasks such as pacing, correction, and feedback, while teachers retain interpretive, cultural, and ethical oversight. Students frequently sought guidance from teachers after receiving input from bots, indicating that human mediation is crucial for converting algorithmic signals into pedagogically relevant advice. This trend is consistent with theoretical discussions on hybrid authority, reinforcing the notion that the roles of teachers evolve rather than diminish within AI-enhanced learning environments.

The emotional dynamics further underscore the limitations and possibilities of AI as a teaching partner. Students valued the consistency and low-pressure atmosphere created by the bot, which fostered greater engagement—especially among more reserved learners. Nonetheless, they also acknowledged the artificial nature of the bot's emotional expressions, characterizing them as supportive yet distinctly inauthentic. This reflects broader discussions surrounding algorithmic empathy, where emotional mimicry can boost motivation but fails to substitute for the relational authenticity that is fundamental to human teaching. Teachers often addressed these shortcomings by providing additional clarification, encouragement, or emotional framing, underscoring their ongoing role as

the primary source of emotional legitimacy within the classroom.

Cultural context significantly influenced the way AI was framed and understood. In the realm of Turkish higher education—where there is a profound respect for the authority of teachers—bots were perceived not as independent educators but rather as assistants that necessitate human supervision. The trust students placed in bot feedback was contingent upon the endorsement of their teachers, highlighting how cultural norms delineate the extent of AI's impact on pedagogy. This investigation is consistent with sociocultural theories regarding educational technology, emphasizing the necessity of aligning AI design and implementation with local values and expectations.

Ethical dilemmas surfaced across various institutions, including ambiguity surrounding the decision-making processes of bots, the risk of algorithmic bias, and concerns regarding excessive dependence on machine-generated evaluations. These concerns mirror global discussions about AI transparency and accountability, indicating that in the absence of robust ethical guidelines, AI could exacerbate inequalities or introduce technocratic approaches to teaching. Teachers' characterizations of their roles as "translating machine logic into human meaning" highlight the critical need for interpretive pedagogy—not merely as a method of instruction but as an ethical safeguard within AI-enhanced educational settings.

Collectively, this study indicate that AI teaching bots have the potential to boost cognitive engagement, facilitate personalized learning, and mitigate emotional barriers, but this is contingent upon their integration within human-centred, culturally aware, and ethically grounded pedagogical frameworks. Instead of diminishing the role of teachers, the incorporation of AI amplifies the necessity for human judgment, interpretive abilities, emotional intelligence, and ethical consciousness. This hybrid model of human–AI collaboration suggests that the future of education relies not on the replacement of educators, but on empowering them to navigate and

shape increasingly intricate learning environments where technological intelligence and human relationships coexist.

Discussion

The study suggest that AI bots establish a hybrid model of classroom authority, wherein both teachers and machines collaboratively mediate instructional meaning. Teachers served as interpreters of algorithmic behaviour, providing context to bot feedback through human judgment. Students exhibited curiosity and trust towards the feedback from bots, yet frequently questioned the genuineness of their emotional expressions. In the Turkish context, which places a strong emphasis on respect for human authority, bots were incorporated as supportive entities rather than as replacements. Ethical issues arose concerning algorithmic opacity, emotional simulation, and the risk of technocratic control over pedagogy. Nevertheless, AI bots contributed to enhanced cognitive engagement and inclusivity when integrated into reflective, human-centred teaching practices. These findings imply that successful AI pedagogy depends on educators' capacity to balance technological adaptability with cultural, moral, and ethical considerations.

The study further indicated that students' engagement was shaped by the perceived relational presence of AI bots. While some learners valued the consistency, personalized feedback, and nonjudgmental interactions provided by bots, others felt uneasy with the simulated emotional responses, revealing a conflict between cognitive support and affective authenticity. This investigation aligns with previous research on algorithmic empathy, which highlights that emotional responsiveness in AI can foster learning but may not entirely replicate human empathy (Kory & Breazeal, 2014; Dillenbourg, 2019). Teachers noted that AI tools promoted reflective pedagogical practices, necessitating that they continuously interpret botic behaviour, mediate student responses, and incorporate technological insights into their instructional choices. These dynamic roles position educators not merely as passive overseers but as

orchestrators of hybrid learning environments, merging algorithmic intelligence with human judgment and relational care.

Moreover, the results shed light on the ethical and sociocultural aspects of AI integration. Participants expressed apprehensions regarding algorithmic opacity, cultural bias, and the risk of excessive dependence on machine-mediated guidance. These concerns bolster existing arguments in the literature regarding the importance of transparency, inclusivity, and critical oversight in AI pedagogy (Benjamin, 2019; Floridi & Cowls, 2021). Within the context of Turkish higher education, cultural norms that prioritize respect for human authority influenced the interactions between teachers and students with AI bots. Instead of diminishing human roles, AI proved to be most effective when positioned as a collaborative partner, enhancing instructional practices while maintaining the relational and ethical dimensions of teaching. This indicates that the successful integration of AI relies not solely on technological advancement but also on pedagogical strategies that are culturally sensitive and ethically informed, thereby connecting theory and practice in hybrid learning environments.

Implications

The results of this research carry substantial consequences for teaching practices, underscoring the need for a transformation in teacher training and professional identity in the era of AI-driven instruction. Educators are no longer merely conveyors of information; they must also function as interpreters and ethical overseers of algorithmic feedback. Consequently, teacher education programs ought to incorporate components focused on AI literacy, critical data awareness, and hybrid classroom management, equipping educators to handle the cognitive and emotional dynamics introduced by AI technologies. Cultivating reflective skills to evaluate when and how to depend on AI suggestions will be essential for preserving pedagogical independence and ensuring that technology supports human-centred educational objectives rather than dictating them.

On the policy front, the incorporation of AI teaching agents necessitates the establishment of regulatory frameworks that protect the ethical, cultural, and emotional aspects of learning. Policymakers should create clear guidelines that address algorithmic accountability, data privacy, and cultural inclusivity within AI systems utilized in education. These frameworks must extend beyond mere technical regulations to consider the sociocultural ramifications of human-machine collaboration, ensuring that the implementation of AI aligns with local educational values and promotes social equity. Additionally, institutional policies should advocate for participatory methods in AI design—where educators, students, and developers work together to establish pedagogical priorities—to avert the imposition of technocratic or culturally biased algorithms.

From a design and technological perspective, the research highlights the necessity of developing AI systems that are culturally aware and emotionally intelligent. It is essential for developers to incorporate ethical design principles such as transparency, explainability, and contextual adaptability into AI interfaces to foster inclusive learning environments. Instead of pursuing complete emotional simulation, future AI systems should focus on achieving authentic relational alignment, acknowledging the distinction between emotional responsiveness and empathy. Crafting AI that recognizes its nonhuman essence while facilitating genuine affective engagement can enhance trust and encourage deeper learning. Collaborative design partnerships among engineers, cognitive scientists, and educators can promote such ethical co-development.

Ultimately, the research indicates broader implications for the philosophy and future of education. The emergence of hybrid human–AI pedagogical ecosystems challenge the traditional belief that teaching is solely a human endeavour. As algorithmic systems become integrated into daily classroom interactions, it is crucial to reconceptualize pedagogy as a collective cognitive and ethical undertaking between humans and intelligent technologies. Educational institutions must create reflective

spaces where teachers and students can critically examine the limits of agency, empathy, and authority in the learning process. By doing so, educational systems can harness technological advancements without compromising the reflective, relational, and moral principles that characterize meaningful education.

The results highlight that the successful incorporation of AI teaching bots necessitates a redefinition of the teacher's professional identity—not merely as a passive recipient of algorithmic outputs, but as an engaged interpreter who translates, contextualizes, and ethically evaluates machine-generated feedback.

Given that authority in AI-mediated classrooms is both distributed and asymmetrical, teacher education programs must explicitly equip educators to navigate this hybrid dynamic. This preparation should encompass the development of skills in algorithmic literacy, critical data analysis, and the capacity to evaluate the pedagogical consequences of bot feedback for a diverse student background.

Moreover, as students frequently depend on teachers to interpret the bot's decisions and to scrutinize the emotional authenticity of simulated empathy, educators must foster competencies in relational mediation—striking a balance between technological adaptability and emotional responsiveness. By doing so, teachers emerge as pivotal agents who uphold the reflective, ethical, and humanizing aspects of learning in increasingly automated educational settings.

At the institutional and policy level, the results underscore the pressing necessity for regulatory frameworks that emphasize ethical transparency, cultural sensitivity, and responsible use of AI. The concerns raised by participants regarding algorithmic opacity, emotional simulation, and potential bias demonstrate that, in the absence of clear guidelines, AI may exacerbate inequities or promote technocratic approaches to pedagogy. Consequently, policies must require explainability, data privacy safeguards, and culturally informed implementation strategies that

acknowledge how local customs—such as the profound respect for teacher authority in Türkiye—affect human–bot interactions.

On the technological front, developers ought to create AI systems that enhance rather than compromise human judgment, offering interpretable feedback and steering clear of excessive dependence on simulated emotional reactions. Establishing participatory design frameworks where educators, students, and technologists work together can help ensure that AI tools are pedagogically relevant, ethically sound, and culturally suitable. In conclusion, responsible AI design and policy can enhance the inclusive, motivational, and engagement benefits highlighted in this study while preserving the human-centred integrity of educational practices.

Conclusion

Incorporation of AI teaching bots into the educational landscape requires a rethinking of the human role in the teaching process. Instead of acting as independent educators, AI should function as a supportive partner that enhances the reflective, ethical, and relational aspects of pedagogy. This research illustrates that AI bots can improve cognitive engagement, inclusivity, and personalized learning when they are thoughtfully integrated into human-centred classrooms. Teachers are not eliminated but rather repositioned as facilitators of hybrid learning environments, bridging the gap between algorithmic outputs and the socio-emotional requirements of students.

The results further emphasize the significance of cultural and ethical awareness in the adoption of AI technologies. In the context of Türkiye, the respect for human authority influenced the role of bots as supportive entities rather than as independent educators. The engagement of students was shaped by both the cognitive abilities of AI and its perceived relational authenticity, highlighting the limitations of algorithmic empathy. Ethical issues—including algorithmic opacity, cultural bias, and the potential for technocratic pedagogy—underscore the necessity for

transparency, inclusivity, and reflective oversight in classrooms enhanced by AI.

From a theoretical standpoint, this study broadens the existing literature on human–bot interaction (Latour, 2005; Prieto et al., 2021) and algorithmic adaptivism (Belpaeme et al., 2018) by illustrating how authority, empathy, and relationality are collaboratively constructed within hybrid pedagogical ecosystems. On a practical level, the research indicates that effective integration of AI necessitates professional development for educators, enabling them to interpret, contextualize, and ethically utilize bot feedback, thereby achieving a balance between technological advancement and human judgment and care.

Future investigations should delve into the longitudinal effects of AI across various cultural and disciplinary settings, assess the long-term implications for teacher identity and student learning outcomes, and scrutinize the evolving ethical frameworks essential for AI-mediated pedagogy. Ultimately, reclaiming the human aspect in AI-enhanced education requires harmonizing technological innovation with the relational and ethical core of teaching, ensuring that algorithmic intelligence acts as a means of empowerment rather than a substitute. By prioritizing the human element in hybrid learning environments, AI can significantly enhance inclusive, reflective, and ethically sound educational practices.

The research illustrates that the incorporation of AI teaching bots alters the educational framework not by supplanting human instructors but by changing the circumstances under which teaching and learning take place. The results indicate that authority in AI-enhanced classrooms becomes decentralized yet remains fundamentally rooted in human oversight, as educators continue to act as ethical interpreters who contextualize bot feedback and uphold cultural standards of expertise. Although AI bots provide consistent support and promote greater engagement—especially among reluctant learners—their simulated emotional responses cannot entirely mimic the relational authenticity inherent in human teaching. This

conflict between cognitive efficiency and emotional limitation highlights the significance of hybrid learning environments where AI aids in instructional scaffolding while educators preserve the reflective, relational, and moral aspects of education. In conclusion, the investigation confirms that the pedagogical worth of AI does not reside in its independence but in the effectiveness of its integration into human-led interpretive and culturally relevant practices.

The results further emphasize that the effective integration of AI in educational settings necessitates continuous ethical oversight, culturally sensitive design, and ongoing professional development. The concerns raised by both students and educators regarding the lack of transparency in algorithms, the risk of bias, and the potential for dependency highlight the necessity for AI systems to be transparent, comprehensible, and congruent with the values inherent in local educational environments—especially in cultures like Türkiye, where reverence for human authority influences views on pedagogical legitimacy. This study adds to the expanding theoretical discourse on human–AI relationships, algorithmic empathy, and hybrid authority by illustrating how emotional, cultural, and ethical factors converge in actual classroom environments. Future investigations should examine these interactions across various cultural and disciplinary frameworks, assess the long-term implications for teacher identity and student independence, and formulate ethical guidelines that ensure AI functions as a means of empowerment rather than a catalyst for technocratic teaching methods. In summary, maintaining the human essence of education—while effectively utilizing AI's adaptive potential—presents the most promising route toward inclusive, reflective, and ethically sound learning environments.

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Staging Inclusion or Reinforcing Exclusion? UDL and Moroccan Assessment Cultures

Nouh ALAOUI MHAMDI[1]

Inclusion circulates as an educational orthodoxy, with Universal Design for Learning (UDL) framed as widening access through multiple means of engagement, representation, and action, expression. When UDL travels as a standardized reform into centralized systems, it frequently meets assessment regimes, teacher-centred routines, and uneven infrastructure, under such conditions, the transfer of inclusion appears associated with patterned exclusions rather than their reduction (Alaoui Mhamdi, 2025b, 2025a; Benseddik et al., 2017; Lee & Hung, 2025).

In Morocco's English-language classrooms, policy ambitions for equity sit alongside overcrowding and resource constraints, while exam-orientation narrows teachers' discretion to vary tasks in line with UDL (Alaoui Mhamdi, 2025b).

Material access matters for reported enactment. Moroccan studies associate availability of projectors, connectivity, and curated digital materials with higher self-reports on UDL-aligned practices and with lower perceived barriers, while rural schools report the converse (Abakarim & Yaakoubi, 2025; Boualili & El Bakkali, 2025). Teachers

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frequently value digital tools but describe integration as contingent on time and training, which positions UDL less as a neutral toolkit and more as a practice filtered through institutional support (Abakarim & Yaakoubi, 2025). At the same time, recent Moroccan quasi-experimental work revisiting the "meshing hypothesis" reports no significant performance gains from tailoring EFL instruction to learners' reported styles, suggesting that style matching is not associated with higher task performance and that flexible, multi-path design aligns more closely with available evidence (Benseddik et al., 2017; Seddik et al., 2025).

Against this backdrop, specifying how UDL is reported in ordinary classrooms is important for analytic clarity and policy calibration. The author addresses this by analysing a quantitative survey of 167 English teachers in Fez-Meknes, using descriptive statistics and correlations to examine associations between four outcomes, UDL Engagement, Representation, Action/Expression means, and perceived barriers, and technology access, participation in recent training, school location, teaching experience, and background characteristics. The regional focus is appropriate because Fez-Meknes contains both urban and rural schools with heterogeneous infrastructure, allowing observation of patterned variation that national discourse tends to flatten.

The guiding question is therefore introduced as follows: *how are reported UDL-aligned practices and perceived barriers among Moroccan English teachers related to institutional conditions and technology-related factors?* To answer this with transparent tests of association, three hypotheses are specified:

H1 - higher reported access to technological materials and internet aligns with higher UDL Engagement, Representation, and Action/Expression means.

H2 - participation in teacher training within the last 24 months relates to higher UDL means and relates to lower perceived barriers.

H3 - teaching location (urban/rural), use of digital materials, and total years of experience are associated with differences in UDL means and barrier scores.

Interpretation draws on the Extended Technology Acceptance Model (TAM2) (Venkatesh & Davis, 2000) to situate reported uptake. Perceived usefulness and ease of use are treated as proximal beliefs about multimodal and digital practices, subjective norm and image refer to expectations within schools, job relevance, output quality, and result demonstrability qualify judgments of usefulness, with experience and voluntariness moderating these relations. In Moroccan EFL, usefulness relates to alignment with curriculum and examinations, ease of use to connectivity and device reliability, and social influence to leadership and collegial culture. Teacher reports that digital tools aid accessibility but require training map onto usefulness and result demonstrability, while national ICT strategies with uneven reach temper ease-of-use perceptions (Abakarim & Yaakoubi, 2025; Boualili & El Bakkali, 2025).

The broader context remains salient: a multilingual policy environment in which French retains credentialing salience and English expands in secondary schooling, centralized curricula and high-stakes assessment that compress discretionary space, and uneven infrastructure and professional development that remain more available in urban centres (Abakarim & Yaakoubi, 2025; Alaoui Mhamdi, 2025b; Boualili & El Bakkali, 2025). These conditions suggest that UDL's "multiple means" presuppose institutional means, time, materials, training, and permission to vary tasks. The literature review now turns to scholarship on UDL and inclusive task design, TAM2 and technology acceptance, teacher agency under centralized governance, and policy transfer in language education to inform the measures, hypotheses, and subsequent interpretation (Abakarim & Yaakoubi, 2025; Alaoui Mhamdi, 2025b; Ismailov, 2025; Lee & Hung, 2025).

Literature Review

Universal Scripts, Local Scripts: Inclusion under Assessment Governance

Across the literature, UDL's universalism appears to collide with institutional routines, multilingual politics, and standardized assessment in ways that may re-script inclusion as a constrained design choice rather than a generalizable method. This tendency seems especially visible where exam-aligned pacing guides and uniform rubrics limit variation, even when teachers value UDL's principles (Alaoui Mhamdi, 2025b). Policy texts appear to affirm equity yet frequently remain programmatic, which suggests that enactment depends less on declarations and more on how schools sequence training, authorize task variation, and interpret "legitimate" evidence of learning (Benseddik et al., 2017; El Boukhrissi & Brigui, 2025). The repeated emphasis on infrastructure and equipment should be acknowledged but treated cautiously. While access issues matter, they may function as proxies for deeper governance questions, permission structures, time budgets, and accountability scripts, that arguably condition practice more directly (Abakarim & Yaakoubi, 2025; Boualili & El Bakkali, 2025; Ouhraa & Mrah, 2025). The pattern, taken together, suggests that inclusion policies can travel, implementation guides may circulate, and yet classroom practice often remains tethered to assessment cultures that favour uniformity (Alaoui Mhamdi, 2025b; Benseddik et al., 2017; El Boukhrissi & Brigui, 2025).

Multiplicity without Typologies: Tasks, Choice, and What Counts as Evidence

Findings across English as a Foreign Language (EFL) and English as a Medium of Instruction (EMI) contexts indicate that multiplicity, scaffolded tasks, clear rubrics, and multimodal outputs, appears to support participation without relying on fixed learner typologies. A Moroccan quasi-experiment revisiting the meshing hypothesis reports no reliable advantage from style matching, which suggests that typological tailoring may distract from assignment architectures that permit multiple

demonstrations of understanding (Seddik et al., 2025). EMI-oriented analyses further imply that accessible participation tends to align with staged genres and visual mediation, while more analytic formats may require explicit scaffolds to sustain engagement, which in turn seems to depend on departmental tolerance for alternative products (Ismailov, 2025). Preservice and school-based accounts hint that representation is adopted first, with engagement and action, expression lagging unless mentoring explicitly legitimizes them, which suggests that local definitions of assessable work still govern which UDL domains gain traction (Lourenço et al., 2025; Sabaté-Dalmau & Moncada-Comas, 2023). The overall picture may be that UDL is best operationalized not through categorical "matching" but through transparent choice structures that fit what programs already accept as valid evidence (Ismailov, 2025; Lourenço et al., 2025; Seddik et al., 2025).

Adoption as Collective Work: Agency, Peer Norms, and Program Time

Across the literature, adoption appears less individual than collective: shifts in practice seem to occur when teachers co-design tasks, share artefacts, and iteratively adjust routines, which suggests that peer norms and program time may matter as much as tools (Lee & Hung, 2025). High self-reported implementation alongside "intermediate barriers" in some surveys may indicate ceiling effects or, alternatively, alignment with representation-heavy routines that are already normatively sanctioned, which cautions that transfer of instruments across contexts may require validity checks (Melhem & Al-Rashid, 2023). Moroccan surveys associating higher UDL means with digital-materials use are informative yet may also index organizational permissions, collegial modelling, and assessment fit, which together can shape perceived feasibility (Abakarim & Yaakoubi, 2025; Boualili & El Bakkali, 2025). The literature therefore appears to suggest that while infrastructure is cited often, and should be cited, it has been overused as a master explanation, attention may need to shift toward how usefulness is negotiated, how "output quality" is

evidenced, and how result demonstrability is staged for colleagues and leaders (Abakarim & Yaakoubi, 2025; Lourenço et al., 2025).

Re-siting TAM2: From Information Systems to Pedagogical Design

TAM2, typically applied to information systems, can be repurposed as a lens on pedagogical innovation because teachers' UDL uptake appears to hinge on the same families of beliefs and social processes. Perceived usefulness can map onto judgments that multimodal tasks help meet syllabus and exam targets. Perceived ease of use can relate to workload, classroom orchestration, and procedural clarity. Subjective norm and image can capture department expectations and reputational gains for "innovative yet gradable" work. Job relevance, output quality, and result demonstrability can articulate whether UDL artefacts seem worth planning time, score cleanly, and "show results" convincingly. Experience and voluntariness can moderate these relations as teachers accumulate proofs or face mandates (Venkatesh & Davis, 2000). This reframing may appear to infuse new analytical traction into TAM2 by applying it to educational designs, where usefulness is judged by equity and assessability, ease of use by pedagogic manageability, and demonstrability by artefacts and rubrics, thus offering a structured account of why UDL is taken up, bracketed, or selectively appropriated in Moroccan EFL contexts (Venkatesh & Davis, 2000).

The literature collectively suggests that UDL-aligned practice is patterned less by devices alone and more by assessment cultures, collegial norms, and judgments about usefulness and demonstrable outcomes. These conditions appear measurable and thus lend themselves to association-focused analysis. The next section outlines the survey design, variables, and correlational strategy used to examine how reported UDL practices and perceived barriers relate to training, location, experience, and technology-related factors in the Fez-Meknes sample.

Methodology

Research Design

A quantitative, cross-sectional survey design was employed to gather standardized data at a single point in time. The design appears suitable for describing patterns and for examining whether selected variables relate to one another. Analyses are correlational, aiming to identify associations rather than causal mechanisms.

Sampling Procedure

The participants were 167 public-school English teachers from the Fez-Meknes region. A purposive-plus-snowball approach was used: eligible teachers were contacted and then invited to share the link with similarly eligible colleagues. Recruitment proceeded through *Facebook,* email, and *WhatsApp*, which likely broadened reach but also implies non-probability features that should be borne in mind. This recruitment process yielded 167 completed questionnaires that met the inclusion criteria and formed the analytic sample.

Inclusion and Exclusion Criteria

Inclusion criteria were: active public-school English teachers in Fez-Meknes region, able to read English, and consenting adults. Exclusions covered administrators without teaching loads, preservice teachers, individuals outside public schooling, and those unable to complete the English questionnaire. These criteria align the sample with the study's focus and may limit misclassification.

Questionnaire Development

The data were collected using the Teachers' Perception Towards Implementation of Principles of UDL in Teaching Students with Learning Difficulties scale (Melhem & Al-Rashid, 2023). The instrument was adopted because it targets teachers, originates in a socially and economically comparable context, and remains one of few available measures. It comprises four dimensions: Engagement Principle, Representation Principle, Action Expression Principle, and Barriers

Implementing UDL. Only brief demographic/context items were added. As all participants read English, no translation was required. A *Google Forms* pretest (n = 10) suggested satisfactory comprehension thus the instrument was retained unchanged.

Ethical Considerations

Participation was voluntary and anonymous. An information-and-consent page detailed aims, procedures, and confidentiality. No identifying data (e.g., names, emails, IP addresses) were collected. Under the guidance of Sidi Mohamed Ben Abdellah University for anonymous, minimal-risk adult surveys that do not gather identifiable information, formal ethics approval was not required. Data were stored securely and reported in aggregate.

Data Collection Procedures

The questionnaire was administered online using *Google Forms*. The survey link was disseminated through *Facebook Messenger*, email, and *WhatsApp* to public-school English teachers in the Fez-Meknes region who met the inclusion criteria outlined above. The first page of the form presented an information-and-consent statement summarizing the study aims, voluntary participation, eligibility conditions, and data protection; only teachers who indicated consent proceeded to the main questionnaire.

Before launching the main data collection, a pilot phase was conducted with 18 teachers who completed the full online questionnaire. Pilot responses were used to check item wording, layout, and technical functioning of the *Google Forms* administration. Preliminary reliability and distributional checks on the pilot data suggested satisfactory internal consistency for the UDL subscales and no problematic items or response patterns, so no substantive modifications were required prior to full deployment.

The main questionnaire invited respondents to complete demographic and contextual items (gender, age band, total teaching experience, school location, recent training within 24 months, use of digital materials, and school-level technology access), followed by the four UDL subscales from

Melhem and Al-Rashid's (2023) instrument (Engagement, Representation, Action-Expression, and Barriers Implementing UDL). All items were presented in English and were self-completed on participants' own devices at a time of their choosing. Respondents could exit the form at any point, and only submitted questionnaires were stored.

Once the data-collection window closed, responses were downloaded from *Google Forms* and checked against the inclusion and exclusion criteria. Ineligible or obviously test entries were removed where present, and 167 valid questionnaires were retained for analysis. In this survey design, participants did not complete classroom performance tasks. "Performance" within the study refers to their self-reported frequencies of UDL-aligned practices and perceived barriers, operationalised through the subscale scores described in the Results section.

Data Analysis

Responses were exported to *Microsoft Excel* for coding and then analysed in *IBM SPSS 27*. Descriptive statistics (frequencies, means, standard deviations) summarized demographics and subscale scores. Bivariate correlations assessed the strength and direction of associations among UDL subscales and contextual variables (e.g., training within 24 months, digital-materials use, location, experience). Emphasis remained on pattern description and association strength rather than causal claims.

Validity and Reliability

Internal consistency in this sample was acceptable to strong: Engagement Principle $\alpha = 0.88$, Representation Principle $\alpha = 0.85$, Action Expression Principle $\alpha = 0.88$, Barriers Implementing UDL $\alpha = 0.79$. Retaining original item wording supports comparability with the source instrument, the pretest suggests face validity in this context. Factor revalidation was not undertaken; inferences therefore remain descriptive and association-focused. Within these bounds, the scale appears to maintain reliability and to function adequately for the intended analyses.

Results

This section is segmented into two parts. First, descriptive statistics summarize respondents and key background variables to situate the sample; second, inferential statistics (reported subsequently) examine associations between UDL-related outcomes and contextual factors. For interpretability and to reduce disclosure risk in sparse tails, age and teaching experience are presented in band, this binning also stabilizes percentages and aligns with the study's association-focused aims. Because only 2 respondents (1.2%) reported private-school employment, sector was documented descriptively but not included as a conditioning variable in the inferential analyses to avoid unstable subgroups.

Descriptive Statistics

Descriptive statistics for the sample are presented in Table 1. Based on N = 167, gender distribution is balanced, with 51.5% identifying as female and 48.5% as male. Most respondents are situated in urban contexts (67.1%), with 32.9% in rural settings. Age appears broadly distributed, with the largest share in the 40-44 group (31.1%) and substantial proportions in the 22-29 (19.2%) and 55+ (6.6%) groups. Teaching experience spans early to later-career profiles, with 1-5 years (19.8%), 11-15 years (22.2%), and 16-20 years (19.8%) comparatively frequent. A majority report recent training (59.3%), use digital materials (78.4%), and have school-provided access to technological materials (53.9%). This heterogeneity may be analytically useful when examining associations between these characteristics, UDL subscale scores, and perceived barriers.

Table 1

Sample characteristics (N = 167)

Variable	Category	n	%
Gender	Female	86	51.5
	Male	81	48.5
Location	Urban	112	67.1

	Rural	55	32.9
Age group	22-29	32	19.2
	40-44	52	31.1
	55+	11	6.6
	Other age groups[a]	72	43.1
Teaching experience	1-5 years	33	19.8
	11-15 years	37	22.2
	16-20 years	33	19.8
	Other experience bands[b]	64	38.2
Recent training	Yes	99	59.3
	No	68	40.7
Uses digital materials	Yes	131	78.4
	No	36	21.6
School tech access	Yes	90	53.9
	No	77	46.1

Note. Percentages are based on N = 167. [a]"Other age groups" includes all remaining age brackets not listed separately. [b]"Other experience bands" includes all remaining experience categories not listed separately.

Inferential Statistics

This subsection reports independent-samples *t*-tests for key groups (gender; rural/urban location; training within 24 months; digital-materials use; school technology access) and zero-order correlations among the four UDL outcomes and continuous covariates. Associations are interpreted cautiously; patterns are read as indicative rather than determinative. Private-sector employment was not modelled because only two respondents (1.2%) reported that status, which would yield unstable estimates for subgroup tests.

The three practice-oriented outcomes, Engagement, Representation, and Action-Expression, appear tightly interrelated. Zero-order correlations among them are large and positive (Engagement - Representation $r = .653$, Engagement, Action - Expression $r = .586$, Representation, Action-Expression $r = .708$; all $p < .001$), which suggests that reported design choices cluster across domains and may travel together as a repertoire. Perceived barriers, by contrast, shows near-zero associations with the three practice means ($|r| \leq .027$, $p \geq .726$), which may indicate that barriers register a distinct perception space, may reflect differences in scale range, and may be patterned more by contextual judgments than by self-reports of practice. Age and total experience relate modestly and positively to the three practice outcomes ($|r| \approx .17,.23$, all $p \leq .024$), which may align with cohort-linked repertoires, may index accumulated routines, and may also be compositional.

Gender comparisons point to selective differences. Means for Representation and Action-Expression are higher in one gender group (Representation: $t(165) = 2.21$, $p = .029$, Cohen's $d = 0.34$, 95% CI [0.04, 0.65]; Action-Expression: $t(165) = 2.52$, $p = .013$, $d = 0.39$, [0.08, 0.70]), whereas Engagement differences do not reach conventional significance ($p = .229$, $d = 0.19$). Perceived barriers align with higher scores in the other group ($t(165) = -2.21$, $p = .028$, $d = -0.34$, [−0.65, −0.04]). These patterns may reflect role distributions or classroom routines that differ by group, may be instrument-linked, and may warrant follow-up using models that condition on age and experience.

Teaching location shows a similar, selective profile. Rural teachers report higher Engagement ($t(165) = 2.02$, $p = .045$, $d = 0.33$) and higher Action-Expression ($t(165) = 2.19$, $p = .030$, $d = 0.36$), whereas Representation and barriers differences are not statistically reliable ($p \geq .125$). These results may align with local routines associated with class configuration, may relate to program time, and may also reflect differences in assessment scripts; without additional controls, directional interpretation should remain tentative.

Training within the last 24 months relates to only one domain. Teachers reporting recent training show lower Representation means than peers without recent training ($t(165) = -2.44$, $p = .016$, $d = -0.39$), while Engagement, Action-Expression, and barriers do not differ significantly ($p \geq .413$). This selective pattern may reflect program content (e.g., emphasis on planning constraints that temper use of varied representational materials), may be a cohort artifact, and may depend on the timing and intensity of the training reported.

Technology-proximal contrasts are consistent and comparatively larger. Teachers who report using digital materials have higher Engagement ($t(165) = 2.48$, $p = .014$, $d = 0.47$), higher Representation ($t(165) = 2.95$, $p = .004$, $d = 0.55$), and higher Action-Expression ($t(165) = 4.07$, $p < .001$, $d = 0.76$), alongside lower perceived barriers ($t(165) = -2.78$, $p = .006$, $d = -0.52$). School-level technology access shows the same directional profile with small-to-moderate magnitudes (Engagement: $t(165) = 2.64$, $p = .009$, $d = 0.41$; Representation: $t(165) = 2.63$, $p = .009$, $d = 0.41$; Action-Expression: $t(165) = 3.01$, $p = .003$, $d = 0.47$; Barriers: $t(165) = -2.99$, $p = .003$, $d = -0.46$). These contrasts may reflect affordance familiarity, may capture organizational permission structures, and may also index alignment between multimodal design and what departments accept as gradable outputs.

The correlation structure is summarized in Table 2 (restricted to continuous variables for interpretability) and visualized in Figure 1. The heatmap shows a darker triangular block among the three practice outcomes, pale shading between barriers and practice, and a very dark tie between age and experience ($r = .901$). This visual depiction may assist readers in seeing that practice outcomes move together while barriers appear orthogonal.

Table 2

Zero-order Correlations among Age, Experience, and UDL Outcomes

Variables	Engagement	Representation	Action-Expr.	Barriers	Age	Experience
Engagement	-	.653** (<.001)	.586** (<.001)	.006 (.935)	.228** (.003)	.217** (.005)
Representation	.653** (<.001)	-	.708** (<.001)	.023 (.766)	.217** (.005)	.176* (.023)
Action-Expression	.586** (<.001)	.708** (<.001)	-	.027 (.726)	.181* (.019)	.174* (.024)
Barriers	.006 (.935)	.023 (.766)	.027 (.726)	-	.021 (.789)	.117 (.131)
Age	.228** (.003)	.217** (.005)	.181* (.019)	.021 (.789)	-	.901** (<.001)
Experience	.217** (.005)	.176* (.023)	.174* (.024)	.117 (.131)	.901** (<.001)	-

Note. Values are Pearson *r* with two-tailed *p* in parentheses. * $p < .05$; ** $p < .01$.

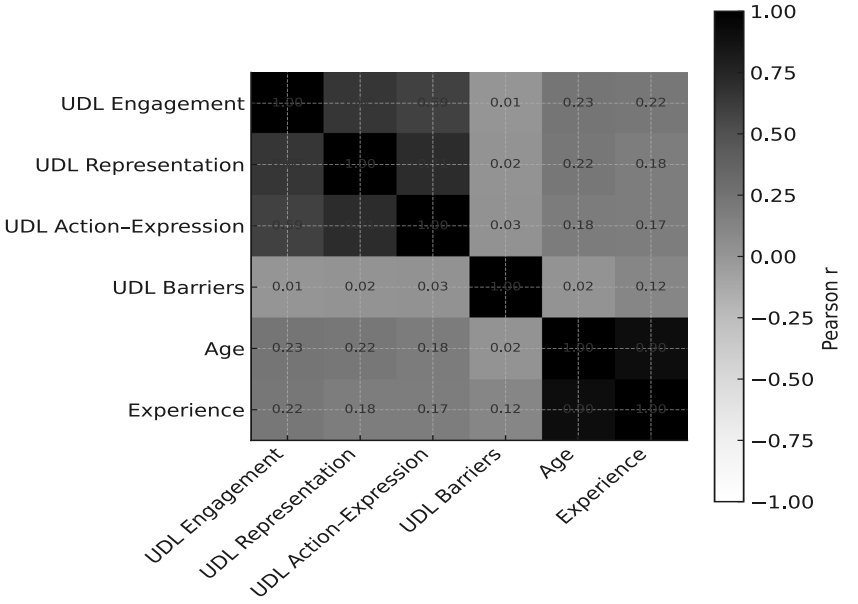


Figure 1 *Correlations among UDL Outcomes, Age, and Experience*

Discussion

The results appear to show three patterned regularities. First, the practice-oriented UDL means, Engagement, Representation, and Action-Expression, cluster strongly, which suggests that reported design choices may travel together as a repertoire under ordinary conditions. Second, perceived barriers remain essentially orthogonal to those practice means, which may indicate that judgments of feasibility are organized in a different evaluative register, possibly more managerial or permission-oriented than task-procedural. Third, technology-proximal indicators (self-reported digital-materials use and school-level access) align with higher practice means and lower barriers, while gender, location, and recent training show smaller, selective contrasts. Read alongside prior scholarship in Morocco and comparable EFL/EMI settings, these patterns appear to support the claim that imported inclusion is often filtered by assessment scripts, program time, and institutional expectations, conditions that can reproduce exclusion by concentrating credible "choice" where usefulness is demonstrable and recognized (Abakarim & Yaakoubi, 2025; Alaoui Mhamdi, 2025b; Benseddik et al., 2017; Boualili & El Bakkali, 2025; Ismailov, 2025; Lee & Hung, 2025). In this sense, UDL may be operationalized when outputs fit grading practices and may be sidelined when such fit is unclear, which echoes critiques of policy transfer that foreground assessment governance and teacher agency (Lourenço et al., 2025; Sabaté-Dalmau & Moncada-Comas, 2023).

Interpreting the Findings through TAM2

Perceived Usefulness

The positive associations between practice means and digital-materials use or school access appear to align with perceived usefulness: multimodal resources may be judged as helping teachers meet syllabus targets, prepare exam-compatible artifacts, and sustain engagement. Where UDL-aligned tasks are seen as yielding assessable products, uptake seems more likely, which dovetails with reports that teachers value tools when they "count"

for grading and progression (Abakarim & Yaakoubi, 2025; Boualili & El Bakkali, 2025). This pattern also fits TAM2's claim that usefulness beliefs are central to reported adoption (Venkatesh & Davis, 2000).

Perceived Ease of Use

Ease of use, understood here as orchestration manageability rather than interface simplicity, appears indirectly reflected. The detachment between barriers and practice may suggest that teachers differentiate "can do" from "allowed to do". Perceived ease may be judged high when routines are routinizable, but barriers may capture organizational constraints that are only partly technical. This split aligns with the observation that exam-aligned pacing and uniform rubrics can narrow the space in which multiple representations are practically orchestrated (Alaoui Mhamdi, 2025b; El Boukhrissi & Brigui, 2025), even when tools themselves are familiar.

Subjective Norm

Differences by gender and location, though modest, may index peer expectations about what counts as legitimate work. Reports of higher practice means in one gender group and in rural settings may reflect local modelling, mentoring, or reputation economies that normalize certain UDL moves. Such norms appear to matter when teachers share artifacts, co-review assignments, and circulate examples that colleagues can reuse, which aligns with lesson-study accounts in EFL that describe shifts emerging through collaborative routines (Lee & Hung, 2025). Under TAM2, subjective norm may thus capture the social permission to invest in UDL tasks.

Image

Reputational incentives also seem salient. Where multimodal assignments are seen as "innovative yet gradable," image gains may be inferred, and practice means appear higher. Conversely, if alternative outputs are suspected of diluting rigor, teachers may report hesitancy, which can surface as higher barrier scores. Image thus relates to how UDL is narrated in departments, as credible design or as risky deviation, a distinction that appears repeatedly in Moroccan discussions of pedagogical legitimacy

(Alaoui Mhamdi, 2025b; Boualili & El Bakkali, 2025), and that TAM2 explicitly treats as a driver of adoption (Venkatesh & Davis, 2000).

Job Relevance

The training result, recent participation aligning with lower Representation, may suggest that current provision is perceived as less directly relevant to the core demands of planning, materials curation, and grading. If sessions stress policy compliance more than assignment architecture, job relevance may register weakly, and Representation may not rise. This reading is consistent with reports that professional development is episodic and certificate-oriented rather than artifact-rich (Abakarim & Yaakoubi, 2025), and with TAM2's specification that relevance shapes usefulness beliefs (Venkatesh & Davis, 2000).

Output Quality

Teachers appear to favour UDL where outputs can be scored cleanly with existing rubrics. The strong co-movement among practice subscales may indicate that, once a gradable multimodal template is institutionally accepted, teachers mobilize engagement, representation, and action-expression together. Where marking schemes are rigid, representation-heavy designs may be privileged over action-expression alternatives, which echoes EMI analyses that tie participation to clear genre staging and rubric transparency (Ismailov, 2025; Sabaté-Dalmau & Moncada-Comas, 2023).

Result Demonstrability

Lower reported barriers alongside higher practice means among digital-materials users may reflect demonstrability loops: examples can be shown, compared, and defended to colleagues and leaders. Departments appear more open when results, artifacts, exemplars, and rubric-aligned performance, are visible. The literature similarly suggests that claims of inclusion gain traction when outcome quality can be evidenced rather than asserted (Lourenço et al., 2025; Venkatesh & Davis, 2000).

Moderators: Experience and Voluntariness

Age and experience correlate modestly and positively with practice means. This pattern may indicate that experience moderates the usefulness, adoption link by furnishing repertoires and by easing rubric design; it may also index cohort norms. Voluntariness is not directly measured here, yet the detachment between barriers and practice, together with small group differences, appears consistent with mixed voluntariness: UDL is neither fully mandated nor entirely optional, and uptake may depend on local permission structures as much as on individual preference (Venkatesh & Davis, 2000).

Why Inclusion May Be Reproduced as Exclusion

The combination of strong practice clustering, weak links with barriers, and selective group contrasts suggests that inclusion is mediated by institutional recognition rather than only by resources. Where outputs are accepted, peer norms are supportive, and results can be shown, UDL appears feasible; where acceptance is thin, the same practices may be treated as exceptional and thus unevenly distributed. This pattern aligns with evidence against typological "matching" and in favour of transparent, staged assignments under assessment governance (Benseddik et al., 2017; Ismailov, 2025; Seddik et al., 2025). Under such conditions, imported inclusion can stratify opportunity by concentrating credible "multiple means" in sites already advantaged by acceptance and modelling (Abakarim & Yaakoubi, 2025; Alaoui Mhamdi, 2025b).

Contributions: Practice, Policy, Theory

Practice

The study offers association-based evidence that teachers report higher UDL means where demonstrable artifacts circulate, where outputs are gradable, and where social permission appears present. This suggests that short design studios, exemplar banks, and rubric-focused mentoring may be more consequential than generic exhortations (Lee & Hung, 2025; Lourenço et al., 2025).

Policy

Findings point to assessment governance as a central mediator: national or regional guidance that clarifies acceptable multimodal outputs and provides shared rubrics may lower perceived risk and align incentives. This stance is consistent with local analyses of curriculum, assessment alignment in Morocco (Boualili & El Bakkali, 2025).

Theory

Applying TAM2 to a pedagogical innovation appears to extend the model's reach: usefulness, ease, norm, image, relevance, output quality, and demonstrability map cleanly onto UDL enactment under centralized assessment. The results suggest that adoption is as social and evidentiary as it is technical, which refines how TAM2 can be applied in education (Venkatesh & Davis, 2000).

Concrete Implementation Pathway (National Policy Level)

1. **Assessment-aligned UDL rubrics.** Issue national rubrics that specify gradable multimodal products for common EFL tasks (reading responses, listening logs, oral portfolios). This may raise perceived usefulness and output quality while clarifying job relevance.
2. **Result demonstrability infrastructure.** Establish a moderated repository of vetted student artifacts with annotations linking criteria to marks; schedule brief "showcase" cycles in which schools upload de-identified exemplars. Such visibility may lower perceived barriers and strengthen subjective norm and image.
3. **Design studios and micro-credentials.** Fund short, school-embedded studios that produce finished assignments, rubrics, and exemplars rather than policy summaries. Recognize outputs with micro-credentials tied to appraisal, which may enhance voluntariness-as-permission and perceived ease.
4. **Department-level routines.** Require two UDL-aligned assessment points per term in secondary EFL, with department

minutes documenting how outputs were graded. Light-touch auditing may sustain result demonstrability and stabilize expectations without overburdening teachers (Boualili & El Bakkali, 2025).

5. **Selective support rather than device-first.** Material access remains relevant but should be coupled to rubric clarity and artifact banks; otherwise, inclusion rhetoric may remain aspirational and unevenly enacted (Abakarim & Yaakoubi, 2025).

Limitations and Future Research

The cross-sectional, regional design and reliance on self-report restrict directional claims; associations may reflect cohort composition, response styles, or unobserved organizational factors. The adapted instrument shows acceptable reliability, yet factor structure was not revalidated; the training measure is coarse and timing-intensity details are absent. Private-sector representation is minimal, limiting sectoral inference. Future work may incorporate multi-level models to separate teacher from school effects, artifact audits tied to grades to operationalize output quality and result demonstrability, longitudinal tracking of department routines, and experimental or quasi-experimental tests of design studios and repository participation. Mixed-methods studies could examine how subjective norm and image are constructed in staffrooms and how job relevance is negotiated during marking meetings.

Taken together, the evidence suggests that UDL's promise in Moroccan EFL may be realized when perceived usefulness, output quality, and demonstrability are institutionally scaffolded; absent such scaffolds, inclusion appears liable to be redistributed in ways that favour already legitimized sites of practice.

Conclusion

The evidence presented here suggests that the global promise of UDL travels through institutional filters rather than arriving as a ready-made

solution. In the Fez-Meknes sample, the three practice domains cluster, perceived barriers remain largely orthogonal to practice, and technology-proximal conditions align with higher UDL means while selective differences by gender and location persist. Read through TAM2, these patterns appear to cohere around perceived usefulness, perceived ease of use, subjective norm and image, job relevance, output quality, and result demonstrability, constructs that together may explain why some classrooms report multiple means while others report hesitation under the same policy banner.

This study's contribution lies in reframing "inclusion" as contingent on assessment-fit and evidentiary routines: where multimodal outputs are recognized, graders are equipped with shared rubrics, and artifacts can be shown, UDL appears feasible; where such supports are thin, UDL may be recoded as exceptional work. The national pathway sketched, assessment-aligned rubrics, exemplar repositories, design studios, and light-touch departmental routines, offers a context-responsive route that may shift reported practices without treating devices as the primary lever. Limitations remain: cross-sectional data restrict directionality, constructs rely on self-report, and sectoral inferences are narrow. Yet the convergent associations point to a workable proposition.

If inclusion is to avoid reproducing exclusion, policy transfer must be paired with assessment clarity and demonstrability infrastructures. In short: inclusion cannot be imported; it must be locally authorized, evidenced, and assessed, or it risks becoming another name for exclusion.

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Ethical Declaration and Committee Approval

This study adhered to institutional research-ethics and publication standards. The protocol consisted of an anonymous, voluntary survey of adult EFL teachers, no identifying or sensitive personal data were collected. In accordance with the ethics guidance of Sidi Mohamed Ben Abdellah University, Faculty of Letters and Human Sciences Dhar El Mehraz (Fez), formal Research Ethics Committee approval was not required for anonymous, minimal-risk surveys of adults that do not gather identifiable information. Participation proceeded via an information-sheet consent process, respondents could discontinue at any time. Data were stored securely and are reported only in aggregate to protect confidentiality.

Empowering Pedagogy with AI: Evolving Teacher Attitudes and Instructional Practices in EFL Contexts

Pelin DERİNALP[1]

Artificial intelligence (AI) is defined as systems that can perform cognitive processes such as learning, problem solving, and decision making in a human-like manner and has attracted attention with its potential to transform many areas of life, especially in recent years (Derinalp, 2024; Derinalp & Halife, 2025; Filiz et al., 2025; Niemi, 2021). AI technologies, which span a wide range of effects from communication to health services, from production to daily life, are also attracting increasing attention in the field of education (Chiu et al., 2021; Chen et al., 2020b). The possibilities offered by AI in areas such as increasing student achievement, supporting self-regulation, and personalizing learning have been documented in various studies (Dai, 2023; Wu & Yu, 2023). Especially in the context of language education, these tools offer important pedagogical contributions such as concretizing concepts, transforming the learning process into an interactive mode and supporting critical thinking (Dai, 2023).

However, despite this potential, the integration of AI in education is still limited compared to other sectors (Luckin & Çukurova, 2019; Luckin et al., 2022). One of the main reasons for this is that teachers' readiness for

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these new technologies is low and they have not yet established the necessary relationship between their pedagogical role and AI (Seufert et al., 2021). As revealed in Galindo-Domínguez et al.'s study (2023), although teachers positively evaluate the potential of AI technologies, their level of classroom use is quite low; which is attributed to a lack of knowledge and preparation. Chiu et al. (2023) state that teachers' insecurity in using AI is associated with a decrease in their perceptions of self-efficacy. This suggests that technological transformation in education could be possible not only with the presence of technical equipment and tools, but also with the capacity of teachers to internalize and transform these tools.

In this regard, this research aims to examine how AI-supported tools are used by in-service English language teachers in the classroom over a five-week period and how this experience affected teachers' attitudes towards AI, their pedagogical practices, and their perceptions of their professional roles. The underlying assumption of the study is that teachers' attitudes towards AI technologies can be transformed through experiential interaction. Therefore, the study holistically analyses how and for what pedagogical reasons teachers integrate AI tools and what kind of gains and challenges this process poses for them.

Theoretical Framework

The integration of AI-supported tools into the teaching process transforms not only teachers' technology usage skills but also their professional identity structures, pedagogical decision-making processes, and classroom roles. To gain insight into this transformation, this study is based on the concept of teacher professional identity, the Technological Pedagogical Content Knowledge framework and the Substitution, Augmentation, Modification, and Redefinition model.

Teacher Professional Identity: A Dynamic and Contextual Process

Teacher professional identity is a multi-layered construct that explains who an individual is as a teacher and how their professional values,

beliefs, and pedagogical orientations are shaped over time (Borg, 2016). This identity is constantly reconfigured around teachers' professional experiences, contextual conditions, institutional expectations and individual agency (Curwood, 2014). This identity becomes even more dynamic when encountering technology. As a result of their interactions with new technologies, teachers assume adaptive, reconstructive, and negotiating roles.

In this regard, classroom applications of AI tools drive teachers away from the traditional role of knowledge transmitters and reposition themselves as content organizers, pedagogical decision makers, and guides who transform technology into meaningful learning experiences (Yeh, 2024; Williyan et al., 2024). Borg (2016) emphasizes that understanding teacher identity is indispensable in supporting teacher learning and planning professional development. Therefore, examining the effects of AI applications on teacher identity is critical to understanding how teachers position these tools and transform their pedagogical practices.

Technological Pedagogical Content Knowledge (TPACK) Framework

TPACK is a model developed by Mishra and Koehler (2006) that argues that teachers are urged to integrate three basic types of knowledge for effective technology integration: Technological Knowledge (TK), Pedagogical Knowledge (PK) and Content Knowledge (CK). At the intersection of these three knowledge domains, this model identifies components such as Pedagogical Content Knowledge (PCK), Technological Pedagogical Knowledge (TPK) and Technological Pedagogical Content Knowledge (TPACK).

While TK refers to the teacher's knowledge and skills in using technological tools (e.g., AI-supported software, digital platforms), PK denotes knowledge of the basic principles of teaching, such as effective teaching methods, classroom management, and student motivation. CK, in turn, means expert knowledge of the subject matter that the teacher is responsible for teaching (e.g. English grammar, literacy strategies). The

TPACK model emphasizes that it is not enough for teachers to only know the technology; they need to use this technology in accordance with pedagogical purposes, student needs and subject content.

Recent studies show that attempts to improve EFL teachers' TPACK components with AI technologies have yielded effective results. In their study with Iranian EFL teachers, Rahimi and Rezvani (2024) found that AI-supported trainings improved teachers' TPK and transformed their teaching roles. Similarly, Karataş and Ataç (2025), in their structural equation modelling study with Turkish pre-service teachers, reported that traditional TPACK components significantly predicted AI-TPACK skills. Both studies point out that EFL teachers need to be supported in pedagogical dimensions as well as technical competencies in order to use AI effectively.

Substitution, Augmentation, Modification, and Redefinition (SAMR) Model

The SAMR model was developed by Puentedura (2006) and categorizes technology integration in four stages. The first level, substitution, is where technology only directly replaces a traditional tool (e.g. using PDF instead of printed text). The second level, augmentation, refers to situations where technology-based applications add additional functionality to the pedagogical process (such as adding a read-aloud feature to digital text). At the modification stage, technology enables the redesign of instructional activities (e.g., using AI to produce content differentiated according to student level). The highest level, redefinition, is where technology enables learning experiences that were not possible before (e.g., students producing creative content with AI and receiving instant feedback).

Studies using the SAMR model in the EFL context indicate that teachers' level of AI integration is often limited. Boonmoh and Kulavichian (2023) reported that Thai pre-service teachers mostly stayed at the substitution and augmentation level, with only one participant reaching the modification level. Similarly, another study conducted by Budiman et al. (2018) reported that although teachers believed in the transformative

power of Information and Communication Technologies in teaching, their classroom practices mostly remained at the substitution and augmentation levels, while the modification and redefinition levels were rarely reached. These findings reveal that the pedagogical impact of AI-supported instruction depends not only on the use of technology but also on how teachers make sense of this technology.

Together, these frameworks allow for a nuanced examination of how teachers respond to the affordances and challenges of AI-supported instruction—not only in terms of technical use, but also as professionals navigating shifting expectations, redefined agency, and evolving classroom realities.

AI in EFL Classrooms

In recent years, AI technologies have emerged as an important transformation tool in the field of education. Many functions such as personalization of learning processes, automation of instructional feedback, and adaptive teaching practices based on the analysis of student data, have become possible with AI (Chaudhary et al., 2024; Chen et al., 2020a; Derinalp, 2024; Derinalp & Özyurt, 2025). These developments offer remarkable possibilities, especially in English as a Foreign Language (EFL) classrooms, and redefine both teacher and student roles (Taufikin et al., 2024).

AI-based technologies are transforming classroom practices with a variety of tools and approaches targeting different language skills in EFL teaching. Intelligent Tutoring Systems (ITS) are able to provide individualized feedback and guidance according to students' learning needs (Kochmar et al., 2021; Mousavinasab et al., 2018). Speech recognition systems provide instant feedback to students for pronunciation improvement (Bashori et al., 2024; Bogach et al., 2021), while Natural Language Processing (NLP)-based writing assistants can evaluate students' written productions in terms of grammar, word choice and structure (Zhang et al., 2024). Adaptive learning platforms offer content

recommendations by analysing students' achievement, progress and learning styles (Aziz et al., 2021; Heng et al., 2021).

Despite a plethora of the benefits of AI, existing literature suggests that the vast majority of teachers lack sufficient, knowledge, experience, and confidence with these technologies (Ng et al., 2023; Roshan et al., 2024). Not knowing how AI tools operate, what instructional goals they serve, and how they can be integrated into classroom practice, teachers often use these technologies in a superficial or hesitant way (Ng et al., 2023).

Although the contributions that AI can offer in EFL teaching are increasingly emphasized in the literature, practice-based data on how these tools are directly experienced by teachers in the classroom context is still limited. In particular, how teachers' attitudes towards AI tools are shaped through experience, at which stages of the teaching process and for which pedagogical purposes they use these tools, and how this process affects their professional roles and pedagogical priorities are important areas that need to be researched in depth. In this context, this study aims to examine the impact of AI-supported tools on teachers' attitudes, pedagogical decisions and classroom roles based on teachers' experiences from a five-week implementation process. Hence, the study aims to answer the following questions:

RQ1. How do in-service EFL teachers' attitudes towards AI tools change throughout a five-week implementation process?

RQ2. How do in-service EFL teachers integrate AI tools across different stages of the teaching process, and in what ways does this integration shape their pedagogical roles, influence their instructional decision-making, and redefine their teaching priorities?

RQ3. What kinds of pedagogical benefits and challenges do teachers encounter during the AI-assisted teaching process?

Methodology

Research Design

This study was designed to examine how AI-assisted teaching experience

transforms EFL teachers' attitudes, practices, and pedagogical awareness. The study is based on a multiple case study design (Stake, 2013), one of the qualitative research methods. Each teacher used AI tools in planning, implementation and/or evaluation processes in their own context and each of them was considered as a separate case in this respect. Multiple case studies allow comparative analysis of how a phenomenon emerges in more than one case (Goodrick, 2014; Stake, 2013). Although each participant was treated as a separate case in this study, the data obtained were analysed using cross-case thematic analysis, and some representative participant experiences representing contextual diversity were included in detail.

Participants and Context

The participants of the study consisted of 14 English teachers (nine females, five males) working in different cities and educational levels (primary, secondary, high school) in Türkiye. The demographic data of the participants are demonstrated in Table 1 below.

Table 1

Demographic Data of the Participants

Participant	*Gender*	*Levels Taught*	*Sector*	*Teaching Experience*
T1	Male	High School	Public	11 Years
T2	Male	High School	Public	4 Years
T3	Male	High School	Private	1 Years
T4	Female	Primary & Secondary School	Public	6 Years
T5	Female	Secondary School	Public	2 Years
T6	Female	High School	Private	4 Years
T7	Female	Secondary School	Public	5 Years
T8	Female	High School	Public	7 Years
T9	Female	Primary School	Public	4 Years
T10	Male	High School	Public	4 Years

T11	Female	High School	Public	5 Years
T12	Female	Primary & Secondary School	Private	4 Years
T13	Male	High School	Public	6 Years
T14	Female	Primary School	Public	6 Years

The participants were selected on a voluntary basis. All teachers planned, implemented, and evaluated a five-week AI-supported teaching process in their own classrooms. Throughout the process, teachers retained full autonomy and decided which AI tools to use, for what purpose and at which lesson stage.

Intervention Process and Data Collection Tools

The intervention took place as part of an MA-level Educational Technologies course whose curriculum included modules on how digital and AI-supported tools can be integrated into key areas of language instruction, including listening, speaking, reading, writing, and grammar. For each area, a variety of AI tools and classroom applications were introduced and demonstrated to the participants. However, the use of these tools during the implementation was not mandatory. Instead, teachers were encouraged to explore and integrate whichever tools they found relevant to their instructional needs and lesson designs.

The 14 in-service English teachers who participated in the study did so voluntarily, and no course grades or academic requirements were tied to their engagement with AI tools or to their involvement in the research. This voluntary structure created a low-stakes learning environment that enabled participants to experiment with the tools at their own pace, even for those who initially held reservations about AI.

The research is based on an AI-supported teaching intervention conducted for five weeks. Each participating teacher performed certain reflective tasks during this process. The process started with the Pre-Implementation Sheet, which the teachers filled out to reveal their attitudes towards AI, thoughts, and expectations before the implementation (See Appendix A). Subsequently, teachers completed two separate reflection forms each

week, one before (See Appendix B) and one after the lesson (See Appendix C), through which they systematically recorded their decisions about lesson planning, their experiences with the implementation process, and their observations of student reactions. These forms allowed for monitoring pedagogical transformations at the weekly level. At the end of the process, a Post-Implementation Sheet was completed to assess changes in teachers' attitudes towards AI and perceptual transformations regarding their teaching roles (See Appendix D). In addition, two separate Focus Group Discussions (FGD) were conducted to increase the qualitative depth of the study. FGD1 involved five participants while FGD2 contained seven teachers. Both FGDs were audio-recorded and each lasted approximately one hour.

Data Analysis

The collected data were analysed according to the thematic analysis approach developed by Braun and Clarke (2006). The coding process employed both deductive and inductive strategies. This means that while some themes were predetermined based on the research focus, additional categories emerged from the data itself during analysis.

Ethical Considerations

This study received ethical approval from the Ethics Committee of Gaziantep University following a formal evaluation process. Written consent was obtained from the participating teachers through informed consent forms that they voluntarily participated in the study and that their data would only be used for scientific purposes. Participants were given the right to withdraw from the study at any time during the study. Confidentiality of the data was ensured and all participants were represented with anonymised codes (such as T1, T2) in the analysis and reporting stages. Focus group discussions were audio-recorded and transcripts were stored in a secure environment accessible only by the research team.

Results

The findings of this study comprehensively reveal that English teachers experienced a positive transformation in their attitudes towards AI, restructured their pedagogical approaches to teaching processes, and evolved from traditional teacher roles to more design-oriented and learner-centred roles as a result of experiencing AI-supported tools during the five-week implementation process. The findings of the study are elaborated in detail below.

To evaluate the change in teachers' attitudes towards AI, reflection texts were collected before and after the implementation and participants were asked to rate their attitudes towards AI from 1 (the lowest) to 10 (the highest) in focus group discussions. As per the self-report data obtained (Figure 1), while the average attitude score was 4.83 before the intervention, this value increased to 7.58 after the intervention; an average increase of 2.75 points was observed. T6, T9, and T11 showed the highest change (+5), while those who did not show any change were T2 and T4, who initially had positive attitudes.

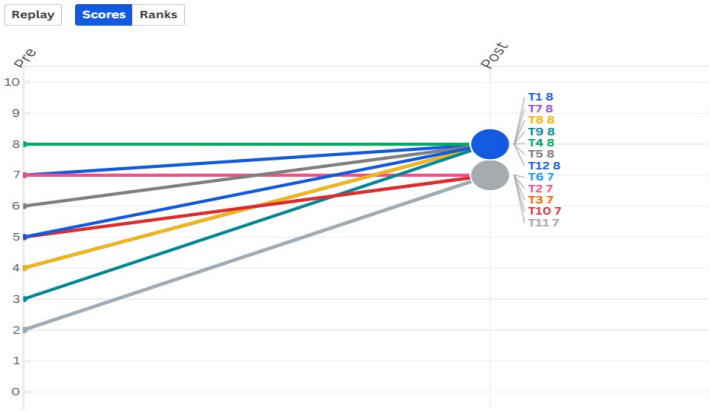


Figure 1 *Teachers' Changing Attitudes towards AI*

Along with quantitative data, findings from qualitative reflections also support the positive transformation in teachers' attitudes. Before the

implementation, it was observed that some teachers were prejudiced, hesitant or distant towards AI. For example, T6 stated that although she was aware of the advantages of AI, she still felt "prejudiced". Similarly, T3 reported that he had never used AI before and was worried that his students might get bored. During the FGD2, T9 directly stated that she was "scared".

After the implementation, it was observed that the attitudes of the majority of these teachers towards AI evolved into a more conscious, positive and pedagogically functional level. For example, T12 noted as follows:

> "*Before I used AI directly in my classes, I had mixed feelings about its role in education. I was especially cautious about the idea that it could push the teacher's guidance to the background or passively direct students to ready-made knowledge. However, after actively using AI applications in private lessons, this attitude changed significantly. Especially in individual lessons, thanks to the opportunities offered by AI, it has become much easier to focus on areas where students are lacking, to develop content according to their immediate needs, and to provide a dynamic, interactive learning environment. In this process, I realized that when used correctly, AI can become a tool that supports and strengthens the role of the teacher rather than replacing them. This has significantly increased my confidence and positive attitude towards technology*". (T12 post-impl.)

Despite her initial concern that teacher guidance would be relegated to the background, T12 stated that in one-to-one lessons, AI provided a great advantage in creating content suitable for student needs and personalizing teaching; she emphasized that she realized AI assumed a supportive role instead of substituting the teacher. As T5 experienced the contribution of AI in designing activities according to students' interests and levels, she described this technology as "*creative, fun, and helpful*" (T5, post-impl.). T11 stated that at the end of the process, with the right guidance, AI was able to go beyond ordinary content and offer innovative activities, which increased classroom participation. T4, on the other hand, stated that she realized the potential of AI, which she saw only as a planning tool in the first weeks, to increase interactivity, personalization and creativity over

time; she defined this technology as a transformative tool in terms of enriching teaching strategies.

Furthermore, when the written reflection texts of T13 and T14, who did not provide numerical ratings for their attitudes towards AI, are analysed, it is understood that both teachers evaluated AI as a more efficient, functional, and positive tool after the implementation. These findings reveal that, in general, the five-week implementation process significantly improved teachers' awareness and attitudes towards AI.

AI Integration into the Instructional Stages and Changing Roles

The second research question of this study investigated how teachers integrated AI tools into different stages of the teaching process (planning, implementation, evaluation) and how these integrations transformed their pedagogical roles, decision-making processes, and teaching priorities. The analysis is structured around three main stages, with thematic comparisons both within and across cases. The findings are presented in a holistic and interwoven manner, taking into account the pedagogical roles undertaken by teachers (for cross-tab, see Appendix E), the functional roles they ascribe to AI tools (for cross-tab, see Appendix F), and the stages of instruction in which they use these tools (for cross-tab, see Appendix G).

AI Integration in the Planning Process

All the participants stated that they benefited from AI tools most intensively at the planning stage of the lesson during the implementation process. These tools were used especially for producing content appropriate to the subject and student level, developing differentiated materials, and preparing visually supported activities. Teachers frequently preferred text generation tools such as *ChatGPT*, *Diffit*, and *Education Copilot* to save time and to structure pedagogical content more quickly and flexibly. This usage pattern manifests that teachers developed an instructional plan in accordance with the TPACK framework by integrating their technological (TK), pedagogical (PK) and content knowledge (CK). In addition, it was observed that these tools resulted in significant time savings in the planning process and transformations at the

level of redefinition in material design, indicating that some teachers realized technology integration at a high level in the context of the SAMR model.

For example, T1 actively used various AI tools at the planning stage in different weeks throughout the implementation process. In the second week, he used *Diffit* to create differentiated materials for his A2 level students—an example of modification according to the SAMR model. In the third week, he developed structured lesson materials through *Education Copilot*; and in the fifth week, he used *Canva Magic Write* to both generate and visualize content. The diversity and functionality of these tools indicate that the teacher was open to AI-based applications and consciously structured this integration for pedagogical purposes. In addition, T1, who evaluated the contributions of the tools to the planning process, expressed the efficiency of the process in the following words: "*Diffit significantly improved the efficiency of my planning process. It allowed me to focus more on how I would deliver the content and support my students, rather than spending too much time searching for or writing texts myself*" (T1, W2B – Week 2 Before Implementation). Similarly, T4 used different AI tools such as *Leonardo AI*, *ChatGPT*, and *Gemini* in the planning phase, especially for visual material production and content diversification. In this process, she created vocabulary cards with *Leonardo AI*, produced short dialogues and sample sentences through *ChatGPT*, and structured multiple tasks targeting multiple skills by designing a weather-themed text and appropriate visuals using *Gemini*. This example indicates that the teacher effectively integrated TPACK components and positioned technology not only as a supportive but also as a reconstructive element. The simultaneous and interactive creation of visual and textual contents with AI tools corresponds to the redefinition level in the SAMR model as this kind of design enabled the compilation of multimedia contents in a holistic way that cannot be easily produced by traditional teaching methods. She described the impact of these AI-supported tools on the teaching process as follows: "*It clearly facilitated the planning process. I spent less time preparing visual and written*

content and had more time to focus on student-centred learning activities. AI made the process more efficient and flexible" (T4, W4B). It is seen that AI tools support teachers not only in content production but also in structuring pedagogical decisions in planning. At this point, T4 expressed the change in the teacher role by noting that "*I felt more like a designer and facilitator than just a content deliverer*" (W4B). Similarly, T1 emphasized that these tools enabled the teacher to be better equipped and more focused on the students by highlighting that "*[T]he use of AI felt like having a supportive assistant who helps organize the foundation of the lesson*" (W2A). AI being a supportive tool has been echoed by several participants not only on their reflective journals but also during the FGDs. For example, during FGD2, T8 noted that AI tools helped her during the planning process but she also stated that she did not feel a drastic change in her role as she was still in the position of the decision-maker.

Other participants who used AI effectively in the planning process included T5, T6, T7, T8 and T9. For example, teacher T5 expressed the ease of the lesson planning process and the result of this as follows: "*I figured out that I can be more motivated and more energetic thanks to this tool because it makes my lesson planning much easier and this way I can be much more fruitful for my learners*" (T5, W2B). T7 clearly expressed the change she experienced in her role as a teacher in the first week of the implementation and used the expression "*from planner to designer, creator*" (T7, W1A). T9, on the other hand, stated that she was able to allocate more time and energy to students with the lightening of her non-teaching workload, and defined this change as AI as an empowering tool. At the end of the process, T9 stated that her awareness of her role as a teacher increased and she saw herself as "*a designer rather than a content provider*" (W5B).

These examples reveal that AI tools in the planning process not only supported teachers in the content preparation process, but also initiated a transformation in their pedagogical roles and identities. In particular, participants such as T1, T4, T5, T6, and T9 indicated that by seeing AI as

an empowering tool, they moved to a more creative, flexible, and student-oriented position in their teaching roles.

However, these findings need to be interpreted with caution. Indeed, despite the convenience of AI tools in the planning process, many teachers emphasized that the content provided by these tools was not fully ready-made and contextually appropriate, thus requiring teacher intervention. T1 stated that the content provided by *Diffit* was inadequate for certain language structures or cultural contexts, so he had to revise and adapt the materials; he did not experience a dramatic change in his role as a teacher, but he felt more organized and equipped. Similarly, T2 stated that he was not sure whether the output produced by the AI was appropriate for the level of the students. Similarly, T7 observed that the video summarization tool she used exceeded her expectations in terms of speed and general content; however, she observed that some summaries were decontextualized and superficial, so she emphasized that AI outputs should be structured with teacher guidance. T9's statement encapsulates this situation:

> "*Gamma gave me the foundation, and I became the curator; adding the emotional, pedagogical, and student-centred layers that only a teacher can provide. It reminded me that while AI can support us greatly, it is still the teacher's insight, empathy, and judgment that bring the real value to the classroom. In a way, the experience empowered me to take a step back from routine tasks and re-centre my energy on what truly matters: meaningful interaction with my students*". (W4B)

T9 noted that she was able to create fast and visually rich presentations through *Gamma*, but the content did not fully adapt to the level and interests of the students, so there was still a need for "*human touch*" (W4B) in elements such as intonation, examples and sequencing. The idea that AI still requires a human touch was also echoed by T11, particularly from the perspective of "*emotional or motivational factors in learning*" (T11, W1B). During FGD2, T7, T9, and T12 also agreed, that despite being a very efficient tool, AI cannot replace a human teacher as it still lacks emotions. T9, further, argued that

> "*As teachers, we take on several roles… guide, mentor, and even sometimes a care-giver… There are conditions where the student lost their parents for example… in those cases, we even support them like a parent. I do not think AI can have this student-teacher rapport*". (T9, FGD2)

These reflections suggest that while AI serves as a powerful support tool in educational contexts, it is not ready to fully replace the nuanced contributions of human educators.

AI Integration in the Implementation Process

The experiences of the teachers participating in the study regarding the implementation process reveal that AI tools were integrated in the classrooms for various purposes and that this integration led to meaningful transformations in teacher roles. The data suggests that AI-enabled tools were operationalized in the classroom not only for content delivery but also for enhancing interaction, providing differentiated instruction, and supporting students' productivity.

For example, T3 used *ChatGPT* in creative storytelling activities during the in-class implementation process. He stated that higher-level students enjoyed these tasks more, while for lower-level students, the content was simplified and organized in order to refine the AI outcomes. This process shows that the teacher is not only a technology implementer but also a pedagogical adaptor and affective stabilizer. In terms of the TPACK framework, the teacher blended technological outputs with pedagogical and content knowledge, took into account the differences among students, and provided an effective technology-pedagogy-subject alignment through content differentiation. In the scope of the SAMR model, this kind of practice directly corresponds to the modification level. As technology brings a new functionality to the traditional storytelling process, and the teacher reorganizes this process according to the levels and needs of the students.

Another remarkable example in the context of implementation is T4. Throughout the implementation process, T4 initially used *ChatGPT* for writing activities and linguistic feedback; over time, he evolved to using a more holistic approach by integrating this tool into listening, speaking,

and reading activities. In the first weeks, the teacher, who saw the AI only as a tool for generating questions and feedback with a neutral attitude, simplified the content and produced alternative activities according to the reactions of the students at different levels. As the process progressed, he experimented in different classes, created audio stories from AI outputs with tools such as *TTSmaker*, and started to design lessons targeting multiple language skills. In the last week, he used gamified tools such as *Kahoot* to keep students' interest and enliven the classroom atmosphere. This line of development reveals that not only the student but also the teacher developed a growing awareness and motivation to diversify, transform and strategically use AI for pedagogical purposes.

T7's experience is an important example of integrating AI with assessment and evaluation tools in the implementation process. The quizzes created with *Canva* and *Quizizz* attracted a high level of attention in the classroom and especially low-motivated students actively participated in the activities. However, the teacher stated that "*... some of the AI-generated questions lacked context or practical application*" (W1B) and she emphasized the importance of using such content not directly but through a critical filter. This approach places the teacher not only as a practitioner but also as a content filterer. Indeed, T7 noted a change in her role by emphasising that

> "*I did feel that my role had changed from merely planning lessons to becoming more of a designer and creator of the material. To meet the needs of my students, I examined, picked, and adjusted AI ideas rather than writing each question manually*". (W1B)

T9's experience stands out in terms of visual productivity and time management during the implementation process. The teacher, who prepared fast and impressive presentations thanks to tools such as *Gamma*, *Nearpod* and *Wordwall*, stated that the classroom flow became more efficient. However, she emphasized that the visual materials should be reorganized in terms of intonation, exemplification and sequencing according to the student level. This situation revealed how critical teacher intervention is for the transfer of AI outcomes to the classroom context. In

this process, T9's role as a teacher evolved from a content creator to a pedagogue who curates and relates the learning environment.

As seen in these cases, during the implementation process, teachers positioned AI tools not only as technical aids but also as tools that shaped their pedagogical decisions and restructured their interactions with students. Through AI-supported activities, teachers moved away from the role of content presenter to more flexible and student-centred roles such as facilitator, designer, guide, and organizer. However, all participants indicated that the outputs provided by AI in classroom practice are not always contextually and pedagogically adequate; at this point, the teacher's intuitive knowledge and contextual judgment remain complementary to the process.

AI Integration in the Feedback and Assessment Process

The participants' experiences suggest that AI-supported tools offer significant contributions not only in content generation or planning processes but also in providing feedback to students and encouraging self-regulation. These contributions differed according to the type of tool used, the teacher's purpose of use, and the students' level of readiness.

For example, T13 prepared an exam with open-ended questions on the theme of environmental problems with *ChatGPT*, aiming to enable students to think creatively through their answers to these questions. However, he stated that there were some difficulties because students were not used to open-ended questions and he had to guide the process. Similarly, T14 used tools such as *LyricsTraining* to enable students to realize their mistakes by receiving instant feedback during listening and observed that this increased both students' awareness and motivation. In addition, T6 used *ChatGPT* to prepare exam questions and allowed students to recognize their own shortcomings with tools such as *Quizlet*, which provided immediate feedback to students. However, teacher intervention was required in cases where some automatic answers were insufficient, indicating that AI-based assessment processes are more effective with teacher guidance. In conclusion, teachers incorporated AI

tools into feedback processes that supported student autonomy; however, these processes became meaningful only when the teacher maintained a directive role.

Pedagogical Gains and Challenges

Participant teachers reported that AI tools provide many pedagogical benefits to their teaching processes. In particular, all teachers emphasized the time-saving role of these tools in the planning process. Thanks to tools such as *ChatGPT*, *Canva*, and *Gamma*, the production of course materials became faster and more efficient, which allowed teachers to focus on student interaction and learning differentiation by reducing the time they spent on content creation. For example, T6 stated that she completed a presentation preparation that would normally take a long time in minutes with *Gamma*; T13 stated that the open-ended questions prepared by *ChatGPT* supported creative thinking. Teachers also drew attention to the effect of AI tools on increasing student engagement. T14 stated that

> "*The interactive video kept the students engaged throughout the lesson. It encouraged active participation, especially among students who are usually shy during regular lessons. The visual and audio support helped them understand the sports vocabulary better and real-time feedback boosted their confidence*". (W1A)

Similarly, T7 stated that gamified quizzes with *Quizizz* increased in-class interaction and the sense of competition encouraged even more passive students to participate in the lesson. According to T8, the invitation design activity prepared with *Canva* enabled students to learn the target vocabulary better and improve their written expression skills. T14, in turn, observed that the *LyricsTraining* application increased students' listening and linguistic awareness by reinforcing grammar structures with songs.

However, the teachers stated that they encountered various difficulties in the AI-supported teaching process. One of the most frequently raised problems is that the content produced by AI tools is not fully suitable for the students' language levels. For example, T6 and T7 stated that the vocabulary and structures in the texts produced by some AI tools were too complex for their students and needed to simplify these contents.

Similarly, T13 stated that the vocabulary focused on in the gap-filling activities offered by the *LyricsTraining* application did not coincide with his teaching objectives and that the lack of opportunity to customize these gaps was both a pedagogical mismatch and a technical limitation for content organization.

Another technical limitation was reported by T14. She identified both the inability to customize questions and the lack of a rewind feature in video playback in the videos used in the *ISLCollective* platform as factors that negatively affect the learning process, especially for students who have difficulty in understanding. T13 also stated that in some applications, only paid access to content limits the variety of materials and restricts lesson plans. The same participant emphasized that in cases where students do not have access to these tools individually, AI-based activities are limited to certain times and places, so simultaneous and active participation of the whole class is not always possible.

In conclusion, the pre- and post-implementation reflections obtained at the end of the five-week implementation period revealed that the teachers' attitudes towards AI changed mostly positively. Also, weekly reflective journals revealed that the teachers integrated AI tools into lesson planning, implementation and evaluation in various ways, leading to a transformation in their pedagogical roles, flexibility in their decision-making processes, and diversification in their teaching priorities. Throughout the process, the teachers realized significant pedagogical gains, such as time savings, content diversity, and increased student engagement, but they also faced various challenges, such as content level mismatch, technical limitations, and access barriers.

Discussion

This study examined teachers' experiences with the integration of AI tools into the teaching process using a multiple cross-case study design. The findings revealed that the teachers' attitudes towards AI were observed to have changed largely in a positive direction. Moreover, the teachers used

AI tools functionally in the planning, implementation, and evaluation phases of the lesson; this integration transformed their pedagogical roles, decision-making processes, and teaching priorities. In this section, these findings will be discussed in the light of the existing literature and evaluated in the context of pedagogical gains and challenges.

The analysis of the findings revealed a significant positive change in the teachers' attitudes towards AI tools during the five-week implementation period. Even some participants who initially had neutral or limited expectations about AI, as the implementation weeks progressed, experienced the pedagogical possibilities offered by these tools and began to appreciate their facilitative effects, especially in planning processes. These findings are in line with sociocultural approaches (Wenger, 1998; Yazan, 2018), which suggest that teacher identity is not fixed but a dynamic construct that develops through experience, context and practice. During the real classroom practices, the teachers positioned technology not only at the instrumental level but also as a component guiding their pedagogical decisions, which paved the way for a restructuring of their professional identities.

The teachers' not only using AI tools but also structuring these tools in line with pedagogical goals and contextual requirements concretely reflects the TPACK model in the field. In this process, the teachers blended their technological knowledge with pedagogical strategies and subject matter knowledge to develop their skills to effectively produce, adapt, and present course content. In a similar vein, Kerr and Kim's (2025) study supports these findings, stating that teachers' exposure to structured experiences in order to use AI tools effectively in education enables them to internalize this process at both cognitive and affective levels. Similarly, Grassini (2023) emphasizes that direct experience allows teachers to grasp both the potential and limitations of AI tools. When the findings of this study are evaluated in the light of the existing literature, it can be concluded that concrete classroom experiences positively transform teachers' attitudes towards AI.

This positive attitude change points not only to the technical conveniences of AI tools but also to the transformation in teachers' pedagogical roles and perceptions of their professional identity. The findings of this study revealed that AI tools, which save time in the planning process, provide diversity in content production and increase student engagement, have moved teachers from the traditional role of content presenter to that of designer, organizer and facilitator. This is in line with sociocultural approaches (Wenger, 1998; Varghese et al., 2005), which suggest that teacher professional identity is not a fixed but a contextually reconstructed construct. Such role transformations are, indeed, emphasized in the literature. The findings of this study are in line with previous research on how AI technologies transform teacher roles. For instance, Ghiasvand and Seyri (2025) reported that after the integration of AI, teachers moved away from the traditional role of content providers and assumed new roles as facilitators, material developers, and supporters of student self-regulation. In this transformation process, it is emphasized that teachers become an actor working in collaboration with AI and this situation reshapes their professional identities. Similarly, Lan (2024) shows that teachers develop new professional identities through AI-supported classroom practices and that the definitions of expertise change in this process. Furthermore, Zhou et al. (2024) revealed that AI tools are perceived not only as assistive but also as systematic tools that are integrated into the teaching process and influence pedagogical decisions. These insights suggest that teachers are moving beyond being technology users to becoming professional learning designers who transform technology for pedagogical purposes and restructure classroom learning processes.

Another finding of this study demonstrated that teachers use AI tools most intensively at the lesson planning stage, corresponding to the augmentation level of the SAMR model. Indeed, Kerr and Kim (2025) and Koraishi (2023) also report that teachers actively utilize AI in the planning process, especially in terms of time saving, content diversity, and visual support. Another finding is the potential of AI tools to increase interaction in classroom practices. The teachers reported that the students participated

more willingly, especially in speaking and writing activities, and that technological innovation increased interest in the lesson. Such practices correspond to the modification level in the SAMR model, as teaching activities are not only digitized but also restructured in line with the unique possibilities offered by AI tools. This was similarly observed in Yuan and Liu's (2025) experimental study, where the use of AI was shown to positively affect student motivation and engagement. In addition, the teachers benefited from AI in their assessment processes in terms of receiving automatic feedback, supporting self-regulation skills, and taking into account individual learning differences. This aligns with the redefinition level of the SAMR model, as assessment is no longer just a measurement tool but a support mechanism where students actively participate in the learning process.

A notable finding that needs to be emphasized here is that the role of teachers remains central even after AI integration. The content provided by the tools can only become effective if it is passed through the pedagogical filter of teachers and adapted to the contextual needs of the classroom. This positions teachers not only as consumers of content but also as pedagogical decision-makers who select, organize, and guide implementation. Asrori and Setyaningsih (2025) also draw attention to this situation and state that it is possible for AI-generated lesson plans to become educationally functional and context-sensitive with the guidance and expertise of the teacher. From this standpoint, although AI tools play a supportive role in teaching processes, teachers are still the main actors in decision-making processes.

Implications

The findings of this study reveal that the integration of AI-supported tools into the teaching process reshaped teachers' pedagogical practices. Especially in the planning phase, the teachers used AI tools effectively in areas such as content generation, simplification and visual material design. This shows that the teachers have secured significant gains in time

management, content diversity, and material development. Therefore, it is of great importance that teacher education programs include practical training on how to use AI tools in pedagogical contexts.

The study also showed that the transformation observed in teacher roles was not limited to planning; the teachers also used AI tools in implementation and assessment processes to increase student interaction, provide feedback and develop alternative assessment methods. This finding reveals that the teachers are positioned not only as content providers but also as guides who manage and reconfigure technology for pedagogical purposes and shape students' learning experience. In this regard, it is suggested that policy makers and school administrators are recommended to provide flexible curriculum structures and technology access opportunities to encourage teachers to use AI tools creatively and critically.

On the other hand, the study also drew attention to some of the challenges the teachers face in using AI. In particular, the inappropriateness of the content to student levels, lack of customization flexibility in some applications, technical limitations and access barriers rendered the teaching process difficult at times. Therefore, developers and educational technology companies need to take teacher feedback into account and develop tools that are more flexible, level-appropriate, and sensitive to the educational context. There is also a need for professional development programs to support teachers' ability to evaluate and, if necessary, transform these tools in line with pedagogical principles.

Conclusion

In conclusion, this study revealed that English teachers functionally integrated AI-assisted tools in lesson planning, implementation, and evaluation, and that this integration transformed their pedagogical roles, decision-making processes, and teaching priorities. During the five-week implementation period, a significant positive change in teachers' attitudes towards AI was observed; some participants who were initially cautious

became more motivated and creative as they experienced the speed, variety and content support offered by these tools. It was observed that the teachers leveraged effective AI especially in planning processes and used these tools as time-saving and supportive tools in material production, content simplification and activity design. However, it is understood that AI outputs are not directly transferred; the teachers maintain their decision-making position by taking responsibility for filtering, adapting and restructuring these contents according to the level of their students. This shows that teachers are positioned not only as technology consumers but also as active actors shaping the pedagogical context. In the implementation and evaluation phases, it was determined that AI tools were adopted as an integral part of the teaching process; the teachers used these tools effectively to increase student interaction, provide feedback and develop alternative assessment methods. These findings reveal that AI technologies are not only an innovation in education, but also a powerful transformational tool that redefines the nature of teaching.

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Ethical Declaration and Committee Approval

This study was conducted in accordance with the principles of scientific research and publication ethics. Ethical approval for this research was obtained from the Ethics Committee of Gaziantep University, with approval number E-73628654-604.01-613002.

Appendices

Appendix A

Pre-implementation questions:

Please answer the following questions as honestly and thoughtfully as you can. Your responses will not be graded or evaluated; they are solely intended to help us understand your perspective.

What are your current thoughts or feelings about using artificial intelligence (AI) in English language teaching?

What opportunities do you believe AI can offer in the English classroom?

Do you have any concerns about using AI in your teaching? If so, please explain.

How do you think AI might affect your role as a teacher?

Appendix B

Before class reflection

Which AI tool do you plan to use and why?

Which stages of the teaching process do you think this tool will contribute to?

How can this tool be useful in achieving the objectives of the lesson?

What challenges do you foresee you might face during the use of the application?

Appendix C

After class reflection

How did the AI tool work in the classroom? How was the interaction with the students? Did you observe a difference in students' performance?

What role did the AI tool play in achieving the objectives of the lesson?

What went well / what did not go so well? Were there challenges you faced? If yes, how did you overcome them?

Did the AI tool contribute to the overall effectiveness of the lesson? If yes, how? If no, why not? What could be better?

How can you use this tool more effectively in the future?

Appendix D

Post-implementation sheet

After using AI in your English classes, how has your attitude toward AI in education changed, if at all?

What did you find most surprising (positive or negative) about integrating AI into your teaching?

Do you now feel more confident about using AI tools in your lessons? Why or why not?

In your opinion, does AI enhance or hinder the teaching and learning process in English language education? Please explain.

What advice would you give to other teachers who are considering using AI in their classes?

Appendix E

Teachers' roles matrix

Participant	Learning designer	Facilitator/Guide	Decision-Maker	Technological Agency
T1	✓		✓	
T2		✓		
T3			✓	
T4		✓		
T5			✓	
T6		✓		✓
T7		✓	✓	✓
T8			✓	
T9	✓	✓		✓
T10			✓	
T11	✓	✓	✓	
T12	✓	✓	✓	
T13				✓
T14	✓		✓	

Appendix F

AI's roles matrix

Participant	Pedagogical Assistant	Efficiency tool	Conditional actor
T1	✓	✓	
T2	✓	✓	✓
T3	✓	✓	
T4	✓	✓	
T5	✓	✓	
T6	✓	✓	✓
T7	✓	✓	✓
T8	✓	✓	
T9	✓	✓	
T10	✓		
T11	✓	✓	
T12	✓	✓	
T13	✓	✓	
T14	✓	✓	

Appendix G

AI integration into the instructional processes

Participant	Planning	Implementation	Feedback and Assessment
T1	✓	✓	X
T2	✓	✓	✓
T3	✓	✓	✓
T4	✓	✓	X
T5	✓	✓	✓
T6	✓	✓	✓
T7	✓	✓	✓
T8	✓	✓	X
T9	✓	✓	✓
T10	✓	✓	✓
T11	✓	✓	X
T12	✓	✓	X
T13	✓	✓	✓
T14	✓	✓	✓

The Impact of Sustainability-Focused English Instruction on Student Attitudes, Awareness, and Vocabulary Growth

Rana SUAYİN[1] **Merve GAZİOĞLU**[2]

Our Earth has been going through an unprecedented global environmental crisis in this century. Human activity has impacted the world in numerous ways which are potentially leading to catastrophe. Some of the signs of grand environmental degradation are ocean acidification, tropical deforestation, domesticated land, the rise of Earth's surface temperature, modification of land for human needs, loss of biodiversity. To illustrate, 35% of the land on our planet has been shaped to meet human needs (Rockström et al., 2009). These human-induced changes to the Earth systems are claimed to lead us to extinction. The speed of environmental change is incomparable to any other periods in world history. Atmospheric CO2 concentrations have reached its current rate at a speed almost 100 times faster than any time before in the last 420,000 years (IGBP, 2015). The Intergovernmental Panel on Climate Change (IPCC, 2023) has repeatedly stated the vitality of immediate action and collaboration to fight global warming and contribute to ecological conservation. In 2015, United

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Nations (UN) disseminated sustainable development goals (SDGs) to be achieved by 2030. These goals aim to address a wide range of global crisis issues, including climate change, environmental degradation, poverty, inequality, peace, and justice.

The urgent need for change and action has made environmental conservation a prominent issue highlighted by experts from various sectors including education, particularly English language teaching (ELT). Being the lingua franca, English is an important medium to increase the interconnectedness of the world. In addition, the English language is taught at all educational levels in many parts of the world, which means it is possible to reach a wide range of age groups. Thus, the English language teaching (ELT) environment is the perfect place to address the issues of our world.

Literature Review

Several studies have explored how environmental concerns and language education intersect and how environmental education can contribute to a more sustainable future through critically-oriented language teaching practices. This body of research draws on a variety of theoretical frameworks, including Ecological Literacy, Critical English Language Teaching and Learning, and Eco-Criticism. Using these frameworks to organize the existing literature gives us a structured and logical overview that helps us learn more about how environmental education and language education are interconnected. Furthermore, as reflected in the current body of research, the Sustainable Development Goals (SDGs) provide a guiding framework for environmental education.

Ecological Literacy

Traditionally, sustainability is more of a concern of science, geography or civic studies. However, English language teaching is now considered as a potential area to initiate change towards a more sustainable future. Language classrooms are unique platforms to incorporate intercultural communication and identity negotiation. They offer students opportunities

to discuss global issues with a critical eye while also improving their proficiency in English language.

Ecological literacy is one central concept in environmental education practices which refers to the ability to comprehend natural processes and make decisions that promote social justice and environmental integrity (Orr, 1992; Capra, 2005). Educating human beings about ecological well-being has been considered vital since they are the ones inflicting harm on nature. Recognising the importance of education, experts and policymakers have strongly suggested integrating teaching pedagogies with sustainability principles. Introducing awareness raising content into school curricula has also been highlighted.

Critical English Language Teaching and Learning (Critical ELTL)

The integration of an ecological perspective to language teaching does not only mean teaching climate change vocabulary to learners but also guiding them through pedagogic practices. These practices require critical thinking to reflect on environmental problems, to read authentic texts on sustainability, and to discuss global issues about ecological responsibility. This ecological approach aligns closely with Critical English language teaching and learning (ELTL) which emphasizes social justice (Crookes, 2021; Hastings & Jacob, 2016; López-Gopar, 2018). One of the many concerns of Critical ELTL is environmentally-oriented education (Royal, 2016) underscoring the importance of developing eco-critical awareness in the ELT context.

Eco-criticism

In the ELT context, eco-critical language awareness is taken as a means to promote sustainability. Central to this concept is eco-criticism**,** which is an interdisciplinary field that explores the relationship between literature and the natural environment. It examines how environmental issues are presented in literary texts aiming to raise awareness of sustainability and ecological responsibility. These texts are narratives about climate change and other environmental justice issues. In ELT, eco-critical language awareness can be gained by learners through critical reading of literary

texts that encourage the learner to question their attitudes, ideologies, identities and actions that yield unwanted consequences.

Sustainable Development Goals

Another way to engage students with global concerns while learning English is the inclusion of sustainable development goals disseminated by the United Nations in 2015 to be reached by 2030. In this list, 17 development goals are agreed upon by 193 member countries of the UN. These goals strive to address the most urgent global issues as listed in the table below:

Table 1

UN Sustainable Development Goals (SDGs)

Goal Number	***Title***
1	No Poverty
2	Zero Hunger
3	Good Health and Well-being
4	Quality Education
5	Gender Equality
6	Clean Water and Sanitation
7	Affordable and Clean Energy
8	Decent Work and Economic Growth
9	Industry, Innovation, and Infrastructure
10	Reduced Inequality
11	Sustainable Cities and Communities
12	Responsible Consumption and Production

13	Climate Action
14	Life Below Water
15	Life on Land
16	Peace, Justice, and Strong Institutions
17	Partnerships for the Goals

Note: The table lists the 17 Sustainable Development Goals adopted by the United Nations in 2015.

Based on the theoretical knowledge explained so far, recent research positioning ELT as a medium to increase eco-literacy by utilizing environmentally-oriented content and critically-oriented pedagogy will be explored.

Recent Research on Promoting Sustainability through English Language Education

Hauschild et al. (2012), in their article, aim to show how environmental education can be achieved in the language classroom through the use of content-based instruction (CBI). The authors list the benefits of content-based instruction (CBI) as enabling integrated skills instruction, creates opportunities for extended input and meaningful output, promotes critical thinking skills, opens space for exploring interesting thematically-organized topics, using these topics as 'springboards' for language development and supports project based-learning. When the content of the materials is deliberately chosen from environmental topics, students will not only develop their language skills but also they will connect classroom learning with real-world actions and build a more responsible self.

In the study conducted by Micalay-Hurtado and Poole (2022), the significance of eco-critical language awareness in the context of English Language teaching is emphasized for its role in promoting social justice, well-being, and sustainability. An eco-linguistics informed Critical Language Awareness (CLA) approach is claimed to fit perfectly in the context of ELT. CLA is an approach to teaching second, additional,

heritage, or other languages that focuses on social justice values (Crookes, 2021). The acquisition of these values through a language transforms students into more knowledgeable and critical citizens in politics and ethics (Achugar, 2015). This critical language awareness provides the learners with the perspective to challenge the use of language as power to dominate others. Here, the aim of CLA aligns with the aim of eco-literacy and environmental education, the latter of which also emphasizes the urgent need to prevent the domination of nonhuman animals and the environment by human-beings. Micalay-Hurtado and Poole (2022, p.375-378) introduce and discuss five principles for an Eco-CLA approach to ELT:

1. Eco-CLA presents learning as bound to the physical world and its many human and nonhuman animal inhabitants.
2. Eco-CLA promotes wellbeing and sustainability as common sense.
3. Eco-CLA promotes the development of ecological consciousness by engaging students in localized sustainable thinking.
4. Eco-CLA advocates for students negatively affected by climate change, especially for students from marginalized communities.
5. A pedagogical application of eco-CLA promotes language instruction that presents multiple English varieties as equal.

After explaining each principle in detail, the study illustrates these principles through instructional activities that fulfil these principles. For instance, the first instructional activity is designed for an English Composition class in an EAP context. The task is to build 'a social media portfolio' which requires them to go online, critically select sustainable versus unsustainable narratives, and advocate some of the sustainability issues as part of their assignment. This task gives learners the opportunity to see how the internet can be a space for discussion of environmental issues and how language awareness plays a pivotal role in doing so.

Saiful (2023) aims to extend the conceptual framework of Eco- ELT by elaborating on its ontology, epistemology, and axiology. The author claims that the implementation of ELT research in environmental education is limited by the absence of a unifying concept that would serve to bring disparate elements together. Looking into the epistemological

feature of Eco-ELT (Ecological English Language Teaching), Saiful (2023) positions the concept in the social constructivism theory of second language learning and acquisition. This theory emphasizes the role of collaborative learning and social interaction in building knowledge and an understanding of reality. In second language learning, learners' competence does not only rely on their inner abilities but also external social and cooperating factors such as peers, the teacher, parents, the learning materials. According to Saiful (2023), Eco-ELT framework offers a vast number of materials and methods of language teaching through the use of authentic environmental texts and environmental activities such as critical reading, environmental nature-writing, eco-debates, eco-drama, and so forth. In his article, Saiful (2023) also elaborates into the multi-disciplinary feature of Eco-ELT, reminding researchers and educators that environmental teaching in ELT, can cover a variety of disciplines such as ecocriticism, sustainability, eco-media, theatre, arts, study of animal and plants. An ELT researcher can enrich his/her research and practices by benefiting and borrowing from these disciplines.

A particularly useful method of integrating environmental topics into learning materials for the sake of both environmental education and language learning was also examined by Laaloua (2022). The author conducted a content analysis of Moroccan high school textbooks to examine the extent they integrate four ecological topics which are ecosystems and cycles, pollution, use of resources, and environmental preservation. The analysis was based on the theoretical framework of the Bio-Head Citizen project. The study found that three textbooks analysed were not designed to meet the needs of students regarding the four EE topics. Also, it was revealed that the existing environmental content is mostly informative about the environment rather than aiming to engage students with educational tasks.

Mete (2018) conducted a study assessing the impact of using environmental education activities designed according to revised Bloom's

taxonomy (1956) on the environmental attitudes and behavior of 7th graders using quasi-experimental research design. She sampled two groups of students as experimental and control groups and used a pre-test and a post-test to assess the impact. The experimental group was instructed using the educational activities based on revised Bloom's taxonomy (1956) while the control group received traditional science instruction. The study found that the experimental group showed much greater improvement in terms of their attitudes and behaviors towards environmental issues in comparison to the control group. Also, they were more motivated to complete the tasks which required them to use their critical thinking abilities. Although this study does not specifically focus on environmental education through English language teaching, it provides valuable insight to the ways the use of Bloom's taxonomy can also be utilized to design ELT materials and tasks.

By elaborating on the concept of 'green pedagogy', Nur et. al (2022) made a call for environmentally-oriented language teaching. Their webinar video review article emphasizes the critical role English language teaching should play in raising awareness of environmental concerns. This article strongly suggests the implementation of 'green pedagogy' in ELT which draws on three main areas: environmentally-oriented curriculum, environmentally-oriented learning materials and teacher professional development. The environmentally-based curriculum mostly endorses Content-Based Instruction (CBI) and Content and Language Integrated Learning (CLIL) methodology, both of which share the common approach where students learn the language through meaningful environmental content.

The authors also attracted attention to the importance of metacognitive awareness of environmental topics on the part of both teachers and students relying on their analysis of a multimodal discourse on environmental topics. They analysed video data taken from a recording of a webinar on climate action in ELT. The speakers in the webinar were two university lecturers, two environmentalists and a keynote speaker. They

aimed to discover how language teachers and environmentalists shape their discourse in conveying meaningful messages related to environmental issues. Their findings strengthened the need for reforms in language teaching.

Damico et. al (2020) presents an inquiry-based way of learning through the use of stories in literacy and social studies educational environments. They advocate the view that literacy educators should guide students to be engaged with climate justice issues by making them aware of ecologically destructive stories we rely on versus ecologically beneficial ones.

Kazazoğlu (2025) also believes in the value of integrating sustainability into English language teaching. The study aims to reveal students' perceptions of their language development and awareness of environmental issues after completing an eco-literacy-oriented writing task. Kazazoğlu (2025) positions eco-literacy as an educational policy to gain the understanding of ecological knowledge and apply it to improve sustainability. The findings of the study show that there were significant changes in students' perceptions especially regarding environmental vocabulary and eco-critical thinking skills.

Looking at the impacts of environmental education from a teacher perspective, Davari et al. (2025) conducts a study on teacher perceptions on integration of environmental communication pedagogy into ELT. Their study revealed contextualizing language teaching within an ecological framework helped learners transform their mindsets to become more aware of ecological and local realities. Their study also showed that the teachers also changed their perspectives and became more eco-centric.

In his 2023 study, Mambu examines how Sustainable Development Goals (SDGs) announced by the United Nations in 2015 are incorporated in an undergraduate English language teaching class as a means to promote criticality among his students and improve their language skills. The data includes texts about SDGs selected by the teacher, worksheets with prompts and questions and students' responses to the prompts, their comments elicited by the teacher during a number of meetings. The study

revealed that the teacher's critical approach to English language teaching helped elicit critical responses from students as evident in their oral and written discourse.

This review of the recent research on the integration of environmental education through English language instruction shows that there is broad agreement among researchers and experts that ELT environments offer a variety of opportunities for educators to raise awareness about our world's sustainability. Although the term 'sustainability' encompasses a long list of interconnected issues threatening our world, environmental preservation is the focus of the studies reported above. It is obvious that ecological concerns have been a more pressing issue lately due to the recent climactic events and their harsh consequences. One limitation of the existing research is lack of studies exploring the impact of sustainability-focused English language education in an undergraduate EAP context where students read, write and discuss sustainability and global issues. In the context of our study, a CLIL-based Eco-critical approach is implemented. The course includes elements of Academic Reading where students read authentic sustainability-themed texts from reputable sources such as *The Guardian, The Conversation*, *Scientific American*. They make presentations on these texts and have class-discussions on these themes. They also need to express their opinions in the forms of academic writing referring to the texts analysed in class. Discussing these global issues in an academic context is a strong feature of the course.

This study will contribute to our understanding of how this course content and approach benefits our students in terms of raising their awareness of global sustainability issues and help them build different perspectives towards these issues. Through this study, we will also gain a deeper insight into students' academic language growth. These insights will enable teachers to improve the components of this course accordingly and refine the course teaching materials and teaching pedagogy. The research questions for this study are as follows:

1. What is the impact of integrating sustainability-themed content into EAP lessons on higher education students' perception and awareness regarding sustainability and global-citizenship issues?
2. What is the impact of integrating sustainability-themed content into EAP lessons on higher education students' language development, in terms of vocabulary growth and academic reading & writing skills?

Methodology

Research Design and Participants

This small-scale study was designed as a mixed-methods research, which employed vocabulary tests and semi-structured interviews to collect the data. Purposeful and convenience sampling methods were adopted. The sample consisted of 72 university students enrolled in two sections of the ENG101 course. The demographic information gathered anonymously from nine volunteering interviewees is as follows: there was a balance in terms of gender, with 4 female and 5 male students. All the participants were aged between 21 and 23, except for one participant who was 18-20 years old. Their departments varied considerably: Architecture, Bioengeneering, Computer Engineering, Electrical and Electronics Engineering, Industrial Enginnering, Mechanical Engineering and Molecular Biology and Genetics, which was the most prevalent of all (33%). Finally, more than half of the interviewees were 2nd year students while the others were in their 3rd and 4th year of study.

Data Collection Instruments and Procedure

In order to answer the research questions, two data collection tools were utilized: vocabulary tests and semi-structured interviews. Initially, a specialized corpus (SDG Vocabulary List) was created using the authentic articles studied as a part of the ENG101 course, with the assistance of *ChatGPT*. This corpus contained almost 750 key words and phrases which were purposefully selected by the researchers in line with the SDGs presented by the UN. Thus, it served as a corpus for designing the pre and

post vocabulary tests. This wordlist was also shared with the students through the learning management system after the first test.

With the aim of assessing the students' vocabulary growth, two vocabulary tests were designed. The same key words randomly selected from the corpus were used to create the pre and post tests. Both tests consisted of 30 items of fill-in-the-blanks type questions with the same level of difficulty. The students were briefly informed about the study and they answered the questions through the *LMS* at the beginning of the term and during the final week of the term, as a practice task.

As a way of canvassing their opinions about the course, the students were invited to the second stage of the study. Thus, nine students who volunteered to be interviewed were informed that their course grades would not be affected by their answers and that their answers would be recorded anonymously. They also signed a consent form as required by the Ethics Committee. The semi-structured interview included five questions aiming to evaluate the changes in their perceptions about sustainability issues in addition to exploring the development in their academic reading, writing skills and the vocabulary growth, after taking the course.

Data Analysis

The data analysis process was fulfilled in two stages: Firstly, the SDG pre- and post-vocabulary tests were quantitatively measured to examine the students' potential vocabulary growth. A number of students who did not take either of the tests were excluded to ensure the consistency of the study. Thereby, the test scores of 72 students were compared and analyzed running some statistical tests on *SPSS*. Secondly, the students' responses to the interview questions were qualitatively examined to understand the changes in their perceptions regarding their awareness of global sustainability issues and their language improvement. Braun and Clarke's (2006) thematic analysis method, which is commonly employed in social studies, was followed through the suggested six phases: (a) familiarizing with the data by reading the transcripts multiple times, (b) initial

coding/semantic analysis, (c) searching for common themes, (d) reviewing themes, (e) defining the themes, and (f) reporting the results with sample quotes.

Results

RQ 1: What is the impact of integrating sustainability-themed content into EAP lessons on higher education students' perception and awareness regarding sustainability and global-citizenship issues?

To address the first research question of the study, responses to the related interview questions (1, 3, and 5) were interpreted:

The first interview question, "Do you think this course has increased your awareness about global sustainability issues?" attempted to reveal a potential change in students' perspectives on sustainability and global issues, particularly upon taking the course. Except for one, all students uttered positive comments about the course. Thus, three themes emerged as a result of qualitative analysis: (a) knowledge expansion and awareness growth, (b) collaborative learning, and (c) contextual barriers.

Knowledge Expansion and Awareness Growth

A majority of the interviewees stated that this course raised their awareness on global issues. They reported that it helped them gain new knowledge and perspectives on sustainability topics along with some political and interconnected dynamics. Some excerpts from their responses are as follows: *"It has contributed to my global awareness. It helped me to understand the big impact politics in our daily lives."... "I learn so many things which I did not know before… Now, I have new perspective about the world…"*

Collaborative Learning

A few students drew attention to the collaborative and communicative nature of the course. They expressed their content by sharing opinions in discussions and being a part of a group. Two sample comments from these students are: *"At discussions after presentations, everyone tell their*

opinions. This course helps a lot to gain new views" ... "I love to communicate about global sustainability issues with my student friends from other disciplines."

Contextual Barriers

One of the interviewees shared dissatisfaction with the course, arguing that it was too demanding for them. S/he also complained about past experiences and questioned the effectiveness of the course. Here are some sentences uttered by the student: *"We were not meet phrases and topics before because of Turkish education system at high school." ... "I don't think this course is effective… this lecture only make heavy weekly plans much more heavier."*

The third question in the interview sessions was "Which topic increased your knowledge/awareness the most?". This question intended to elicit the themes that students regarded as more beneficial and interesting. Accordingly, the students referred to the topics and themes covered in the course and their preferences were grouped in three by popularity: (a) artificial intelligence, (b) crisis-related topics, and (c) students' own presentation topics.

Artificial Intelligence

Most of the students reported that AI was the most useful topic during the whole term. They found the discussions on AI quite fruitful and inspiring, touching upon the relevance with their departments. A few quotations from the interview include: *"Artificial intelligence… it is the subject that you cannot ignore if you live in today's world… discussing about it was by far the most effective." ... "How can AI change the design culture? This question was so important for me."*

Crisis-related Topics

Some students explained that learning about topics such as future pandemic, economic crisis, and human extinction called their attention to underestimated risks in daily life. They claimed that these topics raised their awareness prompting them to think about possible solutions to these

existential problems. Their comments included: *"Solving global crises… If you want to solve global problems, we have to act together." … "Especially I learn so many things about my topics which is Economic Crisis… Also human extinction and future pandemic topics are really interesting."*

Students' Own Presentation Topics

As a matter of course, it was seen that topics which students actively engaged with were useful for them to improve themselves on sustainability issues. Thus, deeper learning and awareness were emphasized by students who conducted research or gave presentations on their subjects. One of the students commented as follows: "*I actually learned new information about all the topics. But mostly, I learned a lot about my own topic, human extinction, because I was directly involved in it and presented on it."*

Finally, with regard to the first research question, Question 5 ("Apart from covered topics, which global sustainability topics would you recommend adding?) was asked to indirectly reveal the students' level of awareness on global issues after taking this course. It was also aimed to explore other topics to be included in the course for upcoming terms. In this way, students' suggestions would expand the content of the course theme. While some of the respondents found the current topics sufficient so did not feel the need to add more themes, answers to this question were categorized into three based on the offered topics: (a) practical and behavioral topics, (b) social justice and equality, and (c) finance and economy. Here are some extracts from the students original answers: *"What kind of habits can we put as a solution to the problems mentioned in the lesson in our daily life? … it can be a discussion topic that gives us the awareness of taking responsibility.", People's inability to live their lives freely… because of religion, language, race, discrimination.", "More topics regarding finance are going to be helpful for our society".*

RQ 2: What is the impact of integrating sustainability-themed content into EAP lessons on higher education students' language development, in

terms of vocabulary growth and academic reading & writing skills?

The second research question aimed at evaluating the students' language development, vocabulary growth in particular. Investigating the question required both quantitative analysis of vocabulary tests and qualitative analysis of responses to some interview questions. Therefore, in the first stage, pre- and post- vocabulary tests results were analyzed through *SPSS*, running necessary tests. Two interview questions that are related to language development were analyzed in the same way as RQ1.

Pre & Post SDG Vocabulary Test Results

Descriptive Statistics was performed to present the pre- and post- test results in order to understand if there was a progress in students' vocabulary knowledge. Subsequently, *Shapiro-Wilk Test* was run to check the normality of the data. More importantly, *Paired-Samples T-Test* was performed to compare pre- and post- test results. The tables below illustrate the results yielded from these tests:

Table 2

Descriptive Statistics for Pretest and Posttest Scores (N = 72)

Variable	*Minimum*	*Maximum*	*M*	*SD*
Pretest Scores	2.00	28.00	13.79	6.83
Posttest Scores	2.00	29.00	17.18	7.44

Table 3

Tests of Normality for Difference Scores

Test	*Statistic*	*df*	*p*
Kolmogorov–Smirnov	.118	72	.015
Shapiro–Wilk	.974	72	.136

Table 4

Paired-Samples T-Test for Pre-test and Post-test Scores

Measure Pair	*M*	*SD*	*r*	*t(71)*	*p*	*95% CI [LL, UL]*
Pretest – Posttest Scores	-3.39	6.09	.639	-4.72	<.001	[-4.82, -1.96]

According to Table 2, the results of the descriptive statistics show that the students' vocabulary scores increased from pre-test (M=13.7, SD=6.8) to post-test (M=17.1, SD=7.4). *Shapiro-Wilk* normality test result *(p = .136, p > .05)* means that the data are normally distributed, with a small sample size (Table 3). Moreover, *Paired-Samples T-Test* results (Table 4) indicate that there is a statistically significant increase in scores from the pre-test (M=13.79) to the post-test (M=17.18). This refers to a strong, positive, and statistically significant relationship between the two sets of scores. Finally, the medium effect size, *Cohen's d*, measured as −0.55 (*d*=6.08983:3.38889=−0.56) proves that the intervention caused a meaningful, moderate improvement in test scores.

With respect to the results from interview questions, the 2nd interview question (Has the integration of global sustainability issues into English 101 - academic reading & writing - contributed to: (a) English vocabulary growth? (b) opinion development? (c) academic writing skills?) revealed that most of the interviewees were positive about the process they experienced. The qualitative analysis unfolded four themes, which are: (a) vocabulary and disciplinary terminology, (b) opinion development, (c) academic writing skills development, and (d) time and disciplinary constraints.

Vocabulary and Disciplinary Terminology

Students' responses showed that they gained technical vocabulary, discourse markers and terminology related to their disciplines. They stated that these elements advanced their lexical repertoire. Here are a few comments made by the students: *"I learned more terminological words.*

This took me to the next level." ..."I learned so many academic word about our topics..."

Opinion Development

It was understood that exposure to multiple viewpoints and discussion allowed students to form more structured, professional opinions about sustainability issues.They reported some benefits such as acquiring new perspectives about global issues. Some comments from the interview responses include: *"Now I have a more professional and more logical perspective." ... "This course allowed me to see different perspectives and gain new ideas."*

Academic Writing Skills Development

The interviewees reported that summarising articles, writing argumentative essays, and modelling academic patterns were helpful in improving their academic writing abilities. A few extracts from their comments are as follows: *"Because everyone does a presentation everyone has to read at least 1 article and we have to summarize it. At that point we gain academic, short but also clear and understandable writing skills." ... "Thanks to the in class activities and feedback sessions I was encouraged to practice beforehand and it has improved my writing skills..."*

Time and Disciplinary Constraints

According to the answers from a few of the respondents, some students preferred department-specific vocabulary or more time for writing practice and pointed out this as a limitation. Some others felt the sustainability focus in the course was less relevant to their career goals. They made some ambivalent and/or negative comments like these: *"I don't need to have an opinion about these issues because I don't plan to be a politician." "We have made presentation for weeks but we have focused our writing skills for 2 weeks. So, it didn't develop my writing skills."*

The final question analyzed from the interview was "*Which course*

components benefited you most for gaining perspective and language development?" We asked this question to see if there were any components of the course that needed to be strengthened or emphasized more. It would also help us assess the effectiveness of these elements in developing students' vocabulary and writing skills. The most favoured elements of the course were (a) presentations (b) discussions, and (c) reading, writing, and vocabulary.

Presentations

The interviewees regarded delivering presentations as the most developing and confidence-building activity. Their comments reflected on the benefits they gained thanks to presenting to an audience: "*Especially the presentation part was a very developing part for me. At first I was very scared, but then I improved myself by constantly repeating."..."I strongly believe that presentation is the most integral part of this class."... "Presentations were super fun and they were the most exciting part of the lesson."*

Discussions

Discussion sessions taking place after presentations were credited for improving speaking practice and for exposing students to diverse viewpoints. Here are some comments from the interview excerpts: *"Discussion sessions were beneficial to me. Because I made a lot of speaking practice." ..."Presentations and discussions but if I have to choose, discussions. Even if I'm not contributing, it's beneficial just to listen carefully." ..."I can say that the discussion forums were the most beneficial. I not only had the opportunity to express my own ideas but also encountered new perspectives that broadened my horizons."*

Reading, Writing, and Vocabulary

The students reported that the course requirements and activities assisted them to improve their academic reading and writing skills in addition to expanding their vocabulary. They stated that reading academic articles provided exposure to terminology and models for academic writing, even when time constraints made it challenging. Some comments made by the

students include: *"It is the reading part because there are too many foreign words and now you know their meaning while reading so your English level becomes even better.."... "Because everyone does a presentation everyone has to read at least 1 article and we have to summarize it… We gain academic, short but clear writing skills."*

Discussion

This study set out to investigate the impact of embedding sustainability and global citizenship themed content into second language education on university students' perceptions, awareness and language abilities in terms of sustainability and global issues.

The quantitative data analysis revealed that there was a significant increase in the scores of students in the post-test which indicates the language growth during the course period. This may be attributed to the CLIL-based approach adopted for this course. The integration of sustainability-themed content and language goals through active learning, with a focus on developing students' ability to discuss global sustainability issues, led to measurable language growth. As concluded by Mambu (2023, p.71), discussing SDGs provides a "springboard" to help students grow their language skills, and leads to a development in their cognitive and critical thinking abilities. These findings align with previous research which reveal how content-based and CLIL-based approaches facilitate vocabulary acquisition through meaningful communication and authentic input (e.g., Coyle, 2007).

The qualitative results yielded important insights into how students regarded the impact of the course content, design and instruction on their perception and awareness of global sustainability issues as well as their perception of vocabulary growth.

The responses students gave to the first interview question '*Do you think this course has increased your awareness about the global sustainability issues?*' revealed the more common themes 'Knowledge expansion & awareness growth' and 'Dialogic learning: discussions & peer

perspectives'. The students reported to have gained awareness and knowledge about sustainability topics (Davari, 2025; Nur et. al, 2022; Kazazoğlu, 2025), and also have benefited from the interactive components of the course to deepen their understanding. This finding not only confirms our assumption of the positive impact of the course but also revealed how discussions and presentations enabled a thorough understanding of the issues. This finding is also in line with Kazaoğlu's (2025) findings in her study which showed significant changes in students' perceptions especially regarding environmental vocabulary and eco-critical thinking skills after she implemented an eco-literacy oriented writing task in her class. Only one student commenting on the course as ineffective and burdening may be explained by the demanding nature of the course considering the heavy departmental workload of students.

The second interview question 'Has the integration of global sustainability issues into English 101 (academic reading & writing) contributed to: (a) English vocabulary growth? (b) opinion development? (c) academic writing skills? How?' yielded mostly supporting views regarding the contribution of the course to the mentioned areas. Most of the students reported to have learned important terminology and academic words related to different fields while fewer students preferred learning vocabulary related to their majors rather than being exposed to input from a wider range of disciplines. They would rather have a tailor-made course for their departmental needs. Given that participant students study in an English-medium university, it is understandable that they feel the need for expanding their vocabulary about their field. This emerging theme of dissatisfaction may have stemmed from the students' lack of knowledge regarding the course objectives which are improving students' global citizenship perspectives and their English competence to discuss these issues effectively. Furthermore, environmental awareness is a concept that needs to be highlighted across all disciplines which aligns with the multi-disciplinary feature of Eco-ELT which can cover a variety of disciplines (Saiful, 2023). Also, as agreed by many student participants, embedding authentic texts on global issues in an English academic skills course

helped them form opinions. Students also reported summarising articles, writing argumentative essays, and modelling academic patterns to have improved their academic writing abilities.

The responses to the third interview question '*Which topic increased your knowledge/awareness the most?'* revealed AI as the widely mentioned awareness-raising topic, possibly due to its perceived role in both daily and professional life and cross-disciplinary impact. Topics related to crises such as human extinction, economic crisis and future pandemics were also mentioned to have increased awareness of urgent systemic risks. Students also expressed the importance of active involvement in a topic through presentations to gain deeper knowledge.

The responses to the fourth question: "Which course components benefited you most in gaining perspective and language development (reading, presentation, discussion, etc.)?" provided valuable insight into the course components perceived as most beneficial. Among these elements, the dominance of presentations and discussions highlights the significance of the interactive nature of a CLIL-based approach in language education, where communication and collaboration enhance deeper learning . Similarly, Liu (2019) found that a CLIL-based approach not only improves students' content knowledge but also linguistic and communicative skills as interactive practices situate the learners in a learning environment where peer engagement and meaningful use of English are prevalent. Nur et. al (2022) also highlights the critical role of providing an environmentally-based curriculum which endorses CLIL or CBI approach in teaching language.

Conclusion

This study aimed to explore the impact of a sustainability-focused EAP course on higher education students' vocabulary development, critical awareness, and global citizenship. We found that there was an increased awareness of global sustainability issues, and the course enhanced academic literacy and topic-specific vocabulary growth among students.

The study highlights the positive role of emphasizing interactive pedagogy for linguistic and cognitive growth in courses adopting the Eco-ELT approach. While the interactive feature of the course has been commonly stated to be very beneficial by students, it was concluded that more writing opportunities for better skill balance are also needed based on some student responses.

One limitation of this study is the small sample size, which limits generalizability. Although it provides important insights into the students' perceptual changes in environmental awareness and global sustainability issues, further research with a higher number of participants is needed. Besides, further studies may include evaluation of different courses employing a sustainable approach. To sum up, this area will continue to attract more research when the urgent need to highlight the importance of environmental preservation is considered.

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Ethical Declaration and Committee Approval

This study was conducted in accordance with the principles of scientific research and publication ethics. Ethical approval for this research was obtained from the Ethics Committee of Abdullah Gül University, with approval number 132650.

Proportion of Authors' Contribution

Author 1: Literature Review, Data Collection and Analysis, Review & Editing, Writing - Original Draft.

Author 2: Data Collection and Analysis, Review & Editing, Visualization, Writing - Last Draft.

A Closer Look at In-Service EFL Teachers' Digital Literacy Skills[1]

Selma ÇELİK[2] **Ebru ŞİRE KAYA[3]**

In today's increasingly digital educational environment, Digital Literacy (DL) has emerged as a crucial competency for teachers worldwide. DL extends beyond the basic ability to operate digital devices; it includes the skills to access, evaluate, create, and communicate information effectively, ethically, and pedagogically (Ng, 2012; Spante et al., 2018). In addition to traditional pedagogical expertise, educators are expected to integrate digital tools effectively into their teaching to enhance communication, creativity, and learner engagement (Leaning, 2019). This shift has made DL an indispensable component of teachers' professional competence, particularly in language education, where technology facilitates interaction, multimodality, and authentic communication (Godwin-Jones, 2015). The widespread use of digital tools, online resources, and learning management systems has transformed how English as a Foreign Language (EFL) teachers design and deliver lessons.

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[1]This study is derived from the corresponding author's unpublished Master's Thesis titled "Examining the Digital Literacy Levels of Turkish EFL Teachers", supervised by Asst. Prof. Dr. Ebru ŞİRE KAYA at Çukurova University, Faculty of Education, English Language Teaching Department, 2024.

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Digital platforms enable personalization, immediate feedback, and intercultural collaboration, but they also require advanced digital literacy skills for effective use (Yaseen et al., 2025). Despite its growing importance, research shows that many EFL teachers possess uneven digital competence. While they may handle basic ICT (Information and Communication Technology) tasks comfortably, they often lack confidence in using digital tools for creative content design, assessment, or reflective teaching (Rahimi & Yadollahi, 2011; Mudra, 2020). The urgency of addressing this gap became even clearer during the COVID-19 pandemic, which accelerated digital transformation in education and exposed disparities in teachers' technological readiness (Nguyen & Habók, 2023). Studies suggest that teachers' DL levels are shaped not only by access to technology but also by institutional support, professional development opportunities, and attitudes toward innovation (Benali et al., 2018; Redecker, 2017). Understanding these factors is particularly essential in contexts like Türkiye, where public schools face diverse infrastructural and training conditions. Therefore, this present study aims to determine the DL levels of EFL teachers and examine whether there are any differences among their DL levels based on their gender, age, and years of teaching experience. Additionally, it seeks to explore EFL teachers' practical uses of digital tools, the problems they face, and their perspectives on the integration of DL into teacher education. To address these objectives, the study aims to answer the following research questions:

1. What is the digital literacy level of EFL teachers?
    a. Is there a difference among the digital literacy levels of EFL teachers regarding their gender?
    b. Is there a difference among the digital literacy levels of EFL teachers regarding their age?
    c. Is there a difference among the digital literacy levels of EFL teachers regarding their teaching experience?

2. How do EFL teachers perceive and experience digital literacy in their teaching practices and in its integration into teacher education programs?

Literature Review

Conceptualizing Digital Literacy

Digital literacy (DL) has evolved from a narrow understanding of computer skills to a broad, dynamic, and socially situated competence. Gilster (1997) first coined the term to describe the ability to access and critically evaluate digital information, and later scholars emphasized its cognitive, communicative, and ethical dimensions (Ng, 2012; Spante et al., 2018). In educational contexts, DL is increasingly seen as a transformative literacy that integrates critical thinking, collaboration, and creativity within digital environments (Leaning, 2019). For teachers, DL is a central component of professional competence, linking pedagogy with technological and ethical practice. One widely cited framework is the European Framework for the Digital Competence of Educators (DigCompEdu), which identifies 22 competencies across six areas, highlighting that DL is as pedagogical as it is technical (Redecker, 2017; European Commission, 2017). This framework has guided numerous studies on teachers' readiness to integrate technology into classrooms globally.

Dimensions of Digital Literacy

DL is conceptualized as multidimensional, encompassing technical, cognitive, social, and affective components. Ng (2012) proposed a tripartite model including technical proficiency (e.g., using devices and software), cognitive processing (e.g., evaluating and synthesizing information), and socio-emotional awareness (e.g., ethical digital participation). Spante et al. (2018) emphasized contextual and cultural dimensions, noting that digital competence is relational and shaped by individuals' interactions with technologies and communities of practice. Recent frameworks stress pedagogical and critical dimensions, urging

teachers to design meaningful learning experiences rather than focusing solely on operational skills (Nguyen & Habók, 2023). Similarly, DigCompEdu frames DL as a progressive competence, advancing from exploration and adaptation to innovation and leadership (Redecker, 2017).

DL in EFL Contexts: Barriers and Opportunities

In English as a Foreign Language (EFL) education, DL allows teachers to enhance communication, multimodality, and learner autonomy (Godwin-Jones, 2015). Despite these opportunities, research consistently reports that many EFL teachers possess only moderate DL levels and experience challenges in integrating technology meaningfully into instruction (Rahimi & Yadollahi, 2011; Mudra, 2020). Limited infrastructure, insufficient institutional support, curriculum rigidity, and large class sizes frequently hinder effective implementation (Çelik & Aytin, 2014). However, these barriers coexist with evidence that structured, sustained professional development can significantly increase teachers' confidence and capability in using digital tools pedagogically (Akram et al., 2022). Thus, DL in EFL education emerges as both a promising avenue for pedagogical innovation and an area constrained by systemic challenges.

Determinants and Implications for Teacher Development

Teachers' DL is influenced more by institutional culture, access to training, and professional attitudes than by demographic factors such as age or gender (Benali et al., 2018). Studies indicate that participation in digital training and access to technological infrastructure are strong predictors of teachers' DL (Benali et al., 2018). These findings highlight the importance of long-term, practice-oriented professional development initiatives that move beyond isolated workshops. Approaches such as peer mentoring, reflective practice, and blended learning are shown to support deeper and more sustainable competence development (Redecker, 2017; Nguyen & Habók, 2023). Collectively, this body of research underscores that enhancing teachers' DL is not only a pedagogical necessity but also a policy imperative requiring close alignment between curriculum

expectations, institutional support structures, and broader educational goals.

Methodology

This study aims to explore EFL teachers' levels of digital literacy (DL), their self-perceptions of these levels, their practical use of digital tools in educational settings, the challenges they encounter, and their views on integrating digital literacy into teacher education programs. To address these aims, a descriptive survey design was employed. According to Creswell (2012), a descriptive survey design aims to portray the characteristics of a particular population or phenomenon, rather than addressing questions of how, when, or why these characteristics occur; it focuses on identifying and describing what currently exists.

The study was carried out during the 2021–2022 academic year with the participation of 250 EFL teachers employed in primary, secondary, and high schools affiliated with the Ministry of National Education in the Şahinbey district of Gaziantep.

The participants were selected using the convenience sampling method. As Dörnyei (2007) notes, convenience sampling is a type of non-probability or non-random sampling in which participants in the target population are chosen for the study based on a set of practical requirements, like being in the same location, being available at a specific time, being easily accessible, or being willing to volunteer. In Table 1, the demographic characteristics of the EFL teachers who responded to the questionnaire are presented as frequencies (f) and percentages (%).

Table 1

Teachers' Demographic Features in the Questionnaire (n=250)

Variable	*Group*	*Frequency f*	*Percentage %*
Gender	Female	152	60,8

	Male	98	39,2
Age	Under 30	103	41,2
	31-40	104	41,6
	41 and more	43	17,2
Teaching Experience	0-5 year(s)	101	40,4
	6-10 years	71	28,4
	11-15 years	32	12,8
	16 years and more	46	18,4
First Usage of Computers	At Primary School	64	25.6
	At Secondary School	70	28.4
	At High school	58	23.2
	At University	40	16
	After University	17	6.8
Digital Devices	Laptop	209	38.35
	Computer	116	21.28
	Smartphone	113	20.74
	Notebook	39	7.16
	Tablet	35	6.42
	Smartboard	33	6.06
Total		250	100

The demographic data in Table 1 were obtained from 250 EFL teachers who participated in the study. As Table 1 displays, the number of male teachers who participated in the questionnaire of the research is 98 (39,2%), while the number of female teachers is 152 (60,8%). In terms of age, 104 teachers (41.6%) are aged 31-40, respectively, followed by 103 teachers (41.2%) in the under 30 group, and 43 teachers (17,2%) in 41 and more. Additionally, the distribution of the teaching experiences of EFL teachers in this study indicates that 101 teachers (40.4%) have 0-5 years of experience, followed by 71 teachers (28.4%) with 6-10 years, 46 teachers (18.4%) with 16 years and more, and 32 teachers (12.8%) with

11-15 years. Moreover, Table 1 also shows the distribution of EFL teachers based on the first time they began to use computers. It can be seen that the results of the frequencies are pretty close to each other. Based on the data in Table 1, 70 teachers (28.4%) began utilizing computers during their secondary school years, indicating the early integration of technology into their educational experiences. Similarly, 64 teachers (25.6%) commenced their computer usage at the primary school level, emphasizing the increasing prevalence of technology from an early age. 58 teachers (23.2%) also responded that they began using computers in high school, showcasing the ongoing trend of incorporating computers into the educational landscape. A notable 40 teachers (16%) initiated computer usage at the university level. Lastly, only a tiny portion of the participant EFL teachers, 17 participants (6.8%), reported that they started to use computers after completing their university education, highlighting a continuous engagement with technology post-academia. They further stated that they were able to use computers when they started to work as a teacher. Finally, the distribution of the digital devices that the EFL teachers use indicates that a laptop (38.35%) was the most used digital device among the participants, then it was followed by computer (21.28%). Surprisingly, smartphones (20.74%) were seen as the third most commonly used digital device, although everyone has a smartphone today. Moreover, notebook (7.16%) ranked fourth, while tablet (6.42%) ranked fifth, and the last digital device, a smartboard (6.06%).

Data Collection Instruments and Procedure

In this study, data were collected through "The Digital Literacy Scale," a 5-point Likert-type questionnaire developed by Bayrakcı and Narmanlıoğlu (2021), selecting from the following options: (1) Strongly Disagree, (2) Disagree, (3) Neither Agree nor Disagree, (4) Agree, and (5) Strongly Agree. To obtain deeper insights into participants' perspectives, several open-ended items were added to the instrument. Thus, the questionnaire is used to yield both quantitative and qualitative data.

To ensure the validity, reliability, and clarity of the questionnaire, a pilot

study was conducted with 30 EFL teachers (Van Teijlingen & Hundley, 2001; Mutz & Müller, 2016). The pilot aimed to test the comprehensibility and relevance of the items in relation to the research questions. Based on the feedback received, minor revisions were made to improve wording, clarity, and item consistency. Additionally, the questionnaire was reviewed by language experts to refine its expression and ensure that all items were easily interpretable.

Following the pilot study, the questionnaire was administered in both printed and online formats, the latter created via Google Forms, a digital platform designed for data collection. After obtaining the necessary permissions from official administrators, participants completed the questionnaire within approximately 15–20 minutes. The overall data collection process was completed over two months.

Data Analysis

To analyse the quantitative data, the *LISREL 8.80* program was used for structural analyses, while *SPSS 24* was employed for additional statistical procedures. Independent samples t-tests and One-Way Analyses of Variance (ANOVA) were conducted to compare scale scores across demographic variables. When the ANOVA results indicated a statistically significant difference, the Least Significant Difference (LSD) post-hoc test was applied to determine between-group variations. In addition, content analysis was carried out to examine the qualitative data obtained from the open-ended items of the questionnaire. The qualitative responses were systematically coded, categorized, and interpreted to identify recurring patterns and themes related to teachers' perceptions, challenges, and suggestions regarding digital literacy. In line with Creswell (2012), the data were analysed inductively to move from specific statements to broader categories and themes, ensuring a clear and meaningful interpretation of participants' views. This process provided a deeper understanding of the qualitative findings and complemented the quantitative results.

Results

The study employed a questionnaire that also included open-ended items. First, the quantitative findings obtained from the questionnaire were analysed in relation to the study's variables and sub-dimensions. Then, the qualitative data derived from the open-ended questions were examined through content analysis to identify emerging codes and themes. The resulting themes and codes were organized and presented in tables with their corresponding frequencies.

In this part, the quantitative data were analysed under each research question and displayed in tables.

The Digital Literacy Level of the EFL Teachers

Table 2 displays the descriptive statistics for the questionnaire and its dimensions. The Digital Literacy Scale and its sub-dimension scores were obtained by averaging the item scores. Therefore, both the scale and its sub-dimensions fall within the range of 1-5.

Table 2

Descriptive Statistics for Scale and Dimensions

Scale Scores	*Minimum*	*Maximum*	*Mean*	*Sd*	*Skewness*	*Kurtosis*
DLS	2,1	5	3,92	0,63	-0,24	-0,489
Ethics and Responsibility	2	5	4,25	0,62	-0,92	0,814
General Knowledge and Functional Skills	1,3	5	3,74	0,93	-0,375	-0,663
Daily Usage	1,83	5	4,30	0,68	-0,949	0,359
Advanced Production	1	5	2,53	1,26	0,519	-0,906
Privacy and Security	2,12	5	3,90	0,65	-0,32	-0,407
Social Dimension	1	5	3,56	1,05	-0,22	-0,885

As seen in Table 2, the Digital Literacy Scale's mean is 3.92, and the standard deviation is 0.63. The means for the sub-dimensions are as follows: 4.25 for Ethics and Responsibility, 3.74 for General Knowledge and Functional Skills, 4.30 for Daily Usage, 2.53 for Advanced

Production, 3.90 for Privacy and Security, and 3.56 for Social Dimension. The Daily Usage sub-dimension has the highest mean, while the Advanced Production sub-dimension has the lowest. Skewness and kurtosis values were examined for the normality of scores for both the scale and sub-dimensions, and these values fall within ±1, indicating a normal score distribution (Tabachnick & Fidell, 2013). Skewness and kurtosis values for both the scale and sub-dimensions are within ±1, indicating a normal score distribution.

Moreover, Bayrakcı and Narmanlıoğlu (2021) identified a table showing the competencies of each DL level depending on the results of the scale. According to this, in the present study, the participants' level of DL is between 3,63-4,17, so their level can be regarded as average. When the competencies of this level are examined, it can be stated that participants with an average level of DL can independently solve non-routine but not overly complex problems. Also, the participants have an intermediate level of proficiency in keeping up with the digital age and remain committed to ongoing learning.

The Differences among the Digital Literacy Levels of the EFL Teachers Regarding their Gender

Whether there is a significant difference in the scores of the EFL teachers on the Digital Literacy Scale and its sub-dimensions based on gender was compared using an independent sample t-test. Table 3 shows independent sample t-test results for the scores of the EFL teachers on the Digital Literacy Scale and its sub-dimensions based on their gender.

Table 3

Independent Sample T-Test Table for the Scores of Teachers on the Digital Literacy Scale and its Sub-dimensions Based on Gender

Scale Scores	*Group*	*N*	*Mean*	*Sd*	*t (248)*	*p*
DLS	Female	152	3,8	15,03	-4,074	,000*
	Male	98	4,12	16,9		

Ethics and Responsibility	Female	152	4,21	6	-1,33	0,185
	Male	98	4,32	6,17		
General Knowledge and Functional Skills	Female	152	3,41	5,68	-7,65	,000*
	Male	98	4,25	5,94		
Daily Usage	Female	152	4,21	5,32	-2,651	0,009*
	Male	98	4,44	5,96		
Advanced Production	Female	152	2,49	11,75	-0,623	0,534
	Male	98	2,59	11,16		
Privacy and Security	Female	152	3,74	6,72	-5,248	,000*
	Male	98	4,16	7,07		
Social Dimension	Female	152	3,5	6,72	-1,243	0,215
	Male	98	3,67	7,07		

*$p<.05$

As seen in Table 3, there is a significant difference in the scores of teachers based on gender for the Digital Literacy Scale ($t(248)=-4.074$, $p<.05$) as well as the General ($t(248)=-7.65$, $p<.05$), Daily Usage ($t(248)=-2.651$, $p<.05$), and Privacy ($t(248)=-5.248$, $p<.05$) sub-dimensions. Male teachers have higher mean scores on both the Digital Literacy Scale and the General, Daily Usage, and Privacy sub-dimensions compared to female teachers. However, there is no significant difference in the scores based on gender for the Ethics ($t(248)=-1.33$, $p>.05$), Advanced Production ($t(248)=-0.623$, $p>.05$), and Social ($t(248)=-1.243$, $p>.05$) sub-dimensions.

The Differences among the Digital Literacy Levels of the EFL Teachers Regarding their Age

Whether there is a significant difference in the scores of the EFL teachers on the Digital Literacy Scale and its sub-dimensions based on age was compared using the one-way analysis of variance (ANOVA) method.

Table 4 shows the ANOVA results for the scores of the EFL teachers on the Digital Literacy Scale and its sub-dimensions based on their age.

Table 4

ANOVA Table for the Scores of Teachers on the Digital Literacy Scale and its Sub-dimensions Based on Age

Scale Scores	*Age*	*N*	*Mean*	*sd*	$F_{(2,247)}$	*P*	*Difference***
DLS	Under 30 years	103	4,08	0,59	6,234	0,002*	1 and 2,3
	31-40 years	104	3,83	0,64			
	41 and above	43	3,75	0,60			
Ethics and Responsibility	Under 30 years	103	4,34	0,66	2,256	0,107	
	31-40 years	104	4,22	0,56			
	41 and above	43	4,12	0,65			
General Knowledge and Functional Skills	Under 30 years	103	3,87	0,92	2,766	0,065	
	31-40 years	104	3,72	0,92			
	41 and above	43	3,47	0,96			
Daily Usage	Under 30 years	103	4,52	0,59	9,375	,000*	1 and 2,3
	31-40 years	104	4,15	0,72			
	41 and above	43	4,15	0,70			
Advanced Production	Under 30 years	103	2,55	1,31	0,084	0,92	
	31-40 years	104	2,53	1,29			
	41 and above	43	2,46	1,06			
Privacy and Security	Under 30 years	103	4,06	0,61	5,473	0,005*	1 and 2,3
	31-40 years	104	3,83	0,67			
	41 and above	43	3,72	0,64			
Social Dimension	Under 30 years	103	3,85	0,99	7,118	0,001*	1 and 2,3
	31-40 years	104	3,34	1,04			
	41 and above	43	3,40	1,03			

**p<.05; **LSD; 1: Under 30 years; 2:31-40 year; 3:41 and above*

As seen in Table 4, there is a significant difference in the scores of teachers based on age for the Digital Literacy Scale (F (2,247) =6.234, p<.05), as

well as the Daily Usage (F (2,247) =9.375, p<.05), Privacy (F (2,247) =5.473, p<.05), and Social (F (2,247) =7.118, p>.05) sub-dimensions. The groups with significant differences were determined using the LSD multiple comparisons (post-hoc) methods and are indicated in the difference column. As seen in Table 4, there is a significant difference between teachers aged 30 and below and those aged 31-40 and 41 and above for both the overall scale score and the Daily Usage, Privacy, and Social sub-dimensions. However, there is no significant difference between teachers aged 31-40 and those aged 41 and above. Teachers aged 30 and below have higher average scores in the Digital Literacy Scale, Daily Usage, Privacy, and Social sub-dimensions compared to teachers aged 31 and above. However, there is no significant difference in the scores based on age for the Ethics (F (2,247) =2.256, p>.05), General (F(2,247)=2.766, p>.05), and Advanced Production (F(2,247)=0.084, p>.05) sub-dimensions.

The Differences among the Digital Literacy Levels of the EFL Teachers Regarding their Teaching Experience

Table 5 displays whether there is a significant difference in the scores of teachers on the Digital Literacy Scale and its sub-dimensions based on teaching experience, which was compared using the one-way analysis of variance (ANOVA) method.

Table 5

ANOVA Table for the Scores of Teachers on the Digital Literacy Scale and its Sub-dimensions Based on Teaching Experience

Scale Scores	*Group*	*N*	*Mean*	*sd*	$F_{(3,246)}$	*p*
DLS	0-5 years	101	4,01	0,59	1,506	0,214
	6-10 years	71	3,89	0,62		
	11-15 years	32	3,91	0,74		
	16 and above	46	3,78	0,64		
Ethics and Responsibility	0-5 years	101	4,31	0,63	0,562	0,641
	6-10 years	71	4,22	0,59		

	11-15 years	32	4,23	0,69		
	16 and above	46	4,20	0,61		
General Knowledge and Functional Skills	0-5 years	101	3,78	0,92	0,878	0,453
	6-10 years	71	3,75	0,87		
	11-15 years	32	3,86	0,94		
	16 and above	46	3,55	1,04		
Daily Usage	0-5 years	101	4,45	0,63	2,621	0,051
	6-10 years	71	4,24	0,61		
	11-15 years	32	4,18	0,90		
	16 and above	46	4,17	0,71		
Advanced Production	0-5 years	101	2,45	1,28	0,644	0,588
	6-10 years	71	2,66	1,31		
	11-15 years	32	2,66	1,32		
	16 and above	46	2,40	1,10		
Privacy and Security	0-5 years	101	3,98	0,61	1,383	0,248
	6-10 years	71	3,90	0,61		
	11-15 years	32	3,91	0,77		
	16 and above	46	3,74	0,70		
Social Dimension	0-5 years	101	3,76	0,96	2,146	0,095
	6-10 years	71	3,42	1,06		
	11-15 years	32	3,49	1,12		
	16 and above	46	3,40	1,11		

**p>.05*

As seen in Table 5, there is no significant difference in the scores of teachers based on teaching experience for the Digital Literacy Scale ($F(3,246)=1.506$, $p>.05$) and its sub-dimensions, including Ethics ($F(3,246)=0.562$, $p>.05$), General ($F(3,246)=0.878$, $p>.05$), Daily Usage ($F(3,246)=2.621$, $p>.05$), Advanced Production ($F(3,246)=0.644$, $p>.05$), Privacy ($F(3,246)=1.383$, $p>.05$), and Social ($F(3,246)=2.146$, $p>.05$).

The average scores of teachers on the Digital Literacy Scale and its sub-dimensions are found to be similar based on teaching experience.

Moreover, the qualitative data is collected through the open-ended items in the questionnaire, which will be displayed in terms of frequencies. To be consistent, the subheadings in this section are parallel to the items in the questionnaire in sequence.

The Functions of Digital Tools in EFL Classes

Table 6 demonstrates the distribution of functions to use digital tools among the participant EFL teachers.

Table 6

The Functions of Digital Tools in EFL Classes

Codes	***Frequency***
Teaching	124
Communication	90
Entertainment	73
Doing research	57
Personal issues	29
Academic purposes	25
Creating a website	1

Based on the frequencies reported in Table 6, the participant EFL teachers were seen to use digital tools primarily for the function of teaching. The participants stated that they utilised digital tools to prepare for exams, plan their lessons, give assignments, prepare course materials, and make their classes more fun. The second frequently mentioned function in Table 6 was communication. The participant EFL teachers stated that they use digital tools to read news, send e-mails, follow social media, and also keep in touch with people faster and easier. These two dominant categories are illustrated in the following comments: *"I need them in terms of teaching and giving responsibilities during learning. We practice listening activities during the lesson. Also, I prepare homework on the internet"*. *"I*

think they make easier our life, I keep in touch with my friends via smartphone quickly". The third function reported in Table 6 was entertainment. It was seen that participant EFL teachers used digital tools to play games, watch movies and serious, take pictures, and listen to music. The following function in Table 6 was found to be doing research. The EFL teachers used digital tools to get some information on any topic. Also, as seen in Table 6, digital tools were used for personal issues such as shopping, paying the bills, navigating, making a reservation, or checking recipes. The last function in Table 6 was found to be for academic purposes. The EFL teachers stated that digital tools helped them read and edit articles, prepare presentations, do homework, improve professionally, and do their work related to projects, courses, and meetings.

The EFL Teachers' Coping with the Problems in Digital Settings

Table 7 indicates the distribution related to how the EFL teachers deal with the problems they face in digital settings.

Table 7

The Way that EFL Teachers Deal with the Problems in Digital Settings

Codes	***Frequency***
Solve on my own	119
Ask for help	59
Both	75
Total	253

As seen in Table 7, 119 EFL teachers stated that they solved the problems independently, while 59 teachers asked for help. 75 teachers stated that they both solved the problems on their own and also with help. Two participant EFL teachers commented on this issue as follows: *"I try to handle the problem on my own if it's not beyond my digital knowledge"*. *"First, I try, but if I cannot solve the problem, I seek assistance"*.

The Integration of DL Skills into the ELT Pre-Service Teacher Education Curriculum

During the study, the majority of the participant EFL teachers supported the idea of integrating DL skills into ELT pre-service teacher education programs. Table 8 lists the reasons the EFL teachers provide for integrating DL skills into the curriculum of ELT pre-service teacher education programs. As revealed in Table 8, they further suggested some topics regarding digital skills to be covered in pre-service teacher education programs.

Table 8

EFL Teachers' Reasons for the Integration of DL Skills into the ELT Curriculum and Topic Suggestions for the Curriculum

The Reasons	***Frequency***	***Suggested Topics for Teacher Education Programs***	***Frequency***
Living in a digital age	44	Digital tools & Websites	39
Making teaching and learning more effective	17	Digital literacy skills	36
Keeping up with the latest developments related to technology	12	Technology integration in English language teaching	29
Being able to meet students' needs	11	Basic computer-related skills	9
Helping with distance education	4	Smart-board usage	3
Feeling confident and being competent	3	Programs	2
Having less effort and time	2	Web 3 tools	1
Improving personal and professional development	2		
Making our lives easier	2		

Enabling us to reach reliable information	1
Having a lack of digital knowledge	1
Improving creativity and critical thinking skills	1

As indicated in Table 8, regarding the reasons of the EFL teachers about integrating DL skills into the curriculum of ELT pre-service teacher education programs, the most frequently repeated reason was living in a digital age. Additionally, some of the participant EFL teachers emphasised the potential for making teaching and learning more effective, while some of the participant EFL teachers highlighted the importance of keeping up with the latest technological developments. The following excerpts highlight these reasons:

> *"Because we live in the age of technology, we as teachers need to adapt ourselves to the innovations of the age. We need it to solve our problems on our own, without others' help. We need to enhance our vision on technology or digital usage of tools and integrate technology to our teaching methods".*
>
> *"Technology has been used to improve language learning. It enables teachers to adapt classroom activities, so it develops the language learning process. It helps to motivate students and make lessons more enjoyable".*
>
> *"Yes, because we should follow new improvements".*

Other reasons illustrated in Table 8 were being able to meet students' needs, helping with distance education, feeling confident and being competent, having less effort and time, improving personal and professional development, making our lives easier, enabling us to reach reliable information, having a lack of digital knowledge, and improving creativity and critical thinking skills. Thus, Table 8 provides valuable insights into the reasons for integrating DL skills into the curriculum of ELT preservice teacher education programs.

Table 8 also illustrates some topic suggestions for ELT pre-service teacher education programs. As displayed in Table 8, the most frequently mentioned topic was digital tools and websites, indicating a strong interest

in incorporating these resources into teaching practices. One participant EFL teacher shared his/her ideas on this issue as follows:

> *"Yes. Because in the new world, digital tools are everywhere. We need to learn how to use them best in our classes. For this, pre-service ELT teacher education programs should teach a range of digital tools so we can benefit from them in our teaching."*

The second suggestion was DL skills, emphasising the importance of equipping teachers with the necessary digital competencies. This suggestion is reflected in the following comment:

> *"Yes, it should because digital literacy is one of the most important aspects of the current century, and we as teachers should be digitally literate, and pre-service education should include such topics as well. Also, I believe that from a very young age, individuals should learn/be taught about digital literacy. It is a must for this age."*

Also, as demonstrated in Table 8, the third commonly suggested topic was technology integration in English language teaching. The other topics suggested by the participant EFL teachers were basic computer-related skills, smart-board usage, programs, and Web 3 tools.

The EFL Teachers' Suggestions Regarding Digital Skills and Platforms for In-Service Teacher Training Programs

The qualitative findings also yielded that most of the participants would like to get training courses to improve their digital skills and learn about some digital platforms. Table 9 summarises the participant EFL teachers' preferences regarding the types of digital skills and platforms they would like to acquire through in-service teacher training courses on DL.

Table 9

The EFL Teachers' Suggestions for In-Service Teacher Training Courses

Codes	***Frequency***
Digital Tools & Websites	55
Microsoft Office Programs	19
Digital Literacy Skills	15

Programs (*Adobe Software*, Animation- Making Mobile Games, *SPSS*, *Canvas*, *Dyned*, *Pardus*, etc.)	14
Innovative Methods for Teaching	11
Coding	10
eSafety	7
Basic Computer Skills	4
Game Creating	4
Web 3 Tools	3
Gamification	1
Social Media Literacy	1
Conducting Online Courses	1

As seen in Table 9, a significant number, 55 participants, expressed an interest in learning about Digital Tools, Web 2.0 Tools, and Websites. Two participant EFL teachers state their ideas on this issue as follows: *"Yes. I would like to be more applicant and aware of the features and applications of ICT tools"*. *"It may be. It can be about using digital tools safely. How to use them in a safer way is very important"*.

Moreover, *Microsoft Office* programs captured the attention of 19 participants. The third training was suggested as Digital Literacy by 15 participants. Additionally, 14 participants sought training in various programs, including Adobe, software, animation, mobile game development, *SPSS*, *Canvas*, *Dyned*, and *Pardus*. Moreover, innovative methods for teaching, especially those involving technology integration, attracted the interest of 11 participants. Also, specialized skills such as coding, eSafety, basic computer skills, game creation, and knowledge of Web 3 Tools also received attention from participants, demonstrating a diverse range of interests in digital literacy training. Overall, Table 9 reflects educators' eagerness to enhance their digital skills across various domains.

The EFL Teachers' Evaluation of Their Digital Literacy Level

Table 10 illustrates the self-evaluation of the participant EFL teachers regarding their DL knowledge, categorizing their proficiency into five levels: Poor, Average, Good, Very Good, and Perfect.

Table 10

The EFL Teachers' Evaluation of Their Digital Literacy Level

Codes	***Frequency***
Good	118
Very Good	66
Average	42
Perfect	16
Poor	8
Total	250

In Table 10, the majority, 118 participants, rated their knowledge as "Good," while 66 participants felt "Very good." Additionally, 42 participants assessed their knowledge as "Average," and a smaller percentage, 16 teachers, regarded it as "Perfect." One participant commonly expresses his/her ideas on this issue as follows: *"Perfect. I have been trained about this topic"*. Only 8 participants in Table 10 rated their DL as "Poor." One participant EFL teacher comments as follows: *"Poor because I am not interested in computers, laptops, etc."*. In total, 250 responses were collected, reflecting participants' perceptions of their DL proficiency across different levels.

Other Digital Skills-Related Problems Reported by the EFL Teachers

Table 11 illustrates some digital-related problems that EFL teachers face in their classes.

Table 11

Other Digital Skills-Related Problems Reported by the EFL Teachers

Codes	***Frequency***
Internet Connection Problems	21
Problems in using Digital Tools or Programs	19
Problems Related to Smartboard Usage	18
No Smartboard	13
Problems with Ss' Usage of Technology	10
Technical Problem	13
Ss No Access to Internet or Digital Devices	7
Problems Related to *Microsoft Office* Programs	1

As seen in Table 11, the participants reported various challenges related to digital skills in their classes. However, some of the problems are not related to digital skills, such as internet connection problems or the absence of a smartboard; they may still have an indirect effect on participant EFL teachers' digital skills. They might hinder the participant EFL teachers from enhancing their usage of digital skills. The most common issue faced by 21 participants, as illustrated in Table 11, was internet connection problems. The participant EFL teachers share their ideas about this problem as follows: *"Some students do not have enough internet connections at home, so they sometimes can't catch what we are doing"*. *"We sometimes might need to change lesson plans because internet connection problems occur suddenly, which harms the effectiveness of their lessons"*.

Furthermore, Table 11 shows that 19 participant EFL teachers expressed challenges with digital tools or programs and attributed them to a lack of knowledge and difficulties in preparing digital materials. One EFL teacher highlights this issue as follows: *"Yes. It is generally about that I don't have knowledge about using tools. I don't have a suitable digital program. I have sometimes technical problems"*. Additionally, in Table 11,

problems related to smartboard usage were noted by 18 participants, while 13 participants highlighted the absence of a smartboard as an issue. Expression of an EFL teacher about smartboard problems is as follows: *"I feel incompetent to use the Pardus on the smartboards at the state school I work because we all generally use Windows OS in our daily lives"*. Besides, some of the participant EFL teachers identified that there might be software problems, such as not opening some programs or websites, because of the censorship on the smartboards at school. In addition, problems with students' usage of technology were mentioned by 10 participants, as seen in Table 11. For this problem, the participant EFL teachers stated that the students lack critical thinking skills and do not know the eSafety rules in which they may share their passwords or personal information with others. In addition, some of the EFL teachers also expressed that students do not know how to obtain the information they need, and some of the participant EFL teachers complained about students' technology addiction, which may result in playing dangerous games. Also, some of the participant EFL teachers stated that students do copy-paste homework, which causes plagiarism. Moreover, technical problems were stated by 13 teachers, according to Table 11, which stem from electricity issues or internet cables, and other equipment. Moreover, students lacking internet access or digital devices were also cited as challenges by 7 teachers in Table 11. Additionally, one participant teacher mentioned the problems related to *Microsoft Office* programs. These responses provide insights into the diverse digital skills-related difficulties faced by teachers in their classrooms.

Discussion and Conclusion

As a result of both quantitative and qualitative data collected through the questionnaire, the EFL teachers had a moderate level of DL, with the highest mean scores in the Daily Usage dimension, followed by Ethics and Responsibility, Privacy and Security, and General Knowledge. This aligns with previous research showing that many EFL teachers possess an average level of DL, being generally capable of using digital tools in

instruction but still facing challenges (Christiani et al., 2022; Saud, 2021). Factors such as differences in educational background, unequal access to technological resources, limited institutional support, and time constraints may explain these results (Ahmed & Akyıldız, 2022; Mudra, 2020). The qualitative findings further supported this interpretation. Although most teachers described their DL skills as "good," their self-assessments did not always align with their actual digital practices**.** These perceptions are consistent with previous studies (Akayoğlu et al., 2020; Juurakko-Paavola et al., 2018; Çukur, 2023), which revealed that teachers often consider themselves digitally literate despite relying on traditional methods or demonstrating mixed confidence in technology use. However, the findings diverge from studies reporting higher DL levels among teachers (Doğan, 2023; Pehlevan & Ünal, 2022; Mavi, 2020) and those showing strong digital competence in pre-service teacher populations (Ata & Yıldırım, 2019; Liza & Andriyanti, 2020). This contrast suggests that while many teachers are digitally aware, contextual constraints such as insufficient training, lack of infrastructure, and generational differences may limit their ability to fully integrate digital tools into their teaching practices (Brown, 2011; Prensky, 2001).

Moreover, the study revealed that there is a relationship between the EFL teachers' DL levels and their gender. Male teachers scored higher than female teachers in overall DL, particularly in Daily Usage and Privacy dimensions, which suggests that the male EFL teachers are more competent in DL skills. This result is consistent with earlier findings suggesting that gender may influence ICT-related competencies (Ata & Yıldırım, 2019; Mavi, 2020). Nonetheless, other research reported no significant gender-based differences (Benali et al., 2018; Peled, 2021), suggesting that gender effects may vary depending on cultural and institutional contexts.

Similarly, age differences were found to be significant, with younger teachers (aged 30 and below) demonstrating higher DL levels, particularly in the Daily Usage and Social dimensions. This pattern supports the notion

that younger "digital native" teachers (Prensky, 2001) tend to be more confident in integrating technology, while older teachers, often "digital immigrants," may face adaptation challenges (Mavi, 2020; Rahimi & Yadollahi, 2011). Yet, teaching experience did not significantly affect DL levels, consistent with findings from Çöp (2023) and Semerci & Aydın (2018), suggesting that years in the profession alone do not guarantee digital competence.

Furthermore, it was seen that EFL teachers use digital tools for multiple purposes, primarily for teaching, followed by communication, entertainment, doing research, academic purposes, personal issues, and creating a website. They reported integrating digital tools to make lessons more engaging and enjoyable, especially through online quizzes and games. Teachers also used them for lesson planning and material preparation. Similar findings were reported by Ahmed & Akyıldız (2022), Solano et al. (2017), Çukur (2023), and Amhag et al. (2019), who emphasized that teachers mainly employ digital tools for instructional support, self-development, and communication, highlighting their role in enhancing student engagement and teaching effectiveness. Despite these diverse uses of digital tools, teachers also reported encountering several challenges that affect the effective integration of technology into their teaching such as internet connection problems, problems in using digital tools or programs, smartboard usage, having no smartboard, students' usage of technology, technical issues, students' no access to internet or digital devices and problems related to *Microsoft Office* programs. The findings align with previous research identifying similar challenges in using digital tools. Studies such as Ahmed & Akyıldız (2022), Doğan (2023), Solano et al. (2017), Soifah et al. (2021), Pratolo & Solikhati (2020), and Çukur (2023) all reported obstacles, including limited resources, poor internet access, rigid curricula, lack of institutional support, crowded classrooms, and students' low digital competence or motivation. These constraints hinder the effective integration of digital tools into English lessons. Similarly, Çelik & Aytin (2014) emphasized that even teachers with strong digital skills face implementation barriers

due to inadequate infrastructure and institutional constraints. Overall, the findings suggest that external factors, rather than teachers' digital abilities, remain the primary barriers to successful digital integration. The study also examined EFL teachers' views on the integration of digital literacy skills into pre-service English language teacher training programs. EFL teachers' suggested topics for teacher training programs. The most common were digital tools and websites, followed by digital literacy skills and technology integration in ELT. Other suggested areas included basic computer skills, smartboard usage, programs, and Web 3 tools. This mirrors existing research emphasizing that teacher training should move beyond tool awareness and focus on pedagogical application within language classrooms (Kurniawati et al., 2018; Ahmed & Akyıldız, 2022). The strong demand for "basic computer skills," "smartboard usage," "programs," and "Web 3 tools" illustrates that teachers perceive gaps not only in advanced digital pedagogy but also in foundational competencies, especially among more experienced or less tech-inclined educators. Altogether, these suggestions underscore the need for hands-on, scaffolded, contextually relevant training programs that integrate theory with practice, address diverse proficiency levels, and support teachers in embedding digital literacy meaningfully in ELT curricula. Building on their perspectives about pre-service training, the study also gathered the teachers' suggestions for designing effective digital literacy training courses. The majority of the EFL teachers agreed that they need to have training on DL skills. They suggested several training topics to improve digital literacy. They mainly emphasized digital tools and websites, *Microsoft Office* programs, and practical digital literacy skills. Teachers also highlighted the need for training in specific software, innovative teaching methods, and coding, showing their interest in hands-on, technology-based professional development. Similarly, Pehlevan & Ünal (2022) emphasized the need for technology courses to help teachers update their knowledge and integrate digital tools effectively. Aslan & Zhu (2017) also found that ICT-related pedagogical training plays a key role in successful technology integration. Likewise, Yükselir &

Yuvayapan (2019) reported similar suggestions for improving digital literacy. This finding aligns with Pehlevan & Ünal (2022), who highlighted that combining theory and practice helps pre-service teachers better understand technology integration. Similarly, studies by Kimm et al. (2020), Reisoğlu & Çebi (2022), and Amhag et al. (2019) emphasized the value of experiential learning, suggesting that hands-on workshops and practical applications are essential for effective technology integration training.

Overall, the study highlights the necessity of providing structured digital literacy training and institutional support to enhance teachers' digital competence and foster more effective technology use in English language teaching. Based on the findings, it can be concluded that many teachers lacked a clear understanding of digital literacy (DL), often equating it with digital reading or writing. This indicates the need to integrate DL-focused courses into teacher education programs to strengthen teachers' ability to use digital tools effectively.

Moreover, given the growing presence of digital-native learners, EFL teachers should design interactive, technology-based lessons that foster students' critical thinking, problem-solving, and DL skills (Ahmed & Akyıldız, 2022; Çelik & Aytin, 2014). Professional development programs, such as hands-on workshops, collaborative learning communities, and online PD courses, should also be promoted to enhance teachers' digital competence.

Limitations and Suggestions for Further Research

Despite these insights, this study has some limitations. This study was limited to EFL teachers working in MoNE schools in the Şahinbey district of Gaziantep, Turkey; therefore, the findings may not be fully representative of teachers in other regions or educational settings. Since the research focused exclusively on EFL teachers, the results cannot be generalized to other subject areas. Future studies could include teachers from different disciplines or even EFL students to provide a broader

understanding of digital literacy levels and digital tool preferences. Moreover, as the study relied solely on a questionnaire, subsequent research may benefit from employing classroom observations or experimental training programs to examine how digital literacy instruction influences teachers' digital competence. Finally, the data were collected during the 2021–2022 academic year, a period coinciding with the COVID-19 pandemic, which may have affected teachers' familiarity with and use of digital tools.

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Ethical Declaration and Committee Approval

This study was conducted in accordance with the principles of scientific research and publication ethics. Ethical approval for this research was obtained from the Ethics Committee of Cukurova University, with approval number (286836).

Proportion of Authors' Contribution

Author 1: Conceptualization, Methodology, Data Collection, Formal Analysis, Writing – Original Draft.

Author 2: Conceptualization, Review & Editing, Visualization, Last Draft

Investigating Leadership Profiles of Language Instructors through Metaphors: EFL Students' Perspectives

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Leadership is a concept which is seen to be complex in educational settings and there are various definitions of leadership although there is not a consensus on the definition of leadership. The majority of leadership definitions converge on the principle of unifying followers toward a shared vision. Basically, leadership requires the provision of direction for subordinates to align with desired objectives (Muczyk & Holt, 2008). The absence of a universally accepted definition can hinder the comprehension and implementation of efficacious leadership strategies (Li, 2001). Metaphors are acknowledged as effective instruments for explaining constructs such as leadership. This investigation endeavours to illuminate the diverse conceptualizations of leadership among English as a Foreign Language (EFL) students within a higher education context, employing metaphors to reflect on the leadership profiles of language instructors.

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Furthermore, it aims to identify leadership attributes for EFL students in foreign language pedagogy.

Literature Review

Definition of Leadership

Leadership has long been recognized as a multidimensional and contested concept in educational contexts, lacking a single agreed definition. Most approaches converge on the idea of aligning followers toward shared visions and goals, yet the means by which this alignment occurs differ considerably (Muczyk & Holt, 2008; Li, 2001). Over the last decades, several theoretical frameworks have been offered by leadership scholars, offering distinct lenses for understanding how leaders influence, inspire, and manage others. While these theories have been widely discussed in organizational and educational leadership studies, little is known about how such leadership models are perceived by students in higher education, particularly in language education. This gap points to the importance of examining how students perceive and interpret the leadership behaviours exhibited by their instructors. The role of the language instructor extends beyond delivering subject matter to encompass guiding, motivating, and supporting learners through the mostly demanding process of language acquisition. Recent scholarship also suggests that learners' perceptions of teacher leadership can shape engagement, classroom climate and achievement (Zhang & Li, 2023; Tu, 2021).

Leadership Styles

In the field of educational leadership, several theories have become particularly influential, each emphasizing different dimensions of leadership practice. Depending on the various theories and approaches towards the concept of leadership, different leadership styles have emerged so far such as instructional leadership (Hallinger, 2005), servant leadership (Greenleaf, 1977), distributed leadership (Spillane, 2006), authentic leadership (Avolio & Gardner, 2005), transactional leadership (Bass, 1990; Bush, 2007) laissez-faire leadership (Skogstad et al., 2007).

Instructional leadership, most strongly associated with Hallinger (2005) and Leithwood (1994), stresses the leader's role in defining clear goals, coordinating curriculum, monitoring teaching, and ensuring that instructional quality is prioritized. Transformational leadership, initially conceptualized by Burns (1978) and further developed by Bass (1990), emphasizes the inspirational capacity of leaders to motivate followers beyond self-interest and to embrace a shared vision. In education, Leithwood and Jantzi (2000) demonstrated how transformational practices—such as intellectual stimulation and individualized consideration—positively affect teacher and student outcomes.

Servant leadership, introduced by Greenleaf (1977) and elaborated by Spears (2010), foregrounds empathy, stewardship, and prioritizing the growth of others, often resonating with the relational and caring aspects of teaching. Authentic leadership, advanced by Avolio and Gardner (2005) and Walumbwa et al. (2008), emphasizes self-awareness, relational transparency, and integrity, highlighting the importance of trust and ethical behaviour in sustainable leadership. In contrast, transactional or managerial leadership puts the focus on order, rules, and efficiency, stressing exchanges and performance management as a way of ensuring accountability (Bass, 1990; Bush, 2007). Laissez-faire leadership, representing the absence of active leadership, has consistently been linked to disengagement and negative outcomes (Skogstad et al., 2007).

More recently, distributed or shared leadership perspectives (Spillane, 2006; Harris, 2009) have gained popularity, suggesting that leadership is not the sole domain of a formal leader but is enacted collectively across members of an organization. In classroom contexts, this means that leadership can be co-constructed through interactions between teachers and learners with active involvement of students. Such views align with educational views toward student-centred learning, where authority and responsibility are not held only by teachers.

Although these theoretical models have been extensively examined in school administration and organizational contexts, much less attention has

been paid to how students themselves perceive leadership in higher education classrooms, particularly in foreign language learning. The language instructor's role extends beyond delivering content to encompass motivating, guiding, and supporting students through the emotionally demanding process of language acquisition. Research indicates that learners' perceptions of teacher leadership can significantly influence their engagement, psychological safety, and overall achievement (Zhang & Li, 2023; Tu, 2021).

Metaphors

Metaphors are known as possible means to illuminate cultural, institutional, and personal constructs (Wallace, 2001). Metaphors can act as foundational comparisons, suggesting that when we use them to describe learning, they might reveal how gaining knowledge (cognitive acquisition) and engaging with others (social participation) may complement each other as proposed by Elmholdt (2003). Research suggests that metaphors are an important aspect of processing new concepts (Boxenbaum & Rouleau, 2011) and that metaphors are used more widely in education than one might initially realise (Guilherme & Souza de Freitas, 2018). Since metaphors can transform complex ideas into familiar ones (Paranosic & Riveros, 2017) and can thereby elicit the meaning behind, the nature of metaphors needs to be critically analysed to better understand the underlying assumptions behind them.

Metaphors can help develop new ways of theorising or understanding educational leadership and have been described as an indispensable element in the process of theory-building (Boxenbaum & Rouleau, 2011; McCandless, 2012). Metaphors can also offer researchers an effective tool for communicating their findings. Metaphors can be used to clarify complex concepts to outsiders, making the unfamiliar accessible and familiar (McKay et al., 2019). Metaphors are powerful as they move beyond simple words and sentences, allowing us to interpret key concepts in a deeper way. On the other hand, brief analytical definitions often reflect

only one dimension of what we aim to understand (Guilherme & Souza de Freitas, 2018).

It can be claimed that metaphors, through their effect on the imagination, enable a thorough and more genuine understanding of issues than abstract definitions do. This does not imply that analytical definitions are unnecessary or unimportant; instead, it highlights that such definitions gain depth and clarity when supported by metaphorical and imaginative perspectives (Guilherme & Souza de Freitas, 2018).

Using Metaphors in Educational Research

Metaphors are used for multiple purposes in education. They are remarkable tools that provide rich descriptions and meanings that may reflect the culture of the individuals and the context they are in. Educators can use metaphors to improve students' understanding of complex concepts, as they provide a bridge between theoretical knowledge and practical application. This approach can enhance students' critical and creative thinking skills (Weick, 2024). According to Randolph and Evertson (1994), metaphors are used to conceptualize classrooms; and classroom events shape the way learners and teachers think by providing frameworks for what is possible in these settings. Metaphors serve as cognitive tools that help students and educators make sense of abstract leadership concepts by relating them to familiar experiences. By encouraging students to create and analyse metaphors, educators can gain insights into students' perceptions of effective and ineffective learning experiences, which can inform instructional practices and foster a more student-centred learning environment (Ferrante et al., 2008).

Metaphors provide a powerful lens for investigating such perceptions because they translate abstract constructs into concrete images rooted in lived experience (Lakoff & Johnson, 1980; de Guerrero & Villamil, 2002). Research in educational psychology and language acquisition also suggests that metaphors serve various analytical functions. It is claimed that metaphors significantly influence our conceptualization of pedagogical approaches and instructional roles within the classroom (de

Guerrero & Villamil, 2002). Conversely, other perspectives indicate that metaphors function as descriptive lenses, illuminating the prevailing social phenomena within which a particular theoretical framework emerges (Şimşek, 1997).

Educational research has long demonstrated the utility of metaphors for exploring teaching and classroom management (Randolph & Evertson, 1994; McLaughlin, 1994; Weinstein et al., 1994). More recently, it was highlighted that metaphors are not merely descriptive but also ideological, framing the very ways in which leadership is understood and implemented (McKay et al., 2019).

Statement of the Problem

In the rapidly evolving environment of higher education, the role of the language instructor extends beyond mere academic delivery. While extensive research has explored various dimensions of language teaching methodologies, learner perceptions of instructor effectiveness and competence and the impact of instructor qualities and leadership skills on language acquisition, there still remains a notable gap concerning how English as a Foreign Language (EFL) students perceive their language instructors as leaders within a higher education context. Furthermore, subconscious ways in which learners conceptualize these leadership qualities through metaphorical language are underexplored. Understanding EFL students' perceptions of their instructors as leaders can illuminate previously unacknowledged dimensions of the instructor-student dynamic, potentially influencing pedagogical approaches, professional development initiatives for language educators, and ultimately, student engagement and performance. This study aims to address this gap by investigating EFL students' perceptions of their language instructors as leaders and the metaphors they use to describe their instructors' qualifications, offering novel insights into the relational and qualitative aspects of effective language instruction from the learner's perspective.

Purpose of the Study

This study aims at investigating metaphors used by EFL learners regarding their language instructors' leadership profiles. Studying metaphors in higher education settings is significant because they reflect not only leadership styles but also students' expectations, emotions, and experiences concerning their instructors. Therefore, examining student metaphors can be considered an important tool for educators to evaluate and improve themselves, facilitating an understanding and analysis of leadership perceptions within a higher education setting.

Methodology

This study employs a phenomenological approach as its research design, primarily aiming for an in-depth understanding of participants' experiences. The research process involves a survey with open-ended questions, enabling participants to articulate their perceptions of leadership. This qualitative research design is anticipated to facilitate an understanding of leadership perception from a student-centric perspective. Ultimately, it is expected to provide a broader understanding of the concept of leadership within a social framework, revealing leadership practices in education through the lens of students. This methodology seeks to clarify how students' perceptions of faculty leadership are shaped and what kind of metaphors are used to express them.

Context

This study involves 120 students from Çukurova University, School of Foreign Languages where university students study English for one academic year before they advance to their departments to pursue their education at university. The majority of participants (80%) are aged between 18-20. While some of them (13.3%) are between 21-23, a few of them (6.7%) are 23+. Out of 120 participants, 58.3% are female students while the male students are 41.7%. They are mostly from the engineering departments.

Data Collection Instruments and Procedure

The data was gathered via an open-ended survey, in which students completed sentences with their own metaphors and elaborated on their reasoning to express their viewpoints.

Open-Ended Survey

The open-ended survey was prepared based on the related literature. The participants were asked to express their thoughts using metaphors in response to open-ended survey questions which are presented below:

1. Survey question 1: "The language instructors who make it easier for me to learn a foreign language resemble…"

2. Survey question 2: "The language instructors who encourage/motivate me to learn a foreign language resemble…"

It was aimed at enriching the collected data by using open ended questions. Furthermore, the data collection phase, through open-ended surveys, was designed to gather insights into the background of students' metaphorical thinking, aiming to explore beyond their superficial thoughts. Demographic information was also included at the beginning of the survey.

Data Analysis

The data was subsequently analysed using content analysis, identifying common themes derived from the metaphors articulated by the participants. Emerging themes were identified and presented under the main themes. All the emerging themes were supported with the related excerpts of the participants under each category while the findings were demonstrated.

Results

Analysis of Responses to Survey Question 1: *"The language instructors who make it easier for me to learn a foreign language resemble…"*

Meticulous analysis of students' answers to the first survey question

revealed five emerging themes such as *Teachers as Sources of Knowledge and Guides*, *Teachers as Supportive and Caring Figures*, *Teachers as Nurturing and Life-Giving Elements of Nature*, *Teachers as Providers of Discipline and Method* and some negative metaphors.

Table 1

Emerging Themes and Metaphors (Survey Question 1)

Teachers as Sources of Knowledge	Teachers as Supportive and Caring Figures	Teachers as Nurturing and Life-Giving Elements of Nature	Teachers as Providers of Discipline and Method	Negative Perceptions
book, library, encyclopaedia, internet, light, lamp, lighthouse, compass, star	*parent, sibling, close friend, companion, coach*	*water, soil, fruit tree, ocean, sun*	*clock, recipe, key, mathematics, wheelbarrow*	*boring film, broken clock, too much homework*

1. Teachers as Sources of Knowledge and Guide

Some metaphors focusing on teachers' intellectual repertoire and depicting them as disseminators of knowledge stood out based on the students' perspectives. The students perceived their teachers as sources of knowledge and a guide like a book, a library, an encyclopaedia, internet, light, a lamp, a lighthouse, a compass, a star. Some excerpts from participants were shared below:

"*A book – because a book both teaches and empowers us*". (P1)

"*A lantern – while learning an unfamiliar language, they illuminate our way and help us find the right path*". (P56)

"*A guide – because knowing what to do is important, and for this we need a guide*". (P17)

The data analysis revealed that the students view their teachers as repositories of knowledge and guiding figures who help them acquire

knowledge. This reflects the leadership dimension of providing direction, making this abstract definition more concrete through students' own experiences.

2. Teachers as Supportive and Caring Figures

The participants frequently used metaphors such as parent, sibling, close friend, companion, coach which indicate some kind of intimacy and familial bonds. Some direct quotations are shared as follows:

"*Like parents – they encourage their children to walk and run; my instructors also encourage me in the same way*". (P12)

"*Like a close friend – because in such an environment people feel more comfortable*". (P14)

"*Like a travel companion – because walking a long road becomes easier with someone by your side*". (P46)

"*Like a supportive person – I feel better and more motivated to speak when encouraged*". (P108)

As can be seen from the participants' responses, emerging students' metaphors leadership in this context is not only about direction but also about motivation, care, and encouragement, which are essential for sustaining student engagement in language learning.

3. Teachers as Nurturing and Life-Giving Elements of Nature

Some other metaphors predominantly used by the students were water, soil, fruit tree, ocean, sun, which is interesting in that they represent how important language teachers are perceived by the participants. Some direct quotations from the participants are presented below:

"*Like water – with what they teach, they make us flourish in terms of language*". (P5)

"*Like fertile soil – as if we are plants, they nurture us*". (P18)

"*Like a fruit tree on a hot day – we benefit from their shade and share their fruits*". (P20)

"*Like an ocean – learning a language is such a vast and comprehensive process*". (P90)

It was interesting to see that another theme emerging from the analysis of students' metaphors was teachers' being compared to life-giving elements of nature as it shows the value they attributed to their teachers as leaders. Teachers are compared to nurturing natural forces that sustain growth. This metaphorical dimension highlights leadership as a life-giving process, deeply connected to students' development.

4. Teachers as Providers of Discipline and Method

Some metaphors from the participants such as clock, recipe, key, mathematics, and wheelbarrow indicated teachers' being perceived as sources of discipline. Some of the students' direct quotations are presented as follows:

"*Like a clock – because they taught me punctuality, which I had trouble with*". (P25)

"*Like cooking a meal – because to cook well, one must go step by step*". (P24)

"*Like a key – because to find the right method you must first find the right key to the right door*". (P32)

The analysis of the data collected reveals that teachers are viewed by the students as leaders who offer systematicity, structure, and methods, providing learners with necessary tools to act in the desired direction in their language learning journey which can also be seen as a direct link to leadership theories.

5. Mixed or Negative Perceptions

A few students associated their instructors with negative comparisons such as boring film, broken clock, and too much homework as well. It should be noted that when the direct quotations presented below are examined, metaphors are intertwined with more explicit descriptive expressions.

"*Like a boring film – the lesson is so boring it makes me sleepy*". (P39)

"*Like a broken clock – because there was no one to encourage me, and too much focus on grammar and essays*". (P93)

"*Like a teacher who does not assign too much homework – there is no need for a load of assignments*". (P94)

Although very limited in number, the students' metaphors presented above also reveal students' dissatisfaction with monotonous teaching methods or excessive workload dictated by the teachers, reminding us that effective classroom leadership in education also requires balance and adaptability.

Analysis of Responses to Survey Question 2: "*The language instructors who encourage/motivate me to learn a foreign language resemble…*"

When the students' answers to survey question 2 analysed, it was revealed that the teachers are primarily seen as guides, motivators, supporters, and nurturing forces. The students use metaphors that emphasize hope, encouragement, and emotional support. A minority of negative responses underlines the importance of student-centred, flexible, and empathetic leadership in foreign language teaching.

Table 2

Emerging Themes and Metaphors (Survey Question 2)

Teachers as Sources of Light, Hope, and Direction	**Teachers as Supportive Family and Friends**	**Teachers as Motivators, Coaches, and Heroes**	**Teachers as Nurturing and Healing Forces**	**Teachers as Challenge, Structure, or Tools**
candle, spark, sunlight, compass, North Star, star	*parents, family, siblings, friends, companions, brothers/sisters*	*motivation videos, life coach, coach, cheerleader, hero*	*soil, water, colours, band-aid, fuel, wind*	*puzzle, risk, recipe, engine, sail, key, band-aid*

1. Teachers as Sources of Light, Hope, and Direction

Some frequently used metaphors by the participants such as candle, spark, sunlight, compass, North Star, and star that highlighted affective and motivational dimensions of teaching are considered significant as they reflected the association of the instructors with notions of hope and inspiration. Some of the participants' direct quotations are presented below.

"*Like a candle – even while burning itself, it gives light to others*". (P4)

"*Like sunlight coming through a hole – they encourage us and contribute to language development*". (P5)

"*Like a compass – with a good guide, a student always finds the right way and gains confidence*". (P14)

"*Like the North Star – always there, ensuring you don't lose your way*". (P23)

"*Like a spark – they are enough to start a big fire*". (P16)

As can be seen by the students' metaphors, motivating teachers are perceived as springs of hope and guidance, those who show the way forward in challenging learning processes.

2. Teachers as Supportive Family and Friends

Another theme emerged from the analysis of students' metaphors was students' perceiving their teachers as emotional supporters, creating safe and encouraging environments like family and friendship bonds. Some of these metaphors include words such as parents, family, siblings, friends, companions, and brothers/sisters which can be seen in direct quotations below:

"*Like parents – from the moment a child is born, they encourage walking, running, and standing up again*". (P8)

"*Like family – since childhood our families encourage us, and teachers do the same*". (P17)

"*Like a close friend – because friends make you feel comfortable and less embarrassed*". (P88)

"*Like a brother/sister – they know us well and guide us correctly*". (P52)

"*Like a friend – they don't let you feel alone*". (P46)

These metaphors emphasizing family relationships underlined instructors' supportive and assisting role throughout the language learning process.

3. Teachers as Motivators, Coaches, and Heroes

Some other frequently used metaphors by the participants were motivation videos, life coach, coach, cheerleader (amigo), and hero which focus on another dimension of leadership expected by the instructors. Excerpts from some participants' metaphors are provided below to exemplify this theme.

"*Like motivation videos – every time I listen, I feel better and find the energy to continue*". (P9)

"*Like a life coach – they convince us that even what we think is impossible can be achieved*". (P43)

"*Like a hero – because to encourage and motivate in today's world is almost a heroic act*". (P36)

"*Like a cheerleader – they increase our motivation and are there when our performance drops*". (P89)

"*Like a coach – they lift us up when we fall*". (P51)

The students' metaphors shared above show that they tend to see their instructors as motivators and role models who instil courage, resilience, and perseverance.

4. Teachers as Nurturing and Healing Forces

Metaphors used for the instructors by the participants such as soil, water, colours, band-aid, fuel, and wind reflected elements of nature, emphasizing their life-giving and healing characteristics.

"*Like soil – they nourish us as if we were plants*". (P37)

"*Like water – their encouragement and knowledge are never-ending*". (P100)

"*Like colours – always vibrant and encouraging*". (P55)

"*Like a band-aid – when I lose my enthusiasm, they motivate me to continue*". (P56)

"*Like fuel – without them, the car won't move*". (P47)

"*Like the wind – they push us forward*". (P98)

Teachers are likened to natural and healing powers that bring about motivation, helping students overcome difficulties they face and continue their journey.

5. Teachers as Challenge, Structure, or Tools

In the students' metaphors, the instructors were generally associated with notions expressing system and challenge such as puzzle, risk, recipe, engine, sail, key, band-aid, and reward system. Some excerpts below exemplify these associations:

"*Like a puzzle – after each question I know, I get another one that motivates me to continue*". (P31)

"*Like taking a risk – mastering a language requires sacrifice and perseverance*". (P32)

"*Like an engine – it pulls the car forward, just as teachers drive us*". (P91)

"*Like a sail – when I am tired, they help me keep going*". (P92)

"*Through rewards, not punishments – because we want to be rewarded, not penalized*". (P113)

As students' metaphors above indicate, students view motivating teachers as structuring agents who provide methods, tools, and challenges, guiding them toward progress.

6. Negative or Neutral Views (Minority)

Although not many in number, the negative thoughts expressed by the students regarding their instructors tended to resort to direct expressions

rather than metaphorical language. Some excerpts showing these views are presented below.

"*There was no instructor who encouraged me*". (P93)

"*Teachers act as if they want every student to write with the same pen and speak with the same personality*". (P10)

"*Sometimes they make school tiring by over-structuring*". (P65)

Although less frequent, some responses from participants reflect frustration with tedious teaching styles or lack of encouragement, highlighting the need for individualized approaches.

Overall Analysis of Survey Question 1 and Question 2

The findings from the two survey questions provide a nuanced understanding of how EFL students conceptualize the leadership profiles of their instructors through metaphors. While the first question ("The language instructors who make it easier for me to learn a foreign language resemble…") emphasized the facilitative aspects of leadership, the second question ("The language instructors who encourage/motivate me to learn a foreign language resemble…") highlighted the affective and inspirational dimensions. Together, they offer a holistic view of classroom leadership in foreign language education.

1. Knowledge – Guidance and Motivation – Inspiration

In the first question, the students predominantly associated the teachers with metaphors of knowledge and guidance, such as books, libraries, lanterns, and compasses. These metaphors illustrate the leadership dimension of providing direction and resources, which aligns with Muczyk and Holt's (2008) conceptualization of leadership as aligning followers toward a shared vision. In contrast, the second question yielded stronger associations with motivation and inspiration, where the teachers were described as heroes, cheerleaders, life coaches, and sparks. These responses reflect a complementary dimension of leadership, emphasizing emotional empowerment and motivational energy.

2. Supportive and Caring Roles

Both questions revealed a significant cluster of metaphors highlighting teachers as supportive and caring figures. The students frequently described instructors as parents, siblings, or friends, emphasizing relational aspects of leadership. This indicates that trust, empathy, and emotional safety are critical for effective classroom leadership. Such metaphors also illustrate how leadership in language education extends beyond cognitive functions into the affective and interpersonal domains.

3. Nurturing and Healing Forces

Across both data sets, metaphors of nature and life-giving elements (water, soil, trees, oceans, wind) consistently appeared. These metaphors frame leadership as a sustaining and nurturing process, where teachers foster growth and resilience. Notably, in the motivation-related responses, nurturing was sometimes tied to healing functions (e.g., band-aids, fuel, wind), suggesting that motivational leadership is perceived as restorative when students lose enthusiasm.

4. Discipline, Method, and Structure

Metaphors such as clocks, recipes, and keys were more pronounced in the first question, reflecting leadership as a provider of order, discipline, and systematic methods for effective learning. In the second question, structure appeared less prominently but was reframed as challenge and perseverance (e.g., puzzles, risks, engines). This suggests that while discipline supports learning processes, motivational leadership is perceived as enabling students to persist in the face of difficulties.

5. Negative Perceptions

Although relatively limited, negative metaphors were present in both data sets. In the first question, these included “boring films” and “broken clocks,” pointing to ineffective or monotonous teaching styles. In the second, dissatisfaction emerged around uniformity of instruction and lack of personalization. These responses, though few, underscore the

importance of adaptive, flexible leadership that avoids excessive rigidity or disengagement.

When the overall data is analysed together, the responses reveal that the students' conceptualizations of leadership in language learning are multidimensional.

Aligning Students' Metaphors with Leadership Styles

After analysing emerging metaphors from the students, we also tried to align the emergent metaphor themes with well-known leadership styles in educational theory. Table 3 below summarizes how each cluster of metaphors corresponds to common leadership paradigms in the literature:

Table 3

Alignment of Students' Metaphors with Leadership Styles

Emerging Metaphors	Leadership Styles	Leadership Traits
Book, Library, Compass, Lantern	Instructional Leadership (Hallinger, 2005)	Clear goals, knowledge, guidance
Parent, Sibling, Friend, Companion	Servant Leadership (Greenleaf, 1977).	Empathy, trust, prioritizing student needs
Soil, Water, Tree, Band-aid, Wind	Authentic Leadership (Avolio & Gardner, 2005)	Transparency, nurturing growth, genuine care
Clock, Key, Recipe, Puzzle, Engine	Transactional Leadership (Bass, 1990; Bush, 2007)	Rules, structure, efficiency
Boring Film, Broken Clock, Too Much Homework	Laissez-faire / Ineffective (Skogstad et al., 2007)	Lack of direction, disengagement

Knowledge & Guidance → Instructional/Directive Leadership

The metaphors of books, libraries, lanterns, and compasses depict teachers as knowledge providers and guides. This aligns with instructional leadership models that emphasize clear direction, expertise, and the coordination of learning resources (Hallinger, 2005). These instructors lead by illuminating the path and setting clear goals, much like a lighthouse guiding a ship. For instance, "Like a lantern – they illuminate our way and help us find the right path" (P56) exemplifies how students perceive this directive role. The leadership here is authoritative in a positive sense – providing vision and know-how – which resonates with the idea of aligning followers toward academic objectives.

Support & Care → Servant/Relational Leadership

Metaphors like parent, sibling, friend, or travel companion cast teachers as caring figures who put students' needs first. This mirrors the principles of servant leadership (Greenleaf, 1977) and relational leadership, which prioritize empathy, trust, and the personal growth of followers. In this mode, the teacher leads by building relationships and nurturing a supportive climate. For example, "Like a close friend – because in such an environment people feel more comfortable" (P14) highlights how a comfortable, trusting environment created by a teacher-leader can enhance learning. Such metaphors demonstrate that students equate effective leadership with mentorship and approachability – consistent with relational leadership theories (Komives et al., 2007).

Motivation & Inspiration → Transformational Leadership

The students who described instructors as "heroes," "life coaches," "cheerleaders," or the "spark" that ignites learning are pointing to qualities of transformational leadership. Transformational leaders inspire and motivate others to achieve beyond expectations by creating a shared vision and energizing followers (Bass, 1990; Burns, 1978). When a student says their teacher is "like a hero – because to encourage and motivate in today's world is almost a heroic act" (P36), it suggests that the teacher has inspired them to overcome challenges, much as a transformational leader would.

This alignment indicates that students value teachers who not only impart knowledge, but also instil enthusiasm, confidence, and a sense of purpose – exhibiting hallmark traits of transformational leadership in education.

Nurturing & Healing → Authentic/Servant Leadership

Many metaphors of nature's nourishment (soil, water, trees) and healing elements (band-aid, fuel, wind) correspond with authentic leadership and aspects of servant leadership. Authentic leadership style is known for genuine relationships, transparency, and a focus on long-term development (Avolio & Gardner, 2005). A teacher "like soil" or "like water" who nourishes growth embodies a leader investing in students' development with authenticity and care. The quote "Like soil – they nourish us as if we were plants" (P37) can be seen as a very touching example of this. Similarly, servant leadership's emphasis on healing and empathy is seen when students liken teachers to a "band-aid" or a "refreshing wind." We interpret these metaphors as students' recognition of teachers who restore their confidence and well-being – leaders who are genuine, caring, and supportive in the face of struggles. This alignment underscores that authenticity and empathy in teaching are not abstract ideals but felt strongly by learners.

Discipline & Method → Transactional/Managerial Leadership

Metaphors such as clocks, keys, recipes, puzzles, and engines reflect a leadership style focused on structure, efficiency, and goal-oriented management. These map onto transactional or managerial leadership models, where clear expectations, rules, and reward structures drive performance (Bass, 1990; Bush, 2007). For example, the "key" metaphor (P32) – "finding the right key to the right door" – suggests a teacher who can unlock the correct method or solution, akin to a manager optimizing processes. Another student's comparison "Like a clock – because they taught me punctuality" implies an emphasis on discipline and time management in the teacher's leadership. Students who offer these metaphors seem to appreciate instructors who bring order and clarity to the learning process, much as a competent manager would to a project.

While not as glamorous as the hero or nurture metaphors, this pragmatic leadership facet is clearly valued for keeping the learning on track.

Negative Cases → Laissez-faire/Ineffective Leadership

Finally, the few negative metaphors correspond to laissez-faire or generally ineffective leadership. A "boring film," "broken clock," or complaints of monotony and lack of encouragement signal a leader who is disengaged or overly hands-off. Laissez-faire leadership is characterized by an absence of guidance and feedback (Skogstad et al., 2007) – essentially a non-leadership style. In our data, students invoking these metaphors perceived their instructors as failing to lead: lessons that drag on without interaction (boring film), or an instructor stuck in one mode (broken clock) who fails to adapt. Although rare, these cases highlight the lower boundary of leadership quality. They reinforce by contrast what students do want – active, responsive leadership – and serve as a caution. Even in an educational context, laissez-faire approaches (e.g. a teacher who just delivers content without engagement) can have subtly "destructive" effects on learners' motivation and should be avoided.

Discussion

The students' metaphorical perceptions portray language instructors' leadership as a multidimensional construct. On one hand, guidance and knowledge provision are seen as essential for effective teaching (addressing students' cognitive needs). On the other, motivation and inspiration emerge as equally critical for sustaining student engagement. Underpinning both of these dimensions is a consistent foundation of support, care, and nurturance – suggesting that emotional intelligence and interpersonal connection are at the heart of good teaching leadership. Structure and discipline are appreciated as supportive mechanisms, but only in balance with flexibility; and the few negative metaphors highlight how things can go wrong if that balance is lost. By articulating their instructors as everything from lights and guides to heroes, gardeners, or even flawed machines, participants have effectively pictured the diverse

qualities they value in an effective language teacher as a classroom leader. Furthermore, these observations echo findings in the education literature that emphasize the interplay of multiple leadership roles. Similarly, Oxford et al. (1998) identified contrasting teacher metaphors such as "Teacher as Nurturer" and "Teacher as Conduit", which correspond to the caring vs. knowledge-focused orientations evident in our data. It also demonstrates the utility of metaphor analysis as a research tool: by systematically examining the imagery students use, we can uncover underlying conceptualizations of teaching and leadership that might remain hidden in direct discourse.

Participants emphasized their teachers' expertise in English and related fields, their protective and supportive attitudes, and their commitment to students' academic development as reasons for employing these positive metaphors. This perception aligns with Northouse's (2016) conception of leadership as a process that involves "influencing a group of individuals to achieve a common goal" (p. 6), suggesting that students recognize in their teachers both authority and inspiration.

The fact that Instructors were predominantly described as parents, siblings, or friends by the participants, emphasizing relational aspects of leadership indicates that trust, empathy, and emotional safety are critical for effective classroom leadership highlighting the affective and interpersonal domains as integral to classroom dynamics (Whitehead & Greenier, 2019). Teachers who demonstrate empathy and emotional awareness foster positive teacher-student relationships, which are linked to increased student engagement, reduced anxiety, and a supportive classroom climate (Aldrup et al., 2022).

The findings indicate that students perceive leadership in language classrooms as multifaceted. Knowledge and guidance metaphors align with instructional leadership (Hallinger, 2005). Supportive and caring metaphors reflect servant and relational leadership (Greenleaf, 1977; Komives et al., 2007). Vahdani-Sanavi & Demirkol (2024) confirm similar

trends in online education, where students see teachers as supportive, motivating, and guiding figures.

In our study, metaphorical perceptions on language instructors' leadership, guidance and knowledge provision are found to be seen as essential for effective teaching. On the other hand, motivation and inspiration emerge as equally critical for sustaining student engagement in the learning journey. Similarly, Reitzug et al. (2008) found that students used a wide range of metaphors to describe leadership. Collectively, these metaphors depict leaders as guides who motivate, inspire, and keep the group moving toward shared goals.

Moreover, the metaphors used by the participants imply a transformational quality of leadership, as teachers are perceived not merely as knowledge transmitters but as figures who "raise followers to higher levels of motivation and morality" (Burns, 1978, p. 20). The image of a "lantern" or "compass" further evokes the authentic dimension of leadership, where genuine care and moral guidance "foster trust and empowerment among followers" (Avolio & Gardner, 2005, p. 317).

Taken together, these metaphors suggest that students view effective classroom leadership as both cognitive and moral guidance—teachers lead not only by instructing but by illuminating pathways through encouragement, empathy and being role models. This resonates with Bass's (1990) view that transformational leaders inspire through vision and personal example, cultivating intrinsic motivation and commitment in their followers.

In summary, aligning the student-generated metaphors with formal leadership styles reveals that learners intuitively recognize many traits of effective leadership found in theory. They see their best language instructors as directive guides, caring supporters, inspirational motivators, authentic nurturers, and organized managers, all in one. This alignment validates our thematic analysis against existing frameworks as well as highlighting the integrative nature of effective classroom leadership. A single teacher is often supposed to wear multiple leadership "hats" – and

the metaphors suggest that this is what students expect from an effective language teacher. We tried to connect the insider perspective with theoretical models of leadership.

Conclusion

By listening to the student voices through metaphors, what we tried to achieve was to gain a richer, more meaningful picture of what leadership in the language classroom entails. We believe that such insights could contribute to teacher training and professional development endeavour, encouraging instructors to reflect on their own metaphorical identity as leaders (Farrell, 2016) and to strive for a balanced leadership approach that touches both the minds and hearts of the learners. Findings of this study indicate that effective classroom leadership in foreign language education requires a balance of cognitive guidance, emotional support, motivational energy, and structured methods – all attuned to students' needs and expectations. Language instructors are seen as directive guides, caring supporters, inspirational motivators, authentic nurturers, and organized managers, all in one. This highlights the integrative nature of effective classroom leadership. The metaphors used by students convey that students perceive effective language teachers not just as information deliverers, but as leaders in all senses– those who guide minds, touch hearts, inspire action. Empowering teachers to recognize and embrace their role as classroom leaders can pave the way for more engaging, supportive, and successful language learning experiences. Ultimately, it can be concluded that effective classroom leadership in foreign language education requires a balance of cognitive guidance, emotional support, motivational energy, and effective teaching methods, with sensitivity to students' diverse and changing needs.

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Ethical Declaration and Committee Approval

This study was conducted in accordance with the principles of scientific research and publication ethics. Ethical approval for this research was obtained from the Ethics Committee of Cukurova University, with approval number (E-74009925-604.01-1358793).

Proportion of Authors' Contribution

Author 1: Conceptualization, Methodology, Data Collection, Formal Analysis, Visualization, Writing – Original Draft.

Author 2: Conceptualization, Methodology, Data Collection, Review & Editing, Last Draft

Appendix

Open-ended Survey

Please complete the sentences with your own words and ideas.

1. Instructors who help me learn a foreign language more easily are like……...

Because……

2. Instructors who encourage/motivate me to learn a foreign language are like……..

Because……

Ecosophy and the Neurodivergent Self: Reading *Diary of a Young Naturalist* through Næss, Guattari, and Bateson

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Dara McAnulty is only fifteen, but this is not apparent from the way the natural world is described in his writing. Growing up in Northern Ireland, McAnulty was diagnosed with Asperger's during childhood, and much of life appeared overwhelming—loud, confusing, and at times too much to process. However, nature presented a different experience. Among birds and trees, McAnulty discovered a quiet understanding that allowed other concerns to recede. In the 2020 memoir, *Diary of a Young Naturalist*, everyday life is depicted with honesty and openness. Rather than solely describing nature, the narrative conveys the necessity of nature and its role as a source of support during challenging times. For McAnulty, nature is not merely scenery; it represents a lifeline, a constant companion, and the environment in which a sense of belonging is found.

The narrative unfolds over the course of a year, beginning and ending at the spring equinox. During this period, McAnulty's family relocates from County Fermanagh to County Down—a significant transition that involves leaving behind familiar wetlands and forests for the rugged

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slopes of the Mourne Mountains. The process of adaptation is explored, including the challenges of bullying, anxiety, and the complexities of feeling different. Despite these difficulties, nature serves as a stabilizing presence. Changes in seasons, the calls of migrating birds, and small conservation projects provide grounding. At its core, the story examines the universal search for belonging and the ways in which environment and community shape identity.

A distinctive feature of McAnulty's writing is the seamless integration of the philosophy of ecosophy—an idea advanced by Arne Næss and further developed by thinkers such as Guattari and Bateson, positing that all elements of existence are interconnected. People, animals, plants, and the land itself are presented as components of an intricate web. Ecosophy encourages a perspective characterized by empathy and responsibility. Rather than treating nature as a distant or academic subject, the narrative enables readers to experience immersion in the natural world: noticing subtle changes in the environment, caring for small creatures, and recognizing connections that are not always immediately visible. The book thus transcends theoretical discussion, offering an account grounded in lived experience and everyday moments that illuminate broader philosophical concepts.

Examining McAnulty's story through the lens of ecosophy reveals how individuals with differing sensory experiences—such as autistic individuals—can provide novel perspectives. Research on neurodiversity demonstrates that autistic people frequently observe details and patterns that may go unnoticed by others. The diary is filled with such observations: the flutter of wings in a hedge, the interplay of light on water, and the texture of moss. Autism is not portrayed as a deficit; instead, it is depicted as facilitating a deeper connection with nature. This approach underscores the multiplicity of ways to perceive and belong in the world, highlighting difference as a form of strength.

Viewed through the perspectives of ecosophy and neurodiversity, McAnulty's memoir transcends the boundaries of a personal account; it

serves as an invitation to reconsider the meaning of belonging. The narrative encourages mindful observation of the world and affirms that there is a place for diverse cognitive experiences. Importantly, the text illustrates that being sensitive, neurodivergent, or deeply observant should not be regarded as an obstacle but rather as a means of forming unique connections with the world. The memoir conveys that wisdom and belonging can arise from accepting individual ways of seeing and feeling, guiding each person toward finding a meaningful place in nature.

Ecosophy: Tracing the Interconnection between Humans and Nature

Arne Næss's (1990) deep ecology invites the reader to rethink the place in the world—not as rulers of nature, but as one part of a much larger, interconnected community. Rather than treating nature as something to conquer or use up, deep ecology asks us to recognize the inherent worth of every living thing and to appreciate how much we all depend on each other. From this perspective, chasing endless economic growth isn't necessarily progress; it might actually be a sign that we've lost sight of what really matters (Maden, 2025). In this chapter, ecosophy is chosen as a guiding idea to explore how we might create a more thoughtful, caring relationship with the world around us. Næss's (1990) idea of ecosophy comes from the Greek words for household (*oikos*) and wisdom (*sophia)*. But it's not just a scientific theory—it's a way of living and thinking that grows out of our day-to-day experiences with the world around us. There's no single right answer or strict set of rules. Næss even created his own personal version, which he called Ecosophy T (after his mountain hut, Tvergastein), and he encouraged others to invent their own—Ecosophy X, Y, or Z—based on what matters most in their own lives (Pavo, 2018). At the core of this way of thinking is the idea of the ecological Self—a version of ourselves that isn't limited to our own bodies but stretches out to include the whole living world. Realizing this isn't just about self-improvement in the usual sense; it's about understanding that our well-being is deeply tied to the health of the ecosystems we're part of (Anker,

1998). When one thrives, so does the world around oneself, and recognizing this give-and-take is a key step toward living wisely in an ecological sense. Félix Guattari took the idea of ecosophy and made it even broader. For him, ecosophy wasn't just a theory—it was a hands-on, creative, and ethical way to rethink how we understand ourselves, our communities, and our planet (Cavalcante, 2018). In *The Three Ecologies*, Guattari (2008) suggested that humanity needs to go beyond simply protecting nature. Humanity has to restore what's been damaged, dream up new ways to live together, and find ethical ways to respond to our rapidly changing world. Later, he described ecosophy as the opposite of seeing humans as the center of everything. Instead, he called for a big-picture approach that examines the connections among minds, societies, and environments (Guattari, 2015). For Guattari, one can't separate ecological problems from problems in society or even from our own inner struggles. Gregory Bateson (1972) added another layer to this mix. He talked about the "ecology of mind," reminding us that we're not just onlookers watching nature from the outside. We're part of the living systems we're trying to understand. For Bateson, what lasts in life isn't just individual creatures—it's the ongoing relationships between living things and their surroundings. This idea fits perfectly with Næss's focus on connection and Guattari's belief in linking mind, society, and environment. He also pointed out that everyone sees nature a little differently—each person notices their own details, but together, we can spot the bigger patterns that connect us. When he wrote about seeing the beauty of the woods, both in the details of single trees and in the forest as a whole, he was offering us a way to appreciate the complexity of the living world (Bateson, 1972). When the reader puts all of these thinkers together—Næss, Guattari, and Bateson—one could possibly get a rich, layered picture of ecosophy. It's not just an academic idea, but a way of living that calls on the humanity to be more aware, more responsible, and more connected in how to see the world. They all agree that humans aren't separate from nature, and that making sense of our place in the world means rethinking how we relate to everything around us. Ecosophy, in the

end, is something we keep working on throughout our lives: a practice of growing wiser about our place in the web of life. This way of looking at ecosophy helps us make sense of today's ecological stories—especially Dara McAnulty's *Diary of a Young Naturalist*. In his memoir, McAnulty explores what it means to belong in nature, to feel connected, and to discover oneself through those connections. His writing brings the ideas of Næss, Guattari, and Bateson to life, showing how ecological insight doesn't just come from books, but from our senses, our feelings, and our own life stories. All this philosophical groundwork prepares us to explore how McAnulty's book puts ecosophy into practice in the real world.

Understanding the Connection between Neurodivergent People and Nature: A Research Review

Autism is a type of neurodivergence characterized by intense passions, differences in social interaction and communication styles (Bottema-Beutel et al., 2021, pp. 19–29). It is rather a social and communicative disability that can affect a neurodivergent person's ability to communicate across different environments or social spaces. In Oliver (1983) and Shakespeare's (2006) books, both assert that this disability has socially constructed traces. As Walker (2021) states, "[a]utistic people have highly heterogeneous experiences, strengths, and needs which may change day-to-day. Seen through the neurodiversity paradigm, autism is a naturally occurring style of neurocognitive functioning that does not require intervention or a 'cure'" (p. x). As with Dara McAnulty, a neurodivergent person experiences highly heterogeneous experiences and needs adaptations that suit his or her cognitive functioning. If he or she lives in a "poor person–sociocultural environment fit" (den Houting, 2019), a neurodivergent person could possibly develop an unfitting social response. In McAnulty's case, he finds a suitable sociocultural environment in Northern Ireland while living with his family.

Some specific research focusing on developing better environments for autistic people's lives asserted that, as Wells et al. (2025) also note,

"results from quantitative and mixed methods studies suggest there may be a positive relationship between gardening/horticulture programs as well as nearby nature outings on several outcomes within the well-being, behavior, and function categories" (p. 12). Wells et al. (2025) also emphasize that these studies examined "the other three categories of independent variables: aggregate scale nature exposure, nature trips, and non-specific nature access" (p. 12), and the specific aspects of these variables further indicate that "most qualitative inquiry has focused on non-specific nature access and its influence on well-being" (p. 12). According to Wells et al. (2025), although "some qualitative studies have been conducted on well-being and other independent variables" (p.12), nature's influence on behavior and function still "represent considerable holes in understanding within qualitative research" (p. 12).

Building on these findings, Wells et al. (2025) argue that "the potential for nature interventions for people with autism spans a broad continuum from simple low-tech, low-cost strategies to high-tech interventions" (p. 15). Their recommendations highlight that "for schools and families this could translate to regular, daily time outdoors for walks in nature or participation in gardening, for example" (Wells et al., 2025, p. 15). Similar to Dara McAnulty's case in the landscapes of Northern Ireland, Wells et al. (2025) note that "in some locations, this would not require any modification of the environment, but would require a commitment to getting outdoors" (p. 15). Like McAnulty's personal commitment to nature and his creation of an ecosophic memoir, Wells et al.'s (2025) findings point to the value of consistent engagement with the outdoors. At the same time, it is also stressed that "in other contexts, we might consider modifications to make the natural environment more accessible to people with ASD as well as providing a multisensory experience that is tailored to the neurodivergent community" (Wells et al., 2025, p. 15). Thus, Wells et al.'s (2025) research underscores the need for both accessibility-oriented environmental modifications and opportunities for unmodified, direct engagement with nature, given the wide range of benefits nature may offer neurodivergent people.

In another contemporary study on the relationship between nature and neurodivergent people, data "were collected as part of a larger survey study on the childhood and adulthood nature experiences of autistic adults living in the UK" (Friedman et al., 2025, p. 506). In this survey, "participants were asked to respond to 13 open-ended questions … and 13 closed-ended questions" (Friedman et al., 2025, p. 506). The researchers focused primarily on how autistic adults understand the idea of nature connection, centering the survey around one central question: "What does the term 'connection to nature' mean to you?" (Friedman et al., 2025, p. 506).

Participants responded based on their own experiences and perspectives, describing the ways nature becomes meaningful in their daily lives and how they interpret their relationship with the natural world. The survey also used a broad definition of nature, stating that "nature is defined as anything in the physical world, including outdoor green spaces, animals, other landscape features like mountains and rivers, and plants" (Friedman et al., 2025, p. 506). The analysis draws on "108 responses from autistic adults living in the UK" (Friedman et al., 2025, p. 506), and several of the themes that emerged parallel the ways Dara McAnulty articulates his own connection to nature. Friedman et al.'s (2025) three main themes—"feeling that you benefit nature and nature benefits you, […] connecting with something ancient to which I nevertheless belong, [and] it makes me a little sad tbh" (p. 508) —offer a useful framework for understanding McAnulty's reflections through a broader neurodivergent context.

The first theme was common among many participants, who "defined connection to nature by explaining the affordances offered by nature and the ways that nature served them" (Friedman et al., 2025, p. 508). These responses show that the psychological bond between autistic people and the natural world "seemed to be based, at least in part, on what they perceived that they gained from natural spaces and non-human living things" (Friedman et al., 2025, p. 508). One non-binary participant from England, close in age to McAnulty, described "feeling as if you are part

of the system with nature, like you understand it, can instinctively interact with it, feel safe with it, feeling that you benefit nature and nature benefits you" (Friedman et al., 2025, p. 508). This instinctive sense of belonging closely mirrors McAnulty's descriptions of moving through the wild landscapes of Northern Ireland, where he experiences nature not as something external but as a space where he can think, feel, and breathe freely.

The second theme identified by Friedman et al. (2025) also connects strongly with McAnulty's experiences. Some participants emphasized that their autistic identity shaped both their understanding of and their relationship with nature. As Friedman et al. (2025) note, "a few participants referenced their autistic identity as being centrally relevant to their conceptualisation of connection to nature and the way they experience nature" (pp. 508–509). This overlapping sense of identity and ecological belonging resonates with McAnulty's writing, where neurodivergence is not an obstacle but a key part of what enables his specific attentiveness, depth of feeling, and sensory connection to the non-human world. Even one male participant from Scotland asserted that:

> …we are products of nature and, as I'm autistic, it's natural to enjoy solitude in green open spaces too—it's a kind of silence and break from human voices that I'm sensitive to. It's a deep, empathetic, wondrous connection of the sort that probably gets filtered out in neurotypical people who spend a greater part of their time in the socially-connected sphere where they find their bearings. (Friedman et al., 2025, pp. 508–509)

These claims parallel Dara McAnulty's memoir, in which he also repeatedly expresses his contentment in being with nature while soothing his overactive brain in the green open spaces of Northern Ireland. Similarly, McAnulty's ecosophic memoir helps him express himself more freely. McAnulty (2021) notes, "autistic people have been sharing their interests and experiences related to nature for decades" (p. 505). This shows how the memoir reveals his deep, meaningful connection to nature as a neurodivergent individual. The memoir highlights the importance of

both personal experience and one's relationship with nature for self-expression and understanding.

Traces of Ecosophy in *Diary of a Young Naturalist* by Dara McAnulty

Dara McAnulty, a fifteen-year-old, is both a global youth climate activist and a young writer who expresses his love for nature and his fight to save it. About writing this book, McAnulty states that

> I have experienced challenges but also felt incredible joy, wonder, curiosity, and excitement. In sharing this journey, my hope is that people of all generations will not only understand autism a little more but also appreciate a child's eye view on our delicate and changing biosphere. (McAnulty & Milkweed Editions, n.d.)

The memoir begins in the spring in McAnulty's Northern Ireland home. In the prologue, he introduces his diary: "This diary chronicles the turning of my world, from spring to winter, at home, in the wild, in my head. I'm Dara, a boy, an acorn. Mum used to call me lon dubh (which is Irish for blackbird)" (McAnulty, 2021, p. 7). Even in the prologue, the writer draws a parallel between himself and nature. He mentions that his mum calls him a blackbird and an acorn, which situates him equal with an animal and a plant. This situation posits him in an ecosophical worldview that regards the earth as an interconnected system, similar to Bateson, Guattari, and Næss. McAnulty (2021) adds that "I have the heart of a naturalist, the head of a would-be scientist, and bones of someone who is already wearied by the apathy and destruction wielded against the natural world" (p. 7). In this sentence, he defines himself as a naturalist and a future scientist who is already against the destruction of nature. That also situates McAnulty as an interconnected person, in the ecosophical sense, who appreciates both nature and science and is against nature's exploitation.

McAnulty's family also lives an ecosophical life, coexisting with nature and seeking out wildlife in Northern Ireland. As a family, they are fascinated by the unexceptional sights of natural phenomena and animals. As an example from the book, "[w]hen a frog leaves frogspawn in their bucket-refuge the family is 'exultant', and respond by cheering in

excitement" (McAnulty, 2021, p. 13). When they spot a group of whooper swans, McAnulty comments that they "felt so privileged" (Fleming, 2020, p. 38). As a neurodivergent teenager, McAnulty is a target for bullying at school, but he transforms his unique condition into an advantage with the help of his love for nature:

> He displays an understated frankness when talking about his mental health and experience of bullying, which stands in stark contrast to the lyricism of his descriptions concerning his intense sensations of engaging with nature, and the ferocity of his intention to save and protect it from destruction (Fleming, 2020, p. 38).

In the memoir, McAnulty (2021) mentions his affinity for nature throughout the book: "I wish we could translate the language of trees – hear their voices, know their stories. They host such an astonishing amount of life" (p. 63). In this quotation, his wish to translate the language of trees and hear their voices equates him with the nature that wants to befriend them.

As McAnulty describes the lives of individual creatures, plants, and trees extensively (always keeping their wildness intact) (Fleming, 2020, p. 39), he continues to create an ecocentric worldview in the memoir. As an example, he mentions, "I am not like these birds but neither am I separate from them" (McAnulty, 2021, p. 72), which posits him as part of nature once again. Furthermore, as a neurodivergent naturalist, he finds nature therapeutic, saying "my head is pretty hectic most of the time, and watching daphnia, beetles, pond skaters, and dragonfly nymphs is a medicine for this overactive brain" (Jordan, 2020). So, as a neurodivergent, he finds peace and therapy by aligning with nature itself, as natural sounds or images are easier to process: "Bright colours cause a kind of pain, a physical assault to the senses. Noise can be unbearable. Natural sounds are easier to process" (McAnulty, 2021, p. 28). He even compares being autistic to being in nature:

> We rarely think of all of that effort being made below the water, those webbed propellers whirring so the bird can glide with such ease and grace on the river. It's just like being autistic. On the surface, no one realises the work needed, the

> energy used, so you can blend in and be like everyone else. (McAnulty, 2021, p. 165)

As a neurodivergent, he struggles to act like a neurotypical. He makes analogies with underwater life and birds, noting "those webbed propellers whirring so the bird can glide with such ease and grace on the river" (McAnulty, 2021, p. 165). Once again, he draws a parallel, regarding himself as part of nature, yet struggling to live and trying to blend into the human world.

In another quotation, McAnulty (2021) once again feels his connection with nature: "I am buoyed by the life springing out everywhere, in the garden, in the school grounds, even on the streets around the house" (p. 37). McAnulty (2021) further explains that his feelings align with nature: "My heart crashes less against my chest. I feel in rhythm with nature, and I start becoming immersed in every moment again, letting each wave hit me and seep in" (p. 37). As a neurodivergent person, he feels an ongoing sense of interconnection with a sincere, personal ecosophical view throughout the book. In another quotation, McAnulty (2021) also reflects his ecological activism that has its roots in the passion in his heart for nature:

> My early fascination for raptors has grown into a passion to help protect them. A few months ago, Mum and I bog-trotted and hiked our way through the Cuilcagh Mountains, thirty miles of spectacular landscape, to raise money for a satellite-tagging programme, the first of its kind in Northern Ireland. The work is delicate, secretive, and involves raptors being tracked and monitored so ecologists can learn about how the birds travel, where they nest, their flight patterns and behaviour. Our trip to Scotland is all about training for this, learning from the scientists in Callender. It is also about seeing conservation in action, taking part. (p. 68)

In this quotation, he also expresses his passion for learning an ecological perspective to better understand the birds. With his family, he also hiked and observed the landscape and raptors. It also serves to protect raptors and raise money for a satellite-tagging programme. Also, he mentioned their trip to Scotland to attend a training session with scientists in Callender on how the birds live. Thus, in this quotation, McAnulty's

ecosophical view is seen as a complex issue with an activist and an educational side, and a continual passion in his heart for nature.

Conclusion

Dara McAnulty's *Diary of a Young Naturalist* ultimately shows how a young person's lived experience can open a different doorway into ecosophical thinking. What strikes the reader throughout the memoir is not only the richness of his observations, but the way those observations slowly accumulate into a kind of philosophy—unforced, not named as such, yet unmistakably resonant with broader ecological thought. McAnulty never claims to build a system, but the patterns of his days, his sensory engagements, and his reflections on belonging reveal a way of understanding the world that aligns closely with what Næss, Guattari, and Bateson describe in their own, more formal language.

In many ways, his memoir affirms Næss's belief that ecological awareness arises from a shift in perspective rather than the adoption of any fixed doctrine. Through his descriptions of the landscapes of Northern Ireland—the rivers, hedgerows, birds, mosses—McAnulty repeatedly returns to the idea that human life is bound up with the more-than-human. He does not do this to make a philosophical point; it is simply how he experiences the world. But it is precisely this simplicity that mirrors Næss's suggestion that ecological self-realization begins when individuals start paying attention to what is already there. McAnulty's noticing becomes its own form of thinking: a slow, grounded practice that draws him further into relationship with the ecosystems that sustain him.

Guattari's broader call for a threefold ecological awareness—environmental, social, mental—likewise echoes through the memoir, though again indirectly. McAnulty's reflections often shift between the outer world and his inner life, showing how deeply one shapes the other. The moments when he seeks the quiet of open fields or forest paths are tied not only to aesthetic pleasure but also to the need to regulate sensory overload, anxiety, and the pressures of social expectation. Nature becomes

a stabilizing force, not in a romanticized sense, but in a practical, lived way. His experience underscores the idea that ecological thinking cannot be separated from questions of care, accessibility, and the conditions that allow different minds to flourish. In presenting nature as a space where he can think and feel freely, McAnulty gently reinforces Guattari's insistence that ecological repair must include the psychological realm.

Bateson's emphasis on relationships, patterns, and the "ecology of mind" also helps illuminate why McAnulty's writing feels so distinct. What Bateson theorizes as a network of interdependencies, McAnulty encounters through the minute shifts of seasons and the behavior of individual creatures. The way he describes a bird's flight or the movement of light across water signals a type of attention that is inherently relational. His observations are rarely detached; they arise from participation, from being present long enough for the mind to attune to the rhythms of the landscape. In this sense, McAnulty practices an ecological form of thinking without naming it as such. The patterns he perceives in nature become patterns through which he understands himself.

What emerges from these parallels is not merely a young person echoing established theory, but an example of how ecosophy can be embodied in everyday life. McAnulty's memoir suggests that ecological wisdom may emerge gradually, through repeated encounters, rather than through formal study. This is significant because it broadens the idea of who can participate in ecological thought. His neurodivergence—often portrayed in public discourse as a difficulty—serves as a source of insight here. The intensity of his attention, his sensitivity to detail, and his emotional attunement to the non-human world offer a perspective that complements and enriches traditional ecosophical frameworks. Instead of seeing autism as something that distances him from the world, McAnulty shows how it anchors him more deeply within it.

By weaving personal experience with ecological sensitivity, McAnulty develops a form of ecosophy that is genuinely his own. It is grounded in specific places—the Mourne Mountains, the gardens around his home, the

paths he walks repeatedly—and also in the particularities of his mind. His memoir demonstrates how ecology, identity, and belonging intersect in ways that are rarely acknowledged in mainstream environmental thought. It reminds readers that ecological understanding can be shaped by sensory differences, by emotional intensities, and by the need for refuge from overwhelming environments. These experiences are not merely private; they carry implications for how we imagine ecological communities and whose perspectives we value.

As a book chapter, this analysis has suggested that McAnulty's contribution to ecosophical thinking lies not in abstraction but in embodiment. He shows how ecological consciousness can become part of one's daily rhythms, how attentiveness can develop into care, and how care can deepen into a sense of ethical responsibility toward the more-than-human world. His narrative encourages readers to move away from anthropocentric habits of thought and to reconsider what it means to belong somewhere. At the same time, the memoir provides a rare example of how neurodiversity and ecological insight can inform one another, offering a vision of environmental understanding that is inclusive rather than restrictive.

In the end, *Diary of a Young Naturalist* stands as a testament to the possibility of a lived ecosophy—one that grows not from grand pronouncements but from the steady work of paying attention. McAnulty's reflections remind us that ecological wisdom is not the domain of a select few; it can emerge in the quiet spaces between moments, in the repeated act of stepping outside, in the willingness to notice what most people overlook. His writing encourages a form of ecological engagement that is grounded in empathy, openness, and the recognition that human and non-human lives are intertwined. In doing so, McAnulty expands the meaning of ecosophy itself, showing that its fullest expressions may arise from the intersection of ecology, neurodiversity, and the search for a place where one can fully belong.

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Ethical Declaration and Committee Approval

This study was conducted in accordance with the principles of scientific research and publication ethics. Ethical approval for this research is not necessary.

Law Students' Perceptions of AI-Generated Feedback in Legal English: Toward Sustainable Writing Support

Stelina NDREU[1]

The increasing presence of artificial intelligence in education has raised new possibilities for how feedback is delivered and processed in writing instruction. Tools such as *ChatGPT* are entering classrooms with a sense of novelty, yet they interact with longstanding pedagogical needs. In contexts where English is taught for specific purposes, feedback plays a complex role. Learners do not simply revise based on surface corrections; they engage with expectations shaped by discipline and audience. This is especially true in fields like legal English, where form and accuracy carry more than stylistic weight. They reflect the communicative norms of a profession.

In recent years, interest has grown in how AI-powered tools assist students during writing tasks. The shift from rule-based grammar checkers to generative language models has brought about new conversations regarding effectiveness, transparency, and the learner's role in interpreting feedback. Many students find these tools accessible and easy to use. However, the meaning of "helpful" feedback becomes less clear when

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suggestions lack context or when learners accept revisions without reflection. The technology offers immediacy, but immediacy does not guarantee depth or appropriateness.

There is growing research that explores student perceptions of AI-supported writing. Much of it, though, takes place in general English settings or through assignments completed outside the classroom. Little attention has been given to structured, course-integrated uses of AI tools in English for Specific Purposes (ESP) environments. This research seeks to examine how law students respond to feedback from *ChatGPT* when working on writing tasks designed for legal communication. The classroom offers a setting where choices are shaped by the student and the machine, as well as by the presence of instruction, the constraints of academic evaluation, and the goals of subject-specific literacy. This study aims to investigate how law students engage with AI-generated feedback in an ESP writing classroom, and how such engagement shapes their perceptions of usefulness, trust, and learning.

Through a classroom-based study, this chapter explores how students interpret, question, and sometimes even resist feedback produced by an AI chatbot. Their reflections provide insight into the role that such tools might play in writing instruction that is both responsive to emerging technologies and grounded in the practical realities of language learning in higher education. In doing so, it foregrounds the learner's voice in evaluating the educational role of AI.

The findings also invite reflection on how digital tools like *ChatGPT* might contribute to sustainable feedback practices. In settings where teachers manage large classes or have a limited instructional time, AI-supported feedback may help maintain a level of individualized attention without compromising classroom efficiency. Moreover, when students learn to engage critically with such tools, they begin to develop habits of self-regulation and independent revision. These are capacities that support long-term learning beyond the scope of a single course and align closely with broader goals of sustainability in education.

Literature Review

Feedback is a central element in second language (L2) writing development, especially in contexts where English is taught for specific purposes (ESP). Grabe and Kaplan (1996) emphasize that writing is a recursive process, and feedback serves as a mechanism for revising and refining ideas. Within this view, the quality and relevance of feedback, whether human or automated, critically influence learner outcomes.

In recent years, AI-powered tools such as *ChatGPT* have been introduced to enhance feedback delivery, including Automated Writing Evaluation (AWE) systems and, more recently, AI-powered chatbots. Ranalli, Link, and Chukharev-Hudilainen (2006) analysed the validity of AWE systems and found that even though these tools are useful for formative feedback, particularly on grammar and coherence, there are concerns about their accuracy and contextual appropriateness. Cuocci et al. (2023) conducted a meta-synthesis on technology-supported peer feedback in English as a second language (ESL) /English as a foreign language (EFL) writing and concluded that digital tools can enhance revision quality but must be used alongside pedagogical strategies that promote learner autonomy.

Unlike earlier AWE systems that focused on rule-based correction, tools like *ChatGPT* offer sentence- and paragraph-level generation, raising new pedagogical questions about authorship, tone, and trust. This shift calls for closer attention to how students interpret and apply such feedback.

ChatGPT and similar AI chatbots have introduced a new layer of immediacy and accessibility in the writing classroom. Massoud and Zhang (2025), in a study involving ESL students, reported that *ChatGPT* was positively received as a supportive tool for generating ideas and improving clarity. However, students expressed mixed feelings regarding its reliability, particularly in upholding academic integrity. Similarly, Waziana, Andewi, and Hastomo (2024) found that while EFL learners reported vocabulary and grammar improvement through chatbot interaction, they also tended to overtrust its suggestions, occasionally integrating errors into final drafts.

Perception-based studies further underscore both the opportunities and limitations of AI-assisted writing. Duong (2025) explored usage patterns among EFL learners and found that students often rely on chatbots to revise text but lacked strategies for evaluating the quality of feedback. Woo, Yu, and Guo (2025) observed that EFL secondary students actively edited AI-generated compositions, yet their decision-making depended on prior writing competence, revealing a tension between assistance and overreliance. A broader scoping review by Schei, Møgelvang, and Ludvigsen (2024) confirms these patterns across higher education: students are generally optimistic about chatbot support but show little awareness of its limitations unless explicit instruction is provided. Despite the growing attention, most of this work is grounded in general EFL writing rather than ESP settings, where language use is highly specialized and genre bound.

ESP writing — particularly in fields such as legal, medical, or business English — requires not only linguistic accuracy but also adherence to disciplinary tone, register, and rhetorical structure (Hyland, 2006). General-purpose chatbots may not be designed to recognize or replicate such genre-specific conventions, which introduces a potential mismatch between the feedback generated and the expectations of the task.

Understanding how students interact with AI feedback also requires a theoretical lens to capture not just outcomes, but underlying attitudes and behaviours. Davis's (1989) Technology Acceptance Model (TAM) explains student attitudes through perceived usefulness and ease of use. In contexts where *ChatGPT* is introduced as a writing aid, TAM helps illuminate whether learners view the tool as a legitimate feedback source.

Additionally, Zimmerman's (2000) self-regulated learning theory provides a lens through which to examine learner autonomy, planning, and revision behaviour in response to feedback. Yu and Yang (2021), in a decade-long review of ESL/EFL learners' responses to teacher feedback, emphasize the importance of scaffolding in shaping productive engagement, a concept grounded in Vygotsky's (1978) theory of the Zone

of Proximal Development (ZPD). In this view, AI feedback can support learner growth only if it aligns with their current developmental stage and is mediated appropriately by instruction.

In sum, while existing literature highlights promising uses of AI feedback in language learning, most studies focus on general ESL/EFL contexts. There remains a gap in research on in-class chatbot use for discipline-specific writing tasks, such as those found in ESP courses. This study aims to help fill that gap by investigating how Albanian university students in a Legal English course perceive the value, reliability, and learning potential of *ChatGPT*-supported writing feedback. While situated in a national context, the findings speak to broader questions of how students engage with AI in structured, genre-sensitive learning environments.

Methodology

This study was designed as a classroom-based investigation embedded in an English for Specific Purposes (ESP) course. It aimed to explore how university law students perceive and respond to AI-generated feedback during discipline-specific writing tasks. The research followed an exploratory, mixed-method approach, combining both qualitative and quantitative data sources. The focus was not on assessing the effectiveness of the tool, but rather on capturing the learners' perspectives and reactions to its integration within regular classroom instruction. The course served as a naturalistic setting where students interacted with both teacher and AI feedback in real time, offering insight into how emerging technologies are being absorbed into everyday academic practice.

The rationale for adopting a classroom-based design stemmed from the need to observe authentic learner behaviour. Studies that take place outside the classroom often rely on self-reported data detached from actual learning experiences. In contrast, this experiment sought to document how students use and interpret AI tools in a setting where language instruction, assessment, and teacher presence coexist. The classroom also provided an environment where students' engagement with technology could be

observed without the artificial separation between learning and testing conditions. This approach was consistent with the pedagogical goals of the course, which emphasized the development of practical writing competence within the conventions of legal communication.

A mixed-method framework was selected because it allowed the researcher to identify not only what students thought about the chatbot but also how they acted upon its feedback. The quantitative data provided measurable trends in student attitudes, while the qualitative data captured the nuances of emotion, hesitation, and reflection that numbers alone could not convey. This dual strategy aligned with the study's interpretive stance, which treats language learning as both a cognitive and a social process. The combination of numerical and narrative data provided a more comprehensive understanding of how AI-based feedback operates within the complex ecology of the classroom.

Data Collection Instruments and Procedure

The data were collected over a ten-week period during a Legal English course attended by 50 undergraduate law students. The majority were second- and third-year students aged between 19 and 23, with CEFR B2 proficiency in English. None had formal experience using *ChatGPT* in academic writing prior to the course. Five genre-based writing tasks were included as part of the course curriculum: a legal memorandum, a short legal opinion, a simplified contract clause, a formal complaint letter, and a case summary. Each task was completed during scheduled class sessions and was followed by a feedback stage involving both teacher comments and chatbot interaction. The students were shown example prompts for requesting rewording, grammar checks, and tone adjustments. They were also advised on how to critically assess AI output, including legal tone, sentence structure, and content consistency. Teacher feedback was returned separately, allowing students to compare inputs. After the final task, the students were asked to complete an anonymous survey and submit a reflective journal entry. The survey contained Likert-scale items as well as open-ended questions, while the reflective writing invited

students to describe their experience in their own words.

This mixed-format approach was chosen to balance analytic depth with ease of completion and to generate data that could be both quantified and interpreted qualitatively. The instrument also aims to explore whether AI-supported feedback practices may contribute to sustainable learning by fostering learner independence and reducing teacher workload. Participation in the research components was voluntary and anonymous. The students were informed about the aims of the study and gave written consent for the use of their responses for research purposes.

Table 1 provides an overview of the five writing tasks used in the course, along with how students were instructed to apply AI support and respond to teacher feedback.

Table 1

Overview of Student Writing Tasks and Instructional Support

Task	***Genre***	***Purpose***	***Use of ChatGPT***	***Teacher Guidance***
Legal memorandum	Formal internal memo	Provide legal advice on a fictional client situation	Used during revision phase	Structured modelled in class, genre checklist given
Legal opinion	Argumentative analysis	Respond to a legal scenario and present a clear opinion	Used for idea development	Legal reasoning discussed, model answer reviewed
Contract clause drafting	Legal drafting	Draft or revise a standard contract clause	Used for idea development	Sample clauses analysed, focus on language of obligation
Formal complaint letter	Professional letter	Address an issue in a legal or consumer protection context	Used for phrasing and accuracy	Functional language introduced, tone discussed

Case summary / brief	Legal summary	Summarize case facts and holding in clear legal English	Used for structure and concision	Template provided, peer review prior to AI use

Data Analysis

The data analysis was conducted in two stages. Quantitative data from the surveys were compiled and examined for patterns in responses related to perceived usefulness, ease of use, trust in the feedback, and overall satisfaction. The responses were analysed in Excel using frequency and percentage distributions across 5-point Likert-scale items. Open-ended survey responses were grouped and summarized thematically, providing an intermediate layer between numeric data and journal reflections.

The qualitative data from the reflective journals were subjected to thematic analysis, focusing on recurring words, phrases, and expressions related to autonomy, uncertainty, and the value assigned to chatbot suggestions. Reflections were anonymized and coded manually to identify dominant perspectives and outlier cases. Themes such as “technical support,” “trust,” and “blended feedback value” emerged from the reflective journals. These were cross validated by comparing them with open responses from the survey, enabling triangulation across data sources. This approach aimed to deepen interpretation while minimizing researcher bias. The analysis aimed to trace how students interpreted the role of the chatbot in their revision process and how they positioned it relative to traditional teacher input.

This design aligns with interpretivist research traditions that prioritize situated meaning-making over controlled experimentation. By embedding the study in a real instructional setting, the aim was not to isolate variables, but to explore how learners actively construct meaning and value around new technological tools. This approach supports the view of language learning as a socially and contextually mediated process.

Results

The survey received 50 valid responses. Figure 1 presents a visual summary of student agreement across key areas such as usefulness, trust, and genre relevance. The quantitative results from Likert-scale questions showed that students generally viewed *ChatGPT* as a helpful tool for supporting revision, especially for language-level issues such as grammar and sentence structure. However, when asked about its relevance to Legal English and the trustworthiness of its suggestions, responses were more cautious and divided.

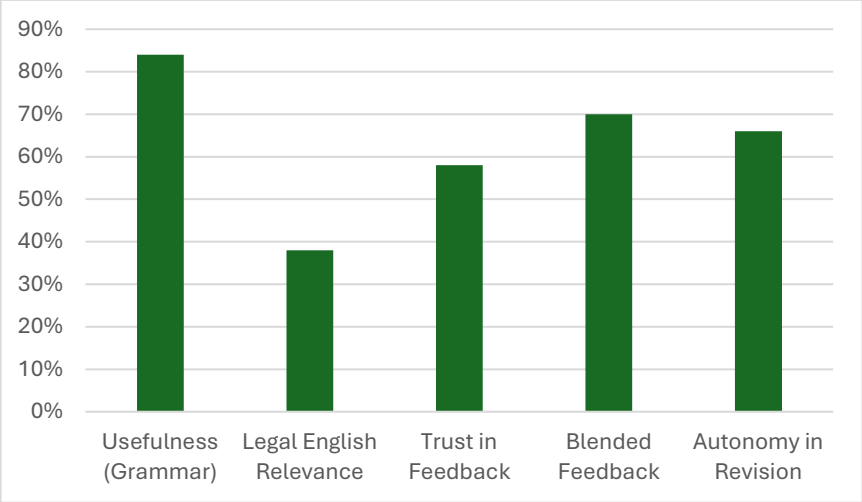


Figure 1 *Student Perceptions of ChatGPT in Legal English Writing*

A large majority of students (84%) either agreed or strongly agreed that *ChatGPT* helped them identify grammar and spelling errors. Similarly, 76% found it useful for improving sentence structure and fluency, with 68% stating that the suggestions were clear and easy to understand. These results suggest that students saw clear benefits in using the tool for surface-level linguistic improvements.

Confidence in using *ChatGPT* was relatively high, with 70% of respondents indicating they felt comfortable using the tool during the

revision process. Despite this, 58% reported difficulty deciding whether the chatbot's suggestions were appropriate or correct. This points to a degree of uncertainty and reliance on personal judgment or additional support when interpreting AI-generated feedback.

When it came to the legal writing context, only 38% of students felt that *ChatGPT*'s feedback reflected the tone and expectations of Legal English. This highlights a perceived gap between general language support and the demands of discipline-specific writing. However, the tool was still positively received when used alongside teacher feedback. Seventy percent of students agreed that combining both sources improved the quality of their writing, while 66% reported feeling more capable of revising independently after using *ChatGPT*.

In terms of future use, 92% of students said they would like to use AI feedback tools again in other writing tasks, suggesting openness to further integration of such tools in classroom practice.

The open-ended responses provided additional insight. Table 2 presents a thematic summary of these reflections, capturing key benefits, concerns, and areas where students contrasted *ChatGPT* with teacher feedback. When asked what they found most helpful, students frequently mentioned "rephrasing," "speed," "structure," and "confidence." Others highlighted brainstorming support and the sense of direction it gave them while drafting. On the other hand, concerns included "lack of accuracy," "oversimplifying," "vagueness," and "confusion with terminology." Several respondents expressed that the chatbot sometimes failed to capture the tone and specificity expected in legal texts.

When comparing chatbot and teacher feedback, students emphasized the teacher's understanding of the legal system, the ability to explain errors in context, and the importance of nuance and tone. Common keywords included "depth", "clarity", "human", and "careful". AI, by contrast, was often described as "fast", "general", or "neutral". While some students expressed appreciation for the immediate support provided by *ChatGPT*,

most did not see it as a replacement for human feedback, particularly in subject-specific tasks.

Table 2

Thematic Classification of Reflective Journal Comments on ChatGPT Feedback

Theme	***What it captures***	***Students' comments***
Technical support	*ChatGPT*'s help with grammar, clarity, and sentence-level fluency	"It gave me clearer word choices." "Helped me spot grammar mistakes I didn't notice." "I used it to correct spelling quickly."
Genre awareness gap	Limitations in handling Legal English conventions and tone	"It didn't sound legal enough for this kind of text." "The expressions were too casual for a memo." "Not sure it understands the way contracts are written."
Confidence and agency	Growing independence in revision decisions	"It helped me see my own mistakes faster." "I revised it by myself after checking with *ChatGPT*." "I started writing with more confidence."
Trust and doubt	Uncertainty about correctness or accuracy of AI suggestions	"I wasn't sure if what it said was accurate, but it looked good." "I still asked my teacher if *ChatGPT* was correct." "It gave a suggestion that seemed wrong, but I couldn't explain why." "It repeated things I already fixed."
Blended value	Comparing and combining teacher and AI feedback	"I checked both and used what made the most sense." "First I read what *ChatGPT* said, then I compared it to the teacher's feedback." "I took ideas from both to make a better draft."
Surface vs Deep feedback	Awareness that AI helps with form, not content or logic	"It didn't notice if my example didn't fit the question." "It helped with wording but not the meaning." "Grammar was fine, but the content still needed work."

Tone and voice concerns	Feeling that *ChatGPT* altered their personal or professional tone	"It made it sound robotic and not like my voice." "My writing felt too neutral after using it." "It removed the personal tone I wanted in the letter." "Sometimes it erased the message I was trying to get across."

These results suggest that students recognize the strengths of chatbot feedback for certain aspects of writing but remain critically aware of its limitations. The tool was most effective when used as a complement to teacher input, and students appeared to benefit most when given space to compare, reflect, and evaluate both types of feedback. This critical engagement suggests that while students welcomed AI input, they viewed it as part of a broader learning process rather than a standalone solution. These insights are consistent with literature on blended feedback models and learner autonomy in technology-supported classrooms.

Discussion

The findings of this study illustrate the complex position that AI-powered chatbots such as *ChatGPT* currently occupy in the writing classroom. While students expressed appreciation for the immediate, language-level support the tool offered, they also articulated clear boundaries for its usefulness, particularly in terms of genre-specific writing expectations and trust in content accuracy. This dual perception reflects the broader pedagogical challenge of integrating emerging technologies into learning environments without diminishing the role of instructional mediation.

The high percentage of students who reported improvements in grammar and sentence structure after using *ChatGPT* supports previous findings in the field. Studies such as those by Waziana et al. (2024) and Ranalli et al (2016). have emphasized the benefits of AI tools in improving surface-level aspects of writing. The responses gathered here confirm that *ChatGPT* was particularly well received in this regard, suggesting that learners perceive it as a useful revision partner. Furthermore, the confidence many students expressed in revising their own work after

receiving AI feedback aligns with Zimmerman's (2000) theory of self-regulated learning. The chatbot may serve as a low-stakes, accessible support system that fosters greater autonomy among learners who are developing their revision strategies.

However, the limitations noted by participants, especially those related to legal terminology, tone, and contextual appropriateness, reinforce concerns highlighted in more recent studies. Massoud and Zhang (2025) as well as Duong (2025) have reported that students often find it difficult to assess the reliability of AI-generated feedback. In this study, although most students trusted *ChatGPT'*s grammar corrections, many expressed uncertainties about whether its suggestions matched the expectations of Legal English. Only a minority believed that the chatbot's output adequately reflected disciplinary norms. This suggests that while AI tools may support general writing development, their uncritical use in ESP contexts could lead to stylistic or rhetorical mismatches that undermine genre awareness.

The feedback comparison results are also noteworthy. Most students felt that teacher feedback was more helpful overall, particularly in areas requiring interpretation, legal reasoning, or professional tone. This preference is consistent with research on the importance of scaffolded feedback in L2 contexts (Yu & Yang, 2021; Vygotsky, 1978). Students appear to value the personalized, targeted nature of teacher comments which is something AI is currently unable to replicate. Nonetheless, the fact that 70% of respondents found the combination of chatbot and teacher feedback to be beneficial points to the potential for hybrid approaches. These results suggest that AI-generated feedback may not replace teacher input, but it can serve as a meaningful complement when used thoughtfully and with pedagogical intention.

These findings also resonate with the theoretical perspectives introduced earlier. The Technology Acceptance Model (Davis, 1989) helps explain why students embraced certain features of *ChatGPT* such as speed, clarity, and accessibility, while remaining cautious about trusting its feedback

entirely. The high agreement on usefulness coexists with hesitation about appropriateness, suggesting that perceived ease of use may not always translate into full acceptance when task specificity and risk are involved. Vygotsky's concept of the Zone of Proximal Development (1978) is also relevant, particularly in how students benefitted most when teacher guidance framed their interaction with AI. The chatbot alone did not scaffold development; it was the instructional environment that made the feedback meaningful. Finally, Zimmerman's (2000) model of self-regulated learning appears in students' increased confidence and autonomy. Many reported revising independently or making decisions based on comparisons between teacher and chatbot suggestions, behaviours consistent with growing self-regulatory capacity, and suggestive of AI's role in fostering sustainable learning habits.

These findings invite a deeper consideration of how feedback is experienced and interpreted by learners. The open-ended responses reveal appreciation for technical support and emotional reactions to AI interaction: feelings of confidence, hesitation, curiosity, or even confusion. This aligns with socio-cognitive perspectives that frame writing not just as a cognitive activity but as a social and affective process. Students are not passive recipients of feedback. They negotiate its value, weigh its authority, and decide whether to act on it. In that sense, the introduction of AI into the feedback process does not simply change what feedback is available, but how learners relate to it.

Another layer of complexity involves the students' ability to critically engage with the chatbot's output. Several participants reported difficulty distinguishing between valid suggestions and inappropriate changes. This underscores the importance of teaching critical AI literacy, a concept that goes beyond digital skills and into evaluative thinking. Students need to learn how to question the source, assess the relevance of feedback, and make revision decisions accordingly. Without explicit training, there is a risk of surface-level learning or uncritical acceptance of flawed AI suggestions, particularly in high-stakes academic or professional genres.

From a pedagogical standpoint, the integration of AI tools into ESP writing instruction requires careful design. While the convenience and speed of chatbots can make them attractive resources, their limitations must be addressed transparently in the classroom. One possible approach is to create structured activities that position AI feedback as a first draft or brainstorming aid, followed by collaborative peer review or teacher-led discussion. In doing so, learners can be encouraged to see *ChatGPT* not as an editor or evaluator, but as a tool for stimulating revision and reflection.

Finally, the study touches on broader conversations about sustainability in education. In classroom contexts where teacher workload is high or individual feedback is limited; AI tools may provide a scalable and efficient means of offering basic writing support. This does not imply that human feedback should be replaced. Rather, it suggests that AI, when integrated thoughtfully, can enhance the overall feedback ecology, supporting a more accessible and student-cantered revision process. Sustainability in this case is not just about technology but about designing systems that make high-quality writing instruction viable and resilient across contexts.

Taken together, these insights reinforce the need for a blended feedback approach that combines the strengths of both human and AI contributions. Such an approach can foster technical improvement, support learner autonomy, and maintain attention to the nuanced demands of discipline-specific writing. As AI continues to evolve, so too must our pedagogical frameworks, not only to accommodate new tools, but to guide learners in using them critically and responsibly.

While this study provides useful insights into student perceptions of AI-generated feedback in Legal English writing, several limitations should be noted. First, the participant sample was drawn from a single university cohort in Albania, which may limit the generalizability of the findings. Although the students represented a typical B2-level EFL legal English class, their experiences may not fully reflect those of learners in different

institutional or cultural contexts. Second, the tasks assigned focused on specific genres (e.g., memos, opinions, clauses), but legal writing encompasses a broader set of formats and discourse practices that were not examined. The study also centred on a single AI tool (*ChatGPT4*) and did not compare its output with other automated writing evaluation tools, which might offer different levels of genre alignment or feedback specificity. Finally, the use of AI in this classroom was guided by one instructor's design and constraints; future studies might explore different implementations across instructors or compare guided versus unguided uses of AI feedback.

The findings from this study suggest important considerations for ESP practitioners, particularly those working in law, business, or professional communication contexts. While students clearly benefited from *ChatGPT*'s support with grammar, vocabulary, and fluency, their responses indicate that genre-specific instruction remains essential. AI feedback alone is unlikely to help students internalize the rhetorical norms and formal conventions of legal writing. Teachers should therefore integrate chatbots into the classroom not as substitutes for feedback, but as tools that promote drafting, self-editing, and reflection. One effective approach may involve pre-task modelling (e.g., analysing tone in legal memos), followed by structured AI use and then post-AI peer review or discussion. This sequence allows learners to observe, test, and critique the feedback they receive. Teachers can also support students in developing AI literacy, helping them question suggestions, compare outputs, and understand where generative models fall short. When thoughtfully implemented, such practices can promote more sustainable feedback ecosystems in the classroom: reducing teacher burden while enhancing learner autonomy, especially in courses where writing demands are high and assessment timelines are tight.

Conclusion

This study examined how Albanian law students perceived and responded

to AI-generated feedback during Legal English writing tasks. The findings suggest that while students valued the immediacy and clarity of *ChatGPT*'s feedback, they also identified limitations in terms of genre-specific appropriateness and contextual reliability. The chatbot was particularly appreciated for its ability to support grammar correction, sentence rephrasing, and fluency improvement, reinforcing its usefulness as a language-level support tool.

At the same time, the data revealed a cautious attitude toward fully trusting the tool, especially for discipline-specific writing. Students highlighted concerns about terminology, tone, and the absence of nuance. They consistently viewed teacher feedback as more relevant to the legal genre and more effective for guiding deep revision. However, the majority also recognized that combining chatbot and teacher feedback produced a stronger learning experience. This points to the value of a blended feedback model that leverages both technological efficiency and human insight.

The study set out to explore whether *ChatGPT* could meaningfully support student writing in an ESP context without compromising learning quality. The results suggest that AI tools can play a supportive role, but only when framed by pedagogical structure and critical engagement. In this sense, the technology's impact depends less on its capabilities than on how students are taught to use it.

The study contributes to ongoing conversations about the integration of AI tools in language education, particularly in ESP contexts where professional discourse conventions must be observed. It also offers practical implications for educators seeking to balance innovation with pedagogical rigor. By fostering critical engagement with AI-generated feedback and maintaining a clear instructional role for teachers, classrooms can support more autonomous, reflective, and skilled writers.

From a broader perspective, the use of AI in feedback practices may support more sustainable teaching models, particularly in settings where teacher resources are stretched. Rather than replacing human feedback,

tools like *ChatGPT* can extend the reach of formative assessment and offer students additional entry points for revision. As digital technologies become increasingly embedded in higher education, understanding how learners interpret and interact with AI will be essential to shaping effective, ethical, and sustainable writing instruction.

Future research could explore how different types of AI feedback (e.g., analytical vs. generative) are perceived across ESP domains beyond law, or how students' trust and usage patterns evolve over time. Longitudinal studies, teacher perspectives, and comparisons across AI tools could all offer deeper insight into the sustainable integration of these technologies into disciplinary writing instruction.

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Turkish EFL Teachers' Agency for Inclusive Education within Higher Education Context: Tensions and Resources

Ümmügül MUTLU-KÖROĞLU[1]

Inclusive education emphasizes the principle that every student has the right to learn alongside their peers and to receive equal opportunities to participate fully in educational processes. Recently, a growing body of research has highlighted the role of the teachers in shaping such equitable opportunities, particularly for students with disabilities (Heikonen et al., 2017; Naraian, 2013; Themane & Thobejane, 2018; Wang et al., 2017). They recognized teachers as the central figures in promoting socially just classroom environments where all students - regardless of their background- have equitable access to quality education and get necessary support to achieve their academic goals. Bridging the gap between educational policy demands and classroom realities, teachers are the primary agents who have the potential to transform the abstract principles of inclusion policies into meaningful classroom practices for students with disabilities. For this reason, fostering teacher agency for inclusive

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education is critical to ensure effective inclusive educational practices for students with disabilities.

However, exercising teacher agency is particularly challenging in contexts where the "pervasive nature of social inequality is woven throughout social institutions" (Bell, 1997, p. 4). Such inequalities have positioned teacher agency as a central focus in international research, particularly within the field of inclusive education (Kardeş & Akman, 2022; Li & Ruppar, 2021; Pemik & Levent, 2019). These studies underscored the importance of supporting teachers when they require to navigate the complexities of inclusive education practices. They also highlighted the need to deepen the understanding of the values, beliefs, and attitudes that shape broader inclusive school culture (Mu et al., 2015). Aligning with the ecological view of teacher agency, their perspective defines teachers as active, reflective, and contextually responsive professionals capable of navigating complex educational contexts.

Despite this growing attention, teacher agency for inclusive education seems to remain a relatively underexplored area within higher education contexts (Li & Ruppar, 2021). In these environments, where standardization and accountability take primacy, there is little room for an "autonomous or collective ethical self" (Ball, 2003, p. 226). Since teachers' agentic actions might be the only means of challenging exclusionary practice in such environments, developing a comprehensive understanding of teachers' agency for inclusion is essential.

In light of these considerations, the present study explores EFL teacher agency in a mainstream classroom that includes two visually impaired students studying alongside their peers. Aligning with the view that agency emerges through the interplay between individual capacities and social structures (Sealey & Carter, 2004), this study adopts an ecological perspective on teacher agency and utilizes Li and Ruppar's (2021) conceptual framework as an analytical lens. The results are expected to uncover tensions and resources that teachers perceive as exercising their

agency for inclusion. A series of semi-structured interviews were conducted in order to offer deeper insights to this investigation.

Literature Review

Teacher Agency

While agency was once understood as an individual's capacity to act (Giddens, 1984, p. 9), more recent perspectives have conceptualized it as a phenomenon shaped by ''social, cultural, institutional, and contextual factors that mediate human action'' (van Lier, 2008, p. 171). These are individual's deliberate and reflective actions through which they respond to challenging circumstances (Biesta & Tedder, 2007; Rogers & Wetzel, 2013). Complementing this view, Priestley et al. (2013) also defined agency as deeply embedded in the contextual conditions shaping one's actions. These highly influential perspectives highlight the relational and situational nature of agency, suggesting that it is not a fixed trait residing within individuals. Rather, it is something emerging through the interaction between personal capacities and contextual affordances. Adopting this recent agency conceptualization in the present study allows a closer examination of teachers' purposeful and constructive agentic actions to improve inclusive outcomes in complex educational contexts.

Before investigating the conditions that facilitate or hamper such actions, it is worth noting the most recent understanding that teacher agency is shaped by the possibilities for action and spaces for "manouvre'' (Priestley et al., 2012, p. 191). This understanding can be reasonable when teacher actions are considered as contextually situated (Lasky, 2005) and defined as coping responses to the conditions and constraints of working environments at particular moments in time (Priestley et al., 2012). To illustrate this temporal and situated nature of teacher agency, Priestley et al. (2016) formulated an ecological perspective including three dimensions: iterational, practical-evaluative, and projective. This perspective provides an effective lens for examining language teacher agency seeing it as an emergent phenomenon from the dynamic interplay

between teachers' past experiences (iterative), immediate contextual conditions (practical-evaluative), and future-oriented goals (projective). Given these points, adopting an ecological perspective in this current study can provide a holistic understanding of teacher agency for inclusion. Additionally, it can be a useful framework to illuminate how teachers perceive "the fluid constraints and affordances in their environments'' (White, 2018, p. 197), and how teachers manage the negativity that they "experience as a by-product of school environmental conditions" (Ollerhead, 2010, p. 607).

Empirical studies on teacher agency for inclusive education

Literature on language teacher agency for curriculum reform is well-documented (Ashton, 2021; Huang & Yip, 2021; Jenkins, 2020; Le et al., 2021; Robinson, 2012; Thumvichit, 2021; Wang, 2022); however, little is known about how teachers exercise their agency to foster inclusive practices for students with disabilities. This small body of research highlights how teachers negotiate the tensions between institutional demands and their social justice commitments while working to create equitable and supportive learning environments for all their students. For example, Mu et al. (2015) investigated the professional competence of inclusive education teachers in China, with a particular focus on teachers' attitudes, knowledge, skills, and agency. Teachers in the study generally demonstrated positive attitudes and a solid understanding of inclusion while their level of agency in adapting instruction and advocating for the rights of students with disabilities was low. These findings suggest teacher agency extends beyond personal traits and capacities, requiring a comprehensive understanding of complex ecologies surrounding teachers, named as immediate contextual conditions (practical-evaluative dimension of teacher agency for inclusive education).

In other words, teacher agency can be deeply embedded in context and marked by ongoing negotiations between individuals' identities and institutional demands. The study by Naraian (2014) investigated the school and classroom conditions creating (in)equities for students with

disabilities. It focused on how teachers negotiate conflicts, power relations, and local norms while working toward inclusive education. Data collected from diverse school sites- urban elementary, suburban elementary, and suburban high school – revealed that teacher agency is complex, context-dependent, and continuously shaped by tensions between dominant educational discourses and teachers' own professional and moral commitments. Similarly, the study by Naraian and Schlessinger (2018) aimed to explore how novice teachers enact agency in collaboratively taught classrooms. This qualitative study involved first-year teachers who were specially prepared through a Disability Studies in Education (DSE) program. The data suggested that teachers exercised their agency by addressing diverse learning needs, making curricular decisions, and redefining professional roles. However, they experienced dissonance between their professional identities and institutional expectations. This indicates that exercising agency for inclusive education is a dynamic and ethically driven process.

Following a similar line of inquiry, a few empirical studies have revealed the role of other contextual factors like collaboration and collective support (Lyons et al., 2016; Themane & Thobejane, 2018; Wang et al., 2017). Although these researches were conducted diverse educational contexts, these studies consistently emphasized the importance of shared responsibility, positive collegial relationships, and institutional support in fostering teacher agency. Participants commonly perceived them as enabling factors for the successful implementation of inclusive education, despite existence of various contextual challenges. For instance, Wang et al. (2017) examined the relationship between 2,549 Chinese inclusive education teachers' practices and their professional skills. The study documented the strong relationship between these two constructs and investigated how they can be moderated by teachers' professional experiences and ecological support. The findings underscored the significant role of ecological support by emphasizing the need for collaboration among different stakeholders to create a more equitable and inclusive educational environment. Moreover, Lyons et al. (2016),

through semi-structured interviews conducted in four inclusive elementary schools, showed how some Canadian schools successfully implemented inclusive education while others retained traditional segregated practices. The central focus of this study was the individual and collective teacher agency that was manifested through ongoing collaboration. As the study further suggested that joint planning, teaching, reflection, problem-solving, and knowledge sharing demonstrate the existence of sustained inclusive school cultures.

These claims are partially consistent with the findings in a study conducted by Themane and Thobejanes (2018). The study examined the factors that enable teachers to exercise agency for inclusive education in the face of systemic and contextual barriers in rural South African secondary schools. In addition to collegial and stakeholder collaboration, they identified teachers' resilience, adaptability, and strong commitment to inclusive values as key enablers of agency even if they had scarce resources and limited professional training. These findings underscore the role of teachers' previous professional experience, aligning conceptually with the iterational dimension of the ecological perspective of teacher agency – can be seen as a foundational force that shapes current practices (Heikonen et al., 2017; Naraian, 2013; Wang et al., 2017).

Despite these valuable insights of previous investigations into teacher agency K-12 schools within inclusive education programs, higher education settings remain largely unexplored. This gap is significant because EFL teachers in mainstream higher education institutions frequently lack specialized training or institutional support to work effectively with students with disabilities (Afonso et al., 2025). Consequently, it is unclear whether these factors are similarly perceived by EFL teachers working in higher education settings where standardization and accountability often take primacy and leave little room for autonomy or ethical-self. Therefore, a comprehensive analysis is needed to explore the teachers' perceived tensions and resources that

shape their agency for inclusive education. To address these issues, the present study posed the following research questions:

1. What tensions do EFL teachers perceive while exercising their agency for inclusive education?
2. What sources enable EFL teachers to cope with their perceived tensions while exercising their agency for inclusive education?

To address the research questions, the study utilized the Teacher Agency for Inclusive Education framework (Li & Ruppar, 2021, p. 49). It was developed through expanding Priestley et al.'s (2016) framework which addresses the temporal, relational, and context-dependent nature of EFL teacher agency. Consequently, the Li and Ruppar's framework contributes significantly to this present study. It will provide a theoretical lens and an analytic framework to facilitate an in-depth exploration of these crucial dimensions within the specific context of inclusive education. Figure 1 illustrates Li and Ruppars' (2021) teacher agency for inclusive education framework. It reflects the factors influencing teacher agency in the temporal dimension of ecological perspective: teachers' past experiences (iterational), current judgments (practical-evaluative), and future goals (projective). To Priestley et al. (2016), these dimensions collectively shape teachers' agency and their professional decision-making processes.

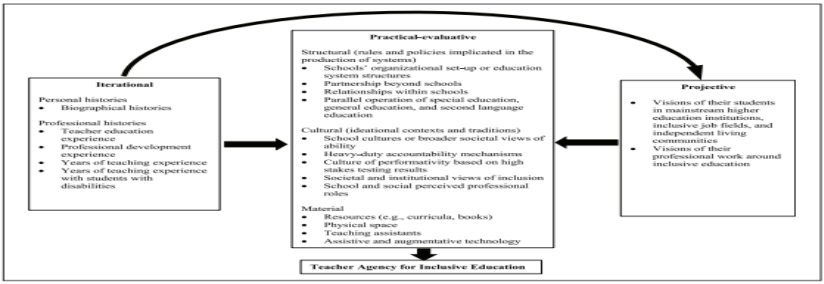


Figure 1 *A Framework for Factors Influencing Teacher Agency for Inclusive Education*

Note. Taken from "Conceptualizing teacher agency for inclusive education: A systematic and international review" (p.49) by Li, L. & Ruppar, A. (2021) in Teacher Education and Special Education

Methodology

A single-case study design was adopted to examine the perceived tensions and resources influencing an EFL teacher's agency for inclusive education. This design was chosen as it allows for an in-depth exploration of the participant's lived experiences over time. This study design is expected to provide a rich, holistic understanding (Creswell, 2012; 2013) of how the participant's agency unfolded while she was teaching visually impaired students across a one-year period.

Settings and Participants

One experienced EFL teacher working at a state university in Türkiye was purposefully chosen for the study. At the time of the study, the participant, Arya (a pseudonym), had thirteen years of professional experience and held a master's degree in English Language Teaching (ELT). She taught English to students across different proficiency levels and age groups, including those with special educational needs. Although she had previously worked with students with disabilities, she had no prior experience teaching visually impaired learners. As a result, she perceived teaching visually impaired students as a significant professional challenge—particularly at the university level, where instructional practices are often constrained by institutional regulations and standardized curricula.

In this study, the ecological context means the broader educational, institutional, and classroom environment. In Türkiye, the education system has undergone multiple reforms aimed at enhancing educational quality and promote equitable access to learning resources for all learners. Major focus of these reforms was the inclusive education act. This act targets the removal of physical, pedagogical, and social barriers preventing students with disabilities from attending in mainstream schools. Despite the existence of legislative efforts aligned with international frameworks like UNESCO (2009), the implementation of inclusive education policy still remains challenging. Çınarbaş and Karaman (2016) revealed that many visually impaired students continue

to face barriers in their educational lives due to limited access to quality learning resources, large class sizes, and an exam-oriented culture that prioritizes academic performance over inclusion.

Within this broader system, the university environment in which Arya works represents a micro-level setting. As an EFL teacher in a mainstream university where English is the medium of instruction (EMI), she teaches ESP (English for Specific Purpose) courses in English to students whose first language is not English. EMI is an approach used by some universities in Türkiye to simultaneously develop students' English proficiency and subject knowledge. In this context, Arya taught in crowded classrooms that included disabled students who were expected to learn alongside their non-disabled peers.

Data Collection Instruments and Procedure

To reach in-depth information and delving into details (Carter, 2018), a series of semi-structured interviews was conducted. The initial two rounds of data collection were carried out during the first semester, followed by the final two rounds in the second semester of 2023- 2024 at three-month intervals. A member check was performed as a final step to ensure the integrity, completeness of the data collection (Elo et al., 2014). Each interview lasted around an hour, and all were audio-recorded. The participants were asked a series of open-ended questions and several follow-up questions to capture more details. To ensure a relaxed atmosphere and facilitate more authentic responses, the participants' native language, Turkish, was used throughout the interviews. For triangulation (Patton, 2002), data from interviews were compared with instructional and assessment materials, and other relevant institutional records.

Data analysis

All interviews transcribed verbatim. The transcripts were then imported into *MAXQDA 2020*, where participants' excerpts, the researcher's observational notes, and reflections from artefacts were integrated to form a comprehensive dataset. Thematic analysis was conducted following

Braun and Clarke's (2006) six-step approach, utilising a hybrid inductive–deductive strategy. Initial codes were generated inductively from the data, while Li and Ruppar's (2021) framework informed the development of higher-level categories.

In the first phase (familiarisation), the researcher immersed herself in dataset, and read transcripts and wrote analytic memos to capture the significant insights. During the second phase (initial coding), she generated preliminary codes: top-down leadership style, decision-making processes, teacher autonomy, integrating all students, and time and effort. In the third phase (searching for themes), these codes were reviewed, compared, and grouped based on similarities and differences. They were subsequently clustered into broader categories aligned with Li and Ruppar's (2021) framework. They were school organisational setup, heavy-duty accountability, accessibility of resources, and visions of students in mainstream education. These categories were then consolidated into preliminary themes, such as teachers' tensions and the resources supporting agency for inclusive education.

In the fourth phase (reviewing themes), all candidate themes were examined, refined and evaluated for coherence with the entire dataset. At this stage, the researcher and an expert checked transcripts for "disruptions or contradictions" (Creswell, 2013, p. 186). A PhD-level expert independently coded the same transcript, and the two sets of codes were compared. Through discussion, a consensus was reached, and the agreed-upon coding template was applied to the remaining data.

In the fifth and sixth phases (defining, naming, and reporting themes), the final coding template was applied consistently, and each theme was refined and clearly defined. The overarching themes (tensions, resources) were then finalised to ensure analytical coherence and alignment with the research questions and the entire dataset.

Finally, to ensure coding reliability, both the researcher and the expert independently coded the full dataset, yielding a kappa value above 0.80, which indicates high inter-coder reliability (Fleiss et al., 2004).

Results

Perceived Tensions

Heavy-duty accountability mechanisms

English as a medium of instruction (EMI) requires teachers to deliver course content in English in the contexts where students' mother tongue is not English. Some universities adopt this approach to simultaneously improve students' English skills and their subject knowledge. While EMI can improve communication skills and foster more active learning, it also places additional demands on teachers working with visually impaired students.

Arya described how the institutional expectation to deliver high-quality EMI instruction pushes her to rely on multimodal supports -visuals, diagrams, tables, and gestures- to promote comprehension. However, these strategies are not accessible for visually impaired students:

> *"When your goal is teaching course content in English, you need to use different methodologies to clarify what you mean. Sometimes you need to use visuals, drawings, tables, or even your mimics. But, when I am teaching in classes with visually impaired students, I should do more. I should define the visuals and sometimes spell the words to these students in English, which necessitate allocating extra time and make other students feeling bored".*

Another layer of accountability stems from the expectation to integrate all students into the same classroom activities. Arya noted that visually impaired students often need additional scaffolding, such as interpreting visual information or reading instructions aloud in group work activities. She explained:

> *"Allocating time required for visually impaired students to complete a task is highly insufficient. Before participating in group discussions, these students need support. These supports include interpreting visual information, or reading the discussion questions on the board. Consequently, I have to allocate more time for the groups they are in. And most of the time this leads to objections from other group of students".*

Despite these challenges, the curriculum pacing and performance expectations remain the same, leaving little room for flexibility. Large

class sizes seem to further intensify this accountability pressure. As Arya emphasized, “reducing class sizes, as smaller groups can allow teachers to be better organized and be more responsive to diverse learner needs, but it seems impossible in many university contexts”.

Together, these experiences illustrate how EMI policies, curriculum requirements, and institutional structures place teachers under heavy-duty accountability, making it difficult for them to balance performance expectations with inclusive teaching responsibilities.

School organizational set-up

At the classroom level, autonomy refers to teachers’ decision-making processes regarding their instructional approaches, material selection, and adherence to their own ethical principle. Despite the tensions mentioned above, Arya seems to demonstrate a notable degree of autonomy in her agentic actions. As she expressed:

> *“Actually, in class, I have the freedom to differentiate my instruction according to the needs of these students. I can use various teaching techniques without changing the original texts. I can also reorganize the seating arrangement to foster a degree of peer support for visually impaired students.”*

This kind of decision-making process is a crucial element for fostering inclusive education, as it allows teachers to exercise professional judgment in responding to the diverse needs of learners. However, as Arya stressed further:

> *“Our school culture poses multiple difficulties. The principal’s leadership style limits opportunities for both teachers and students to voice their ideas or concerns related to their inclusive practices. Another issue is that many times our professional collaboration to foster inclusion is undervalued by our school leaders. Therefore, I struggle to implement the inclusive practices school wide effectively. You know, implementing inclusive practices requires coordination among teachers and principals”.*

This excerpt shows that her school level autonomy was constrained by top-down leadership most of the time.

Accessibility of instructional resources and assessment materials

Other tension that Arya stated was related to materials. To her, teaching

visually impaired students often leads to increased preparation time, particularly when the lesson involves reading texts:

> *"I prepared audio versions of the texts to ensure that these students could access the same content as their peers. While other students read the text, the visually impaired students listen to the audio versions of the same text using their tablets. This enables them to engage with the material simultaneously with their peers. However, it is not an easy task to prepare these audio versions since it requires extra effort and time. And using audios necessitates having multi-tasking skills to manage and operate the audio programs on student computers while delivering instruction in class.'*

This statement clearly illustrates Arya's experienced tensions in pursuing her goal of providing an accessible and meaningful experience for these students. Otherwise, as she thought, learning would become a source of frustration for these students.

The data also showed that Arya spent a lot of time to improve her AI-literacy skills to develop the materials for visually impaired students. For example, when asked how she ensures the accessibility of educational content for these students, Arya explained her use of generative audio-based AI tools to create auditory instructional materials and the JAWS screen reader to increase self-access of these students to the materials with their tablets:

> *"In reading classes, we often have texts that require approximately 20 minutes of in-class reading. Therefore, I prepare audio versions of these texts at home for visually impaired students. Occasionally, I use AI tools such as TTS-Maker; however, these tools are not always fully efficient. I often record the audio by myself. At the beginning of the lesson, I uploaded these audio files to the students' computers, allowing them to access the materials using the JAWS screen reader. Then, they listen audios through headphones while their classmates simultaneously reading the same texts silently."*

It was also evident that, similar to instructional resources, assessment materials also require extensive adaptation and preparation. While Arya was explaining the multiple constraints these students face during exams, she mentioned about limited allocated time. She said:

> *"To assess these students' improvement, it is necessary to employ alternative exam formats. This adaptation requires a careful coordination and supervision*

among teachers and the school administration. We generally reformat exam papers into an accessible digital version, enabling these students to access through screen readers like JAWS or through audio formats that require supplementary audio players. This entire process can be effectively done just with teachers possessing technical and pedagogical knowledge."

Arya also stressed that:

"University policies often restrict the extra time granted to visually impaired students during exams, which can limit students' ability to fully demonstrate their knowledge".

This statement indicates that in addition to challenges related to pre-assessment process, Arya must also navigate institutional regulations, such as university policies that limit the additional time allocated to visually impaired students.

Visions for students in mainstream education

The final theme identified from the data was vision of students in mainstream education. This finding highlights a significant tension that might be unique to the English as the Medium of Instruction (EMI) context. It seems that while inclusive practice requires simplifying language to ensure visually impaired students access to course content, this directly conflicts with the institutional goals to use EMI. As Arya stated:

"Compared to their peers in the same class, visually impaired students have more limited linguistic resources in English. Since they learn English primarily through auditory input, they are often prone to misusing certain words. Simplifying the language could help them understand the content more easily; however, given the educational goal of institutions, such simplification might negatively influence their overall learning outcomes".

This statement clearly shows that her professional concern extends beyond the current semester given that she is trying to make choices that maximize students' long-term academic success.

Resourcing Factors

Socially perceived professional roles

Socially perceived professional roles refer to the shared beliefs, norms,

and expectations of a collegial community. These roles are the most influential dynamics of teacher agency, which characterised with the establishment of supportive professional relationships. They enable teachers to collaborate with colleagues and exchange expertise on inclusive practices. The following excerpt illustrates Arya's appreciation for the contributions of her colleagues in this process:

> *"Through collegial collaboration, I engage in in-depth discussions on inclusive pedagogies, instructional and assessment-related challenges, and I also develop some of my abilities to adapt materials for the students with diverse needs…A colleague of mine experienced with visually impaired student helps me a lot. Thanks to him, I know what to do."*

Being highly motivated to exchange practices, ideas, knowledge, and materials with others, Arya demonstrates an awareness of the value of professional collaboration for inclusive education. She repeatedly emphasized her own efforts to maintain communication with a former colleague who was experienced in working with students with disabilities, identifying him as "*primary sources of guidance and support."*

In one of the interviews, Arya mentioned that she regularly participated in a group of teachers engaged in curriculum development at her university. Nonetheless, discussions within this group rarely addressed the real needs of students with disabilities. Despite this negativity, Arya seems to have a strong desire to collaborate more actively with her colleagues on inclusive practices. With her own words: "Such professional involvement greatly enhances her agency for inclusive education, improves her competencies in inclusive education, and positively impacts her overall teaching practice."

Relationships

In line with relational pedagogical perspectives, relationships mean interpersonal dynamics that shape the learning environment. Arya's following reflections highlight the importance of maintaining positive dialogue in fostering inclusive and responsive learning environments. As seen from the excerpt, she acknowledged that she was not always able to meet all the specific needs of visually impaired students despite having

commitment to exercise her agency.

> *"At first, I faced considerable difficulty in teaching visually impaired students. I was unaware of their specific expectations and learning preferences. So, they criticized me a lot. Interestingly, I later realized that these students often have a clear sense of what works best for them and can effectively express their own needs when given the opportunity and encouragement to do so."*

Personal beliefs and values

When Arya was asked about her motivation to be an English teacher, her moral values and beliefs about the role of teachers came to the surface. The first indication of such beliefs emerged in Arya's reflections, where she positioned teachers as agents of change and advocates for inclusive education.

> *"I believe that teaching is a job that adds value and meaningfully impacts the lives of others. Only teachers have power to lessen the inequalities existing among schools by creating supportive, equitable, and inspiring learning environments".*

From Arya's statement below, it is also evident that while teachers might feel constrained by environmental limitations, they can still be devoted, knowledgeable, and proactive in promoting equity. To her:

> *"It is a kind of responsibility of teachers to create a safe and equitable learning environment. Also, it is teachers' responsibility to prevent prejudice and any form of exclusionary practice that may harm students' well-being".*

This understanding of inclusion extends beyond classroom instruction to encompass ethical and emotional dimensions of teaching, where every child is equally valued regardless of their background.

Past teaching experiences

A perceived sense of competence, stemming from her past teaching experiences, emerged from Arya's responses as a key source that boosts her agency for inclusive education. Particularly, she expressed a sense of comfort with navigating uncertainty while actively advocating for fairness and inclusion:

> *"Working for inclusion is not always clear-cut, I find myself in a huge conflict. Frequently, the classroom realities don't match with what educational policy*

expects from teachers. But, I know my capability, I can do my best to promote inclusion under any circumstances."

Her teaching experience was evident also in her ability to adopt varying pedagogical approaches and transfer effective practices to create more inclusive learning environments. As she expressed:

> *"This is my 13th year in the profession, so I consider myself as a quite experienced teacher. It doesn't take me long to understand how to differentiate instruction and activities for students with varying proficiency levels. Even though I do not have prior experience with visually impaired students, I don't think this is something I cannot manage".*

This excerpt indicates that past professional experiences function as an enabling condition for her agency and they allow Arya to take initiative, sustain her motivation in the face of contextual challenges. Such experiences are also essential for teachers to act autonomously and implement innovative practices that promote inclusion.

Moreover, by extending her efforts to extracurricular activities, Arya seems to actively cultivate valuable spaces to enhance these students' confidence, self-expression, and academic engagement. These activities, as she stressed, serve as key resources for her agency, granting her opportunities to exercise autonomy, apply creative pedagogical strategies, and observe her teaching's impact beyond formal classroom constraints.

> *"I invited the students to visit me during my office hours and encouraged them to share their expectations and learning preferences. Together, we explored strategies that could support their learning, could discover what works best for them. However, studying their major subjects in English at the university level is also a new and challenging experience for them, so they require additional guidance and structured support to navigate the demands of academic language learning effectively".*

These all show how, despite the contextual challenges, she strove to adapt classroom tasks sensitively and avoided practices that could reinforce inequality.

Discussion

This single-case study aimed to provide an insight into perceived tensions

of EFL teachers while exercising their agency for inclusive education and the resources enable EFL teachers to cope with their perceived tensions. This study has a specific emphasis on teachers educating visually impaired students in a mainstream higher-educational context. Drawing upon an ecological perspective of teacher agency and utilizing Li and Ruppars' (2021) framework, the study highlights the temporal, relational, and context-dependent nature of EFL teacher agency for inclusive education. The data collected through the semi-structured interviews revealed the interconnectedness of specific ecological factors and EFL teacher agency for inclusive education.

First of all, rather than illustrating iterational dimension of agency separately, Arya's statements indicate an interplay between the iterational and practical-evaluative dimensions of teacher agency. Teachers' prior experiences, personal beliefs, and moral values regarding inclusive education are identified as the key factors influencing both the continuity and change in their inclusive practices in immediate teaching context. These insights are similar to the study conducted by Wang (2022) showing how accumulated professional experiences interact with her present decision-making and classroom practices. Also, consistent with Chu et al. (2021), in this present study, prior successful teaching experiences were found to reinforce their confidence. But this result extends their understanding by revealing that prior professional experiences not only provide teachers a sense of competence but also enables them to take initiatives by sustaining motivation to act for inclusion even in constraints environments. In Arya's case, although she lacked direct experience with visually impaired students, her prior experiences allowed her to demonstrate confidence and adaptability in developing inclusive strategies for visually impaired students. Such experiences helped her adopt varied pedagogical approaches and transfer effective past practices to create more inclusive learning environments. These results underscore the importance of professional development (PD) that builds on teachers' existing strengths and resilience capacity while also addressing teachers'

insufficient pre-service and in-service training for meeting diverse learner needs (Themane & Thobejane, 2018).

Expanding upon the work of Li and Ruppar (2021), this current study demonstrates that sources of teacher agency are not limited to teaching experiences, but also include personal beliefs and moral values. Arya's reflections revealed that she views inclusion not merely as a pedagogical requirement but as a moral responsibility and social commitment. Despite institutional constraints, such commitments seem to empower her to act intentionally and make pedagogical choices aligned with her values of equity. This result confirms the previous findings that inclusive agency is continuously shaped by tensions among dominant educational discourses, teachers' professional roles, and moral commitments (Naraian & Schlessinger, 2018).

For the practical-evaluative dimension, a closer look at the school structural variables influencing teacher agency yielded three additional evidences on the individual's agency for inclusive education. Firstly, exercising their agency can be seen a decision-making process that allows teachers to use their judgement considering immediate contextual conditions rather than simply following mandated top-down rules. It shows a degree of individual autonomy. This kind of autonomy is significant to incorporate changes into their daily teaching schedules and practices as mentioned by Pappa et al. (2019). As Arya mentioned her sustained efforts to foster inclusion were limited several times due to top-down leadership of the directors. For example, when she decided to modify her lesson plans and adjust in-class activities to better accommodate visually impaired students, she was required to strictly follow a standardized curriculum and complete content within a fixed timeframe. These statements confirm that hierarchical school systems are closely linked with less individual autonomy (Tao & Gao, 2021), which is a key component of teacher agency for inclusive education.

Secondly, the data analysis brings the matter of perceived professional roles to the fore within a collegial community. Identified as the most

influential dynamic of teacher agency, perceived professional inclusive roles, are established with supportive professional relationships. This might be because the shared norms enable teachers to collaborate with colleagues and exchange expertise on inclusive practices (Lyons et. al, 2016). Arya exemplified this dynamic through her strong motivation to share pedagogical ideas, materials, and experiences with colleagues, demonstrating an awareness of how collaboration enhances inclusive education. She frequently emphasized maintaining communication with a former colleague who had experience teaching students with disabilities, and seeing him as a primary source of guidance and support. This argument was echoed by other studies (Eteläpelto et al., 2015; Little, 2002), stressing the importance of support including networking with like-minded teachers (Schweisfurth, 2006).

Thirdly, Arya's statements reveal a major tension stemming from the inaccessibility of instructional and assessment materials for visually impaired students. In contrast to their colleagues, teachers in classrooms including students with disabilities need to adopt additional professional roles, such as a material developer. For example, in textbook-supported mainstream universities in Türkiye, there are no ready-made materials tailored to the needs of visually impaired students; the assessment materials are no exception. Arya demonstrated resilience despite having limited resources, a finding consistent with the results of Themane and Thobejane (2018). This indicates that ensuring meaningful learning experiences for visually impaired students is possible, but only if teachers are empowered and supported. Therefore, to ensure the sustainability of inclusive education, it is recommended to address the workload, recognition, and adequate provision of resources in educational institutions.

Concerning the projective dimension, Arya demonstrates a forward-looking approach while exercising her agency. She is aware that simplifying language can make course content more accessible for visually impaired students who rely primarily on auditory input.

Nevertheless, she also recognizes that such simplification may limit these students' exposure to complex language structures and advanced-level vocabulary, potentially hindering their future academic proficiency and acquisition of necessary terminology. This forward-looking stance exemplifies how teachers exercise agency not only to respond to present challenges but also to envision and work toward equitable and meaningful educational futures for the students (Li & Ruppar, 2021).

Conclusion

This study investigated the tensions and sources related to EFL teacher agency for inclusive education in a higher-education university context. In relation to the first research question - "What tensions do EFL teachers perceive while exercising agency for inclusive education?"- four themes emerged: school organizational set-up, heavy-duty accountability mechanisms, accessibility of instructional resources and assessment materials, and visions for students in mainstream education. For the second research question – "What sources enable EFL instructors to cope with their perceived tensions while exercising agency for inclusive education?" - four themes were identified: socially perceived professional roles, relationships, personal beliefs and values, and past teaching experiences.

This study draws attention to the critical need for systemic support that should be given to the EFL teachers working with disabled students in a higher-education context. It also notes that even experienced educators face uncertainty when addressing the specific needs of visually impaired students. Consequently, implications for teacher education are clear. Firstly, to mitigate these tensions, teacher education programs should expand their scope beyond linguistic and pedagogical proficiency to include a deep understanding of accessibility and disability rights. Secondly, to sustain teacher agency in the workplace, schools should cultivate collaborative communities of practice. These networks serve as an essential ecological resource, allowing teachers to transform individual

uncertainties into collective problem-solving strategies, ultimately fostering a more equitable learning environment.

This study contributes to the literature by unpacking the tensions and resources shaping teacher agency in the under-researched context of higher education. Nevertheless, the findings should be interpreted with caution given the limited number of participants. While a larger sample size would have increased generalizability, the rarity of the specific research context—an English-medium mainstream university integrating visually impaired students—posed significant recruitment challenges. Therefore, rather than seeking broad generalization, this study serves as an exploratory 'critical case.' Future studies should aim to replicate this ecological analysis across diverse university settings to determine whether the tensions identified here are systemic to higher education or specific to the unique institution investigated in this study.

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Ethical Declaration and Committee Approval

This study was conducted in accordance with the principles of scientific research and publication ethics. Ethical approval for this research was obtained from the Ethics Committee of Çağ University.

The Pen Meets the Algorithm: Learners' Evaluation of AI Scoring and Feedback in EFL Writing Assessment

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In academic contexts, the ability to communicate ideas clearly through writing is widely recognized as a core component of successful language learning. Formative feedback on student writing plays a crucial role in this process, which helps learners understand their current level of achievement and guide them on how to improve (Olsen & Hunnes, 2023). However, although students often prefer teacher feedback, and it may outperform peer or self-feedback, the effort required to provide detailed written commentary substantially increases teachers' workload (Zhao, 2010). In EFL classrooms, particularly in the crowded ones, teachers struggle to provide timely and individualized feedback since time constraints frequently limit their ability to focus on both global and local aspects of student texts (Tran, 2025). These practical constraints have prompted calls for alternative feedback mechanisms that can sustain learning while reducing teacher burden (Baz & Hasırcı Aksoy, 2025).

One response to this challenge has been the development of Automated Writing Evaluation (AWE) systems that make use of natural language

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processing to analyze student writing and offer corrective suggestions. Research indicates that AWE can deliver timely and individualized feedback and has a positive impact on students' writing performance, while it potentially decreases teachers' marking workload (Fleckenstein, Liebenow, & Meyer, 2023). Recent advances in generative artificial intelligence (AI), such as Large Language Models (LLMs) like *GPT-4*, offer the capacity to produce more detailed and personalized feedback than earlier rule-based systems (Tran, 2025). Studies comparing AI-generated feedback with teacher feedback have found mixed results: some report comparable learning outcomes and note that AI feedback can be more readable and extensive, while others highlight concerns about accuracy and long-term retention (Jacobsen & Weber, 2025; Naz & Robertson; 2024). Moreover, scholars caution that decisions to adopt AI-based feedback should be informed by learner perceptions and considerations of trust and usefulness (Escalante et al., 2023).

Despite growing interest in AI-assisted writing support, most existing work has focused on typed texts, while pen-and-paper essays remain common in examinations and coursework worldwide. Handwritten essays continue to be widely used for student performance evaluation because of their reliability, yet assessing large numbers of handwritten scripts is a time-consuming and monotonous task (Srihari et al., 2006). Early research integrating Optical Handwriting Recognition (OHR) with Automated Essay Scoring (AES) demonstrates that such systems could provide timely feedback and reduce the costs of large-scale assessments (Yesilyurt & Sevli, 2024). However, empirical studies examining AI-generated feedback on digitized handwritten essays, particularly in EFL contexts, are scarce. Addressing this gap is vital for sustainable learning because AI-supported assessment may allow instructors to deliver detailed feedback quickly, even in large classes. Therefore, it can free time for higher-order teaching tasks and foster students' capacity to engage in self-directed revision. The present study therefore examines how AI scoring and feedback operate on scanned handwritten essays produced by EFL learners. It investigates both algorithm-reported changes across drafts and

learners' perceptions of the feedback's usefulness, clarity, and trustworthiness.

Literature Review

AI-Based Writing Assistants and Learner Engagement with Automated Feedback

AI-based writing assistants have become a prominent strand of Computer-Assisted Language Learning (CALL), which has extended early work on Automated Essay Scoring (AES) and Automated Writing Evaluation (AWE) into more interactive and feedback-oriented systems. Early AWE research using engines such as e-rater showed that automated systems can approximate human ratings and provide basic feedback on organization, grammar, and mechanics (Attali & Burstein, 2006). More recent syntheses indicate a continuum ranging from rule-based grammar and style checkers to machine learning–driven AWE platforms and Large Language Model (LLM)–based assistants that offer real-time suggestions, paraphrases, and discourse-level comments (Godwin-Jones, 2022; Shi & Aryadoust, 2024). Systematic reviews of AI-based Automated Written Feedback (AWF) in tertiary English writing contexts highlight three core foci: technical performance and validity, learners' perceptions and engagement, and the impact on writing outcomes. Studies report mixed but generally positive effects, especially when systems are used formatively (Ding & Zou, 2024; Shi & Aryadoust, 2024).

Within this broader landscape, studies of specific platforms in EFL settings show both benefits and risks. Research on AWE as a feedback channel in online EFL courses suggests that frequent interaction with the tool can support self-regulated revision and provide additional learning opportunities beyond teacher comments (Yildiz & Kuru Gönen, 2024). A systematic review of *Grammarly* in L2 English writing concludes that the tool helps learners reduce grammatical and lexical errors and increase fluency, while warning that its feedback may encourage relatively formulaic language and cannot replace instruction on content and

argumentation (Dizon & Gayed, 2024). Purpose-built assistants such as *AI KAKU*, which combines next-word prediction and reverse translation, have been shown to lower cognitive load for low-level tasks and facilitate syntactic complexity in adult EFL learners' problem–solution writing, even if gains in lexical diversity are more modest (Gayed et al., 2022).

The emergence of LLMs and generative AI has transformed the ecology of writing assistance in L2/EFL contexts. Survey and case-based work indicates that university EFL students use a range of AI writing tools (including LLM-based systems) to obtain both quick and individualized feedback. They perceive them as supportive of autonomy and confidence but express concerns about cultural appropriateness, creativity, and the ethical limits of AI use (Nhan, Hoa, & Quang, 2025). Empirical studies focusing on *ChatGPT* and related tools report that AI-assisted feedback can enhance academic writing performance and motivation when embedded in pedagogically structured tasks (Song & Song, 2023). At the same time, these studies underscore recurrent issues such as hallucinated content, opaque reasoning, and the danger that students accept AI suggestions uncritically (Ding & Zou, 2024; Shi & Aryadoust, 2024).

To understand how such tools support learning, recent work foregrounds learner engagement with automated corrective comments. Drawing on the three-dimensional model of behavioral, cognitive, and affective engagement (Fredricks et al., 2004), L2 writing research shows that students differ markedly in how they notice, interpret, and act on feedback from teachers, peers, and technologies (Han & Hyland, 2015). Studies of AWE and grammar checkers indicate that automated feedback can promote multiple drafting and surface-level accuracy, but its impact depends crucially on what learners do with the comments (Liu & Yu, 2022). Multiple case studies of Grammarly-mediated Automated Written Corrective Feedback (AWCF) reveal wide variation in how deeply students process suggestions, whether they verify them using external resources, and how much trust they place in the system (Koltovskaia, 2020; Saeli, Rahmati, & Koltovskaia, 2023). Comparative work shows

that students attribute different degrees of authority and pedagogical value to teacher versus automated feedback, which shapes whether automated comments are used as learning opportunities or merely as proofreading aids (Zhang & Hyland, 2018). More recently, research on *ChatGPT* as an AWCF provider documents rich dialogic engagement—students querying, negotiating, and sometimes contesting AI explanations—while also raising concerns about overreliance when learners lack the linguistic knowledge or critical stance to evaluate suggestions (Yan, 2024; Ranalli, 2021). Conceptualizations of feedback literacy—as the understandings, capacities, and dispositions that enable learners to make sense of and use feedback—are increasingly invoked to explain why the same automated feedback can lead to very different learning trajectories (Carless & Boud, 2018; Winstone & Carless, 2019).

Overall, the literature portrays AI-based writing assistants as powerful but double-edged: they can support accuracy, complexity, and revision behavior, yet their value depends on learners' engagement, feedback literacy, and the pedagogical conditions under which they are used. Importantly, most existing work has focused on digitally composed texts in online or computer-based settings, leaving relatively unexplored how learners experience and act on AI feedback when working with handwritten exam-style essays.

AI-Supported Feedback in Handwritten Exam Contexts

Despite the rapid expansion of computer-based assessment, handwritten exams remain entrenched in many systems, especially in high-stakes and large-scale contexts. Paper-and-pen responses are often seen as logistically robust and fair, and in language education they are still regarded as closer to "real" exam conditions, particularly where access to devices and institutional infrastructure for computer-based testing is uneven. Yet the persistence of handwritten formats sits uneasily with contemporary expectations for rich formative feedback, given the workload constraints that limit teachers' ability to provide detailed commentary on each script in large EFL classes.

Research on processing handwritten responses with AI has primarily focused on automated scoring rather than formative feedback. Early work by Srihari et al. (2006) combined offline handwriting recognition with latent semantic analysis to assign scores to handwritten essays, demonstrating that machine scores can approximate human ratings when handwriting is sufficiently legible and recognition accuracy is high. Subsequent studies have proposed pipelines for automated evaluation of handwritten answer scripts using segmentation, handwriting recognition, and answer-similarity models, reporting promising accuracy in school and university examinations, often in STEM or short-answer contexts (Ravikumar et al., 2018).

A critical hinge in these workflows is Optical Character Recognition (OCR). Reviews of handwritten OCR highlight enduring challenges related to variable handwriting styles, script complexity, page layout, and image quality (Memon et al., 2020). For longer, multi-sentence texts, small misrecognitions can accumulate and distort meaning, which is particularly problematic for L2 writing assessment, where subtle lexical and grammatical choices are central to judging proficiency. From the perspective of AI-supported feedback, OCR quality is therefore not a peripheral technical detail: if the digitized text fed into a writing assistant contains substantial character- or word-level errors, any subsequent scoring or feedback risks being misaligned with what students actually wrote.

Taken together, this work suggests that while AI-supported processing of handwritten responses is technically feasible, most implementations remain experimental and rarely extend to extended EFL essays or to formative, comment-level feedback. There is thus a clear need to examine how AI-generated comments operate in hybrid assessment ecologies where handwritten exam essays are digitized, processed via OCR, and then fed into an AI writing assistant that provides rubric-aligned feedback.

Sustainable Assessment, Feedback Literacy, and Conceptual Lenses

In EFL writing pedagogy, written feedback is simultaneously central to

learning and chronically constrained by time and workload. Teacher commentary on student texts is consistently described as one of the most labor-intensive aspects of language teaching, and teachers often struggle to provide feedback that is timely, detailed, and dialogic under heavy marking loads (Bailey & Garner, 2010; Evans, 2013). These pressures are particularly acute when essays are handwritten and cannot easily be annotated with digital tools.

The notion of sustainable assessment offers a productive lens on this tension. Boud (2000) conceptualized sustainable assessment as assessment that not only certifies current performance but also equips learners to meet future learning demands. Building on this, Boud and Soler (2016) argue that sustainable assessment requires tasks and feedback processes that foster evaluative judgement, self-regulation, and learner capacity to use feedback independently. Assessment systems that rely almost exclusively on teacher-written comments are difficult to sustain at scale and may not cultivate long-term learner independence.

Feedback literacy has emerged as a key construct linking sustainable assessment to writing classrooms. Student feedback literacy encompasses the understandings, capacities, and dispositions that enable learners to appreciate feedback, make informed judgments, manage affect, and take action on comments (Carless & Boud, 2018). Reviews of feedback research show that, without such literacy, students often misinterpret or ignore feedback, regardless of its technical quality (Evans, 2013; Nieminen & Carless, 2023). In L2 and EFL writing, empirical work indicates that students' conceptions of feedback range from viewing it as teacher-controlled correction to seeing it as a resource for self-regulated learning; these conceptions shape how feedback is actually used (Zhan, 2019). Scale-development studies have operationalized writing feedback literacy and linked higher levels to more proactive engagement and deeper learning from comments (Zhan, 2021; Han & Xu, 2019; Zhan, Wan, & Each, 2025).

Parallel research examines teacher and institutional dimensions. Teacher

feedback literacy encompasses the knowledge, skills, and dispositions to design feedback processes, manage relational dynamics, and support students in making sense of and acting on feedback (Carless et al., 2011; Boud & Dawson, 2021; Carless & Winstone, 2020). In EFL contexts, qualitative studies show that teachers are often aware of the pedagogical importance of feedback but feel constrained by class size, time, and exam-driven curricula when trying to enact dialogic, learner-centered practices (İstencioğlu, 2022). The development of feedback literacy scales in Türkiye indicates growing institutional interest in measuring and supporting these capabilities (Yıldız et al., 2022).

These strands converge on a core dilemma for EFL writing: how to design feedback processes that are sustainable for teachers and simultaneously build students' feedback literacy. Sustainable assessment perspectives encourage diversifying feedback sources—teacher, peer, self, and technology-mediated—while supporting learners to critically evaluate and integrate these inputs (Carless & Boud, 2018; Zhan, 2019; Boggs & Manchón, 2023). AI-supported writing feedback sits directly at this intersection. On the one hand, AI tools offer the prospect of reducing marking burden by providing rapid, rubric-aligned suggestions at scale, including in contexts where essays are handwritten and then digitized. On the other hand, introducing powerful feedback technologies without cultivating feedback literacy risks exacerbating existing problems: students may over-trust AI comments, become dependent on them, or fail to develop evaluative judgement (Nieminen & Carless, 2023).

Because the participants in the present study are pre-service English teachers, three interrelated constructs are particularly salient as conceptual lenses: learner agency, trust, and emerging teacher identity. From sociocultural and ecological perspectives, agency is understood as the capacity to act purposefully within and against structural constraints, emerging from the interaction of learners' histories, goals, emotions, and environmental affordances (Ahearn, 2001; van Lier, 2004; Mercer, 2012). In feedback research, "learner feedback agency" foregrounds how

students strategically seek, interpret, and use—or deliberately resist—feedback in ways aligned with their priorities and perceived risks (Han & Hyland, 2015). Trust refers to learners' confidence in the competence, fairness, and benevolence of the feedback source; in AI-rich environments, calibrated trust is crucial to avoid both uncritical acceptance and wholesale rejection of automated suggestions (Ranalli, 2021; Ding & Zou, 2024).

Emerging teacher identity research shows that pre-service teachers' professional selves are multiple, dynamic, and negotiated over time through prior learner experiences, practicum encounters, and participation in communities of practice (Beauchamp & Thomas, 2009; Wenger, 1998; Barkhuizen, 2017; De Costa & Norton, 2017). In the Turkish EFL context, qualitative work has documented how pre-service teachers' identities are shaped by local institutional cultures and evolving understandings of pedagogy and assessment (Taşdemir & Seferoğlu, 2022). The rapid diffusion of digital and AI tools intensifies these negotiations: integrating AI into writing assessment can prompt teachers (and teacher candidates) to reposition themselves in relation to content, learners, and institutional expectations, sometimes experiencing tensions between being facilitators, evaluators, and "tech adopters" (Godwin-Jones, 2022; Moorhouse & Kohnke, 2024).

In this study, learner agency, trust, and emerging teacher identity function as interlocking sensitizing concepts for interpreting pre-service EFL teachers' revision logs and focus-group narratives. They allow AI-generated feedback on handwritten exam essays to be understood not simply as a technical intervention, but as a site where students negotiate how to use or resist AI suggestions, how much confidence to place in an automated system, and how they envision their future roles as teachers who may themselves deploy—or critically constrain—AI-supported assessment in their own classrooms.

Methodology

Research Design

This study adopted a qualitative case study design to explore how a single cohort of pre-service English teachers experienced and interpreted AI-generated feedback on handwritten cause-and-effect essays in a regular writing course. Framed within an interpretivist paradigm, the research aimed to produce an in-depth, context-sensitive account of participants' meaning-making rather than statistical generalization. The case was bounded by one assignment and course in a specific institutional setting, and drew on multiple qualitative data sources—revision and reflection logs, written self-evaluations, and a focus-group interview—to capture diverse perspectives and enable triangulation.

Context and Participants

The study was conducted in an undergraduate English language teacher education program at a state university in Türkiye. The program prepares pre-service English teachers for K–12 schooling through a curriculum which includes language skills, linguistics, methodology, and practicum components. At the time of the research, the university was beginning to explore AI-supported tools in teaching, but there was no formal institutional policy or systematic training on AI in language education. This study therefore focused on one intact cohort as a bounded case of AI-supported feedback within a regular writing course.

The participants were 39 pre-service English teachers (27 female, 12 male), aged 17–21, enrolled in a required academic writing course. All had prior coursework in paragraph and essay writing and were familiar with basic argumentative and cause-and-effect structures, as well as expectations for coherence, organization, and language accuracy in EFL writing. Their experience with AI-based writing tools (e.g., *ChatGPT* or other assistants) was limited and largely informal rather than embedded in assessment. The focal task was an in-class, handwritten cause-and-effect essay completed under exam-like conditions, which mirrors common high-stakes writing assessments in Turkish EFL programs. AI-generated

feedback was introduced by the instructor as an experimental extension of existing feedback practices, not as a replacement for teacher assessment. Students were informed that their course grades would not depend solely on AI output.

Within the overall cohort, nine students were purposively selected for a follow-up focus group, based on distinct patterns in their revision and reflection logs (e.g., relatively high, moderate, or low acceptance of AI suggestions). This yielded a range of perspectives, including students who tended to trust and rely on AI, those who combined AI input with their own judgement, and those who were more skeptical or resistant. All 39 students contributed written data (revision/reflection logs and self-evaluation notes), while the nine focus group participants additionally contributed to a collective, discursive exploration of AI feedback in the shared classroom context.

Data Collection Instruments

In the qualitative-only design, three instruments were used to generate learner-centered data: (a) revision and reflection logs, (b) written self-evaluation notes, and (c) a semi-structured focus group interview. Together, they documented what pre-service teachers did with AI-generated feedback, how they reasoned about their decisions, and how they positioned AI in relation to their own judgement and emerging teacher identities. All three instruments were aligned with the research questions on students' experiences and evaluations of AI feedback (RQ1) and their interpretations and responses to AI suggestions during revision (RQ2). Numerical outputs or indicative scores from the AI system were retained only as contextual background and were not analyzed quantitatively.

The revision and reflection log was the core tool for capturing micro-level engagement with AI feedback. During the revision session, each student received their original handwritten essay alongside AI-generated comments and, for each substantive suggestion (e.g., wording, grammar, cohesion, organization), indicated whether they accepted it, partially

accepted/adapted it, or rejected it, briefly justifying their choice (e.g., correctness, fit with intended meaning, style preferences, or trust in the AI). Many logs ended with short reflections on the overall usefulness and limitations of the feedback, adding evaluative and affective insights.

The written self-evaluation notes elicited more holistic reflections immediately after revision. The students briefly commented on how they felt about their revised version, what they believed they had learned from engaging with AI feedback, and how they might use or avoid similar tools in future academic writing or teaching. Finally, a semi-structured focus group with nine volunteers—selected to represent contrasting engagement patterns—probed shared meanings and tensions in a 60-minute discussion supported by artefact-based prompts (e.g., selected AI comments and excerpts from revised texts). Topics included perceived usefulness and limitations, moments of trust or doubt, reasons for accepting or resisting suggestions, and perceived alignment between AI feedback and participants' identities as future EFL teachers. The interview was audio-recorded and transcribed verbatim.

Procedure

The data collection was integrated into the normal flow of the course across two consecutive weeks to preserve ecological validity. All activities were carried out by the course instructor, who also served as the researcher, with clear separation between routine assessment and the research-focused use of AI feedback. Ethical approval was obtained, the students were informed that participation (especially in the focus group) was voluntary and unrelated to grading, and written consent, pseudonyms, and secure data storage were ensured.

In Week 1, the students wrote an in-class handwritten cause-and-effect essay under exam-like conditions as part of regular course requirements. After the session, the instructor scanned the scripts and uploaded them to an AI-based writing assistant capable of recognizing the text and generating rubric-aligned feedback on content, organization, and language use. The system also produced indicative scores, which were kept only as

contextual information. For each student, the original essay, AI comments, and scores were compiled into a feedback package for use in the following week.

In Week 2, the students received their feedback package (printed or digital, depending on classroom facilities) and were asked to revise their essays by engaging carefully with the AI suggestions. They were explicitly told that they were free to accept, adapt, or reject any suggestion based on their own judgement. During the revision session, they completed the structured revision and reflection log, recording decisions on substantive suggestions and briefly explaining their reasons. Immediately afterwards, they wrote short self-evaluation notes describing their overall experience, perceived changes to their texts, and intended or imagined future use of similar tools.

At the end of the week 2 session, the volunteers were invited to participate in a follow-up focus group on AI feedback experiences. Nine students were purposively selected to ensure variation in gender and engagement patterns (high, moderate, and low acceptance of AI suggestions). The focus group, conducted later that week in a seminar room, followed a semi-structured protocol and used artefact-based prompts (anonymized AI comments and excerpts from texts and logs) to explore how the participants evaluated AI feedback, justified revision decisions, and envisaged the role of AI in their future teaching. The session was audio-recorded and transcribed verbatim.

Throughout all stages, AI-generated scores were not used for grading and were not subjected to statistical analysis. They formed part of the authentic feedback environment within which students made decisions about their writing, while the primary data consisted of their written and spoken accounts of those decisions and experiences.

Data Analysis

All qualitative data (revision and reflection logs, written self-evaluation notes, and the focus group transcript) were analyzed using reflexive thematic analysis within an interpretivist framework. The researcher first

engaged in repeated, immersive reading of all texts to gain an overall sense of participants' experiences and initial patterns of meaning.

Line-by-line, inductive coding was then conducted, attending to (a) how students evaluated AI feedback, (b) how and why they accepted, adapted, or rejected particular suggestions, and (c) how they talked about learning, confidence, and their future teacher identities. Codes from the different data sources were compared and iteratively grouped into candidate themes that captured recurrent ways of experiencing and responding to AI-generated feedback.

Themes were reviewed and refined in relation to both the coded segments and the full data set, with attention to internal coherence and distinctiveness across themes. The final thematic structure was used to answer RQ1 and RQ2, supported by illustrative excerpts from logs, self-evaluations, and the focus group. Throughout the process, analytic memos were used to document decisions, question assumptions, and reflect on the researcher's dual role as course instructor and analyst.

Ethical Considerations

All participants were informed about the purpose and procedures of the study. They were informed that participation was entirely voluntary, and their written consent was obtained. The participants were assured that neither participation nor the content of their responses would affect their course grades.

To protect confidentiality, all names were replaced with pseudonyms and potentially identifying details were removed from transcripts and reported excerpts. Handwritten scripts, digital scans, AI feedback files, and interview transcripts were stored on password-protected devices accessible only to the researcher. When using the AI-based writing assistant, only the information necessary to process the essays was uploaded, and no superfluous personal identifiers were shared. These measures were implemented to safeguard participants' privacy and uphold ethical standards in AI-supported educational research.

Findings

The qualitative analysis of the revision and reflection logs, self-evaluation notes, and the focus group transcript yielded three overarching themes that directly address the research questions. Together, these themes explain how pre-service English teachers experienced and evaluated the AI feedback (RQ1) and how they subsequently interpreted and responded to its suggestions during revision (RQ2). The final thematic structure consists of: (1) *The double-edged sword: the AI as a blunt but valuable mentor*, (2) *The trust deficit: navigating the AI's inaccuracies and contextual blindness*, and (3) *The pathway to action: actionability as the key to revision.*

Each theme is presented below with illustrative extracts to show how participants made sense of AI-generated feedback on their handwritten cause-and-effect essays.

The Double-Edged Sword – The AI as a Blunt but Valuable Mentor

This first theme captures the fundamental tension in how students experienced and evaluated the AI feedback (RQ1). On one side of this tension, the style of the feedback was frequently described as "brutally honest, hyper-critical, and emotionally disheartening." The participants repeatedly emphasized that the AI did not appear to care about their feelings and that its tone made them feel judged or dismissed rather than supported. Several students characterized the feedback as merciless:

"Acımamış. Hiç acımamış... Bana üstü kapalı şekilde tekrardan yaz. Hatta konuyu öğren öyle yaz demiş hocam." ("It showed no mercy. None... It implicitly told me to rewrite it. It even told me to learn the topic and then write, teacher.")

For some, this led directly to a sense of inadequacy and self-doubt:

"Ben kendimi çok yetersiz hissettim hocam." ("I felt very inadequate, teacher.")

In these accounts, the AI appeared as an unfeeling critic that exposed weaknesses without offering emotional cushioning. The students did not

simply perceive “negative comments”; they experienced the feedback as a personal evaluation of their competence, which could be demotivating or discouraging in the short term.

Yet, on the other side of the same tension within Theme 1, many students also framed this very directness as a valuable quality, while concerns about inaccuracies and contextual blindness are addressed in Theme 2. The “straightforward, teacher-like” nature of the comments was evaluated positively, especially by those who saw clear, concrete indications of what to improve. For these participants, the AI’s lack of politeness was interpreted as efficiency and honesty rather than hostility:

“Net olması gerçekten hani daha kendimi nasıl geliştirebileceğimi gösterdi.”
(“Its clarity really showed me how I could improve myself.”)

“Örneğin bana verdiği feedback gerçekten bir öğretmenin onu okusaydı vereceği bir feedback’ti.”

(“For example, the feedback it gave me was really the feedback a teacher would have given if they had read it.”)

In this sense, the AI was also experienced as a mentor figure: demanding, blunt, and emotionally distant, but nonetheless helpful in pointing out specific weaknesses and guiding revisions. The same textual features—direct criticism, explicit identification of problems, and firm evaluative language—were therefore experienced as both painful and productive.

Overall, Theme 1 shows that participants simultaneously constructed AI as a harsh critic and a respected, if unfeeling, mentor. The ambivalence here is primarily about the *emotional and stylistic* character of the feedback—how it “speaks” to students—rather than about its factual correctness or contextual appropriateness, which are taken up in Theme 2.

The Trust Deficit – Navigating the AI’s Inaccuracies and Contextual Blindness

The second theme addresses the core issue of trust in students’ evaluation (RQ1) and interpretation (RQ2) of AI-generated suggestions. While some

students appreciated the AI's clarity, their confidence in the system was significantly eroded whenever they identified clear errors, logical inconsistencies, or evidence that the AI did not fully understand the task context. These moments pushed students away from passive acceptance toward a more critical stance, in which they actively judged the validity of each suggestion.

The participants described several distinct types of problematic feedback:

Technical Errors (Handwriting Recognition): In some cases, the AI misread the handwritten text and flagged words as incorrect that were, in fact, written appropriately. One student noted:

"Bazı kelimeleri yanlış yazdığımı söylemiş... 'J'yi 'y' diye diye yazmışsın demiş. Yanlış okumuş yani."

("It said I wrote some words wrong... It said I wrote 'j' as 'y'. I mean, it just read it wrong.")

Here, the problem was not the student's language, but the AI's inability to accurately interpret the script, immediately undermining its authority as an evaluator of correctness.

Contextual Errors (Task Rules): The AI also failed to recognize legitimate task-specific practices, such as using invented or simplified sources for the purposes of the essay. In one case, the student had followed instructions that allowed such "made-up" scenarios, but the AI treated them as academic misconduct:

"Sen bunları kendi uydurmuşsun diyor. Made up senaryo bunlar diyor. Bu yüzden benim puanımı buradan bayağı bir kırmış."
("It says 'you made these up.' It says, 'these are made-up scenarios.' Because of this, it docked a lot of my points.")

For this student, the AI demonstrated a lack of awareness of local pedagogical norms, making its judgements feel unfair and misaligned with the teacher's expectations.

Contextual Errors (Task Constraints): Another recurrent complaint was that the AI did not take real-world exam constraints—such as time

pressure—into account when recommending improvements:

"Benim ne kadar zamanım var. Kırk dakkam var. Onu dikkate almıyor." ("How much time do I have? I have forty minutes. It doesn't take that into account.")

Suggestions to add more examples or elaborate extensively could therefore be perceived as unrealistic, further weakening trust in the relevance of the feedback.

Logical Inconsistencies: Finally, participants reported instances where the AI seemed to apply different evaluative standards to similar essays, or to contradict itself across comments. One student compared feedback across scripts and concluded:

"Niye böyle oldu yani? P49'a kötü demiş bana iyi demiş." ("I mean, why did this happen? It told P49 [theirs] was bad but told me [mine] was good.")

Such discrepancies made the system appear arbitrary, calling into question its consistency and fairness.

Taken together, these experiences produced a "trust deficit." The students did not simply accept the AI's authority; they engaged in a cognitive process of interpreting, cross-checking, and critiquing the feedback. In doing so, they often positioned themselves as active evaluators who needed to protect their intended meaning, adhere to task requirements, and guard against what they saw as the AI's contextual blindness.

Theme 2 thus foregrounds the ways in which participants negotiated trust: they were willing to act on suggestions they perceived as accurate and contextually appropriate, but they resisted or rejected those that conflicted with their knowledge of the task, their understanding of the assignment rules, or their sense of fairness.

The Pathway to Action – Actionability as the Key to Revision

The third theme explains how students ultimately responded to AI feedback in their revisions (RQ2). Across the logs and self-evaluation notes, the primary driver for accepting and implementing a suggestion was

its *actionability*. The students repeatedly indicated that they were most likely to act when the feedback both identified a problem clearly and, implicitly or explicitly, pointed to a feasible way to fix it.

Actionable feedback combined two elements: perceived accuracy (often shaped by the trust processes described in Theme 2) and a clear "pathway" from diagnosis to revision. When these elements were present, the students described positive engagement and concrete changes to their texts:

"Çünkü feedback'e baktığımda 'Aa gerçekten bunu böyle yapabilirmişim. Yapsam gerçekten daha iyi olurmuş falan' deyip, bir iki şeyi düzelttim." ("Because when I looked at the feedback, I said, 'Ah, I really could do it like this. It really would be better if I did,' and I corrected one or two things.")

In such cases, the AI functioned as a practical writing coach, helping them see alternatives and try out improvements. This desire for feedback that clearly highlighted weaknesses and suggested ways forward emerged as a strong sub-theme:

"Eksikliklerimi söylesin ben onu geliştiririm. Ben o şekilde gelişeyim." ("Let it tell me my deficiencies; I will improve it. Let me improve that way.")

However, when the feedback was perceived as *unactionable*, the students were much more likely to ignore or reject it. Unactionable feedback was typically either too vague (e.g., generic comments about "improving coherence" without specifying where or how) or contextually unaware of task constraints. For instance, the students recognized that adding more examples or extensive elaboration might, in principle, improve their essays, but they also knew that the exam-style conditions did not allow for such additions:

"Üçüncüsü için de örnek ekle diyor. Ben zaten biliyorum ama zamanım yok."
("It says to add an example for the 3rd one. I already know that, but I don't have time.")

In these situations, the students interpreted the feedback as misaligned with the realities of the assignment and, therefore, not worth acting upon.

Theme 3, therefore, focuses on the behavioral outcomes of students' engagement with AI feedback. It shows how perceptions of emotional tone (Theme 1) and trustworthiness (Theme 2) are ultimately channeled into concrete revision decisions through the lens of actionability. In this sense, Theme 3 operates as the bridge between perception and action: AI feedback was most influential when it was experienced as direct but constructive, trusted as accurate and context-sensitive, and understood as offering a clear, realistic route to improving the text.

Discussion

The findings of this qualitative case study show that the pre-service English teachers' encounters with AI-generated feedback on handwritten exam-style essays are characterized by a complex mix of affective, cognitive, and behavioral responses. The students experienced the AI simultaneously as a harsh but valuable mentor (Theme 1), developed explicit criteria for trusting or distrusting its suggestions (Theme 2), and treated actionability as the main gateway to implementing feedback in revision (Theme 3). In this section, these themes are discussed in relation to prior work on feedback in L2 writing, automated and AI-mediated feedback, feedback literacy, and responsible AI use in assessment.

The first theme – the AI as a "double-edged sword" – underlines the affective ambivalence at the heart of students' experiences. On the one hand, the participants described the feedback as "merciless," demoralizing, and emotionally disheartening. On the other, they explicitly valued its directness and clarity, often describing it as "teacher-like" and unusually helpful for seeing how to improve.

This mirrors long-standing findings in L2 writing research that written feedback is not merely informational but deeply relational and effective. Hyland and Hyland (2006) show that teachers routinely soften criticism through mitigation, praise, and hedging, precisely because direct,

unbuffered criticism can threaten students' self-esteem and damage the teacher–student relationship. Ferris (2010) similarly documents how students may feel discouraged or overwhelmed when feedback is perceived as overly negative, even if it is technically accurate. In our data, the AI's "brutally honest" tone reproduced the critical edge of teacher feedback without any of the interpersonal cushioning that human teachers normally provide, which helps explain the strong feelings of inadequacy reported by several participants.

At the same time, the very features that made the AI feel "harsh" – explicit critique, clear identification of weaknesses, unambiguous judgements – were precisely what many students appreciated as efficient guidance for revision. This resonates with work arguing that focused, direct corrective feedback can be particularly effective for promoting accuracy and revision gains when learners are ready to engage with it (Bitchener & Ferris, 2012; Ferris, 2010). In that sense, the AI amplified a trade-off that already exists in human feedback: the tension between preserving face and offering uncompromisingly clear critique.

From a feedback literacy perspective, these findings highlight the importance of helping students manage the emotional impact of feedback while still recognizing its value. Carless and Boud (2018) emphasize that student feedback literacy involves not only understanding and using feedback, but also managing the affective dimension and developing dispositions to engage with critical comments. Our participants were already articulating this tension: several described initial feelings of discouragement followed by a more reflective appreciation of how AI's criticism could help them improve. Pedagogically, this suggests that AI feedback should be embedded within explicit classroom conversations about the emotional side of critique, the function of "tough" feedback, and strategies for engaging productively with it, rather than presented as a neutral technical tool.

The second theme – the "trust deficit" – shows that students' confidence in AI feedback was highly contingent on perceived accuracy and

contextual fit. The participants quickly noticed mis-readings arising from OCR/handwriting issues, misinterpretations of task rules (e.g., treating invented sources as plagiarism-like fabrications), and a disregard for exam-style constraints such as strict time limits. Once such errors were noticed, students began to systematically question AI's authority and to position themselves as critical judges of its claims.

This pattern aligns with research on automated written feedback (AWF) and automated writing evaluation (AWE). Systematic reviews report that learners typically appreciate the speed and consistency of automated feedback but harbor concerns about its reliability, contextual appropriateness, and tendency to misinterpret meaning (Karatay & Karatay, 2024). Studies in higher education similarly show that trust in AI-mediated feedback depends on students' ongoing evaluation of its accuracy and fairness, and that obvious errors can quickly undermine perceived credibility (Evans, 2013).

Our data extend these findings to a handwritten, exam-like context, where AI's "blind spots" are particularly salient. Because the tool saw only the digitized text, it could not "see" the time pressure, the local classroom norms (e.g., allowance for fictional sources), or the physical effort of handwriting under exam conditions. This corroborates broader concerns that large language models, even when fine-tuned for feedback, lack direct access to contextual information and may therefore offer critiques that are technically plausible but pragmatically misaligned (Yan, 2024).

Interestingly, however, students did not simply abandon AI when trust faltered. Instead, they began to articulate explicit criteria for accepting or rejecting its suggestions: checking whether AI had misread a word, evaluating whether a demand (e.g., adding an example) was realistic under time constraints, and comparing AI's judgements across peers. This kind of evaluative judgement is central to sustainable assessment, which emphasizes students' long-term capacity to make informed quality judgements rather than merely receiving marks (Carless & Boud, 2018; Winstone & Carless, 2019). In other words, the AI's fallibility, rather than

being purely detrimental, appeared to catalyze critical engagement and fostered a more agentive stance towards feedback.

For practice, the trust theme underscores the need to frame AI feedback explicitly as fallible, partial, and task bound. Learners should be invited – even required – to interrogate AI comments against task instructions, disciplinary norms, and their own intentions, rather than treating AI suggestions as authoritative. This aligns with UNESCO's guidance, which advocates human-centered, transparent, and critically mediated uses of generative AI in education, with teachers and learners actively scrutinizing AI outputs rather than accepting them at face value (Holmes & Miao, 2023).

The third theme – actionability – offers a concrete explanation of when and how AI feedback actually led to text changes. The students were willing to implement suggestions when they regarded them as both accurate and clearly actionable: that is, when the feedback identified a specific problem and implicitly or explicitly showed how to fix it. Vague or global comments, or suggestions that ignored task constraints, were likely to be rejected even when students agreed with them in principle.

This emphasis on actionability parallels general feedback theory. Hattie and Timperley (2007) argue that effective feedback answers three core questions – "Where am I going?", "How am I going?", and "Where to next?" – and that comments which do not clearly indicate "what to do differently" are unlikely to influence performance. Evans (2013) similarly notes that students often regard feedback as unhelpful when it lacks clear guidance for future action. In L2 writing, Ferris (2010) shows that learners are more likely to revise successfully when feedback is sufficiently specific and localized to guide concrete textual changes.

The present findings suggest that AI feedback can meet this actionability requirement – and indeed, many students explicitly praised the AI for precisely this quality – but only when its comments are sufficiently focused and explanatory. Where the AI highlighted a specific sentence, pointed out a grammatical or coherence issue, and implicitly modelled an

improved alternative, students tended to accept and integrate the suggestion. When the feedback remained at a global level ("add more examples") without acknowledging real-world constraints (time, word limits), students either resisted or simply noted its correctness without acting on it.

From the perspective of feedback literacy and sustainable assessment, this underscores the importance of designing AI prompts and interfaces that maximize actionable, feed-forward-oriented comments, and of pairing AI output with activities that require students to plan and document their revision decisions. Carless and Boud (2018) emphasize that feedback uptake is not automatic; learners must be supported to translate comments into strategies for improvement. In this study, the revision logs and self-evaluation notes served precisely this function, encouraging students to articulate why they did or did not act on particular AI suggestions. Such meta-feedback activities could be built into routine AI-supported writing pedagogy to ensure that actionability is foregrounded.

Implications for EFL Teacher Education and Sustainable Assessment

Because the participants were pre-service English teachers, their experiences with AI feedback have implications beyond their immediate learning. Several students explicitly connected their reactions to how they might (or might not) use similar tools with their own future students, echoing emerging research where student-teachers view AI as a potentially helpful but risky "assistant" rather than a replacement for human teaching (Hyland & Hyland, 2006).

Our themes suggest several design principles for AI-supported writing assessment in teacher education programs:

- *Treat AI feedback as a site for developing feedback literacy.* Rather than positioning AI as a shortcut to grading, teacher education courses can use AI-generated comments as material for critical analysis, inviting pre-service teachers to critique tone, evaluate accuracy, and redesign feedback to make it more

supportive and actionable. This aligns with calls to view AI not only as a productivity tool but as a catalyst for higher-order evaluative judgement (Carless & Boud, 2018; Winstone & Carless, 2019).

- Integrate AI within a human-centered, dialogic feedback ecology. Both the trust deficit and the actionability theme point to the limits of AI working alone. A more sustainable model is to position AI feedback as one voice among several – alongside peer, self, and teacher feedback – and to create structured opportunities for learners to compare, reconcile, or contest these voices (Zhang & Gao, 2025).
- Benefit from AI to address workload while maintaining pedagogical responsibility. In large classes and exam-heavy programs, AI feedback on handwritten scripts can help alleviate time pressures and enable more frequent formative assessment. However, our findings highlight that such efficiency gains must not come at the expense of transparency or learner agency. Sustainable assessment requires that students understand how AI judgements are produced, know that they are contestable, and are supported to develop their own professional stance towards such tools (Holmes & Miao, 2023; Baskara, 2024).

Limitations and Directions for Future Research

As a bounded qualitative case study with 39 participants in a single EFL teacher education program, the findings are context-specific and not statistically generalizable. The analysis relied on self-reported revision logs, short written reflections, and one focus group, which offer rich but partial windows into students' thinking; additional stimulated-recall interviews or longitudinal tracing of writing development could deepen understanding of how AI feedback shapes learning over time. The study also examined a single handwritten cause-and-effect task and one AI tool since different genres, AI models, OCR pipelines, or feedback

configurations (e.g., AI-only, teacher-only, hybrid) may produce different patterns of trust, effect, and actionability.

Future work could therefore (a) compare handwritten and typed tasks to see whether the additional layer of OCR affects trust and uptake, (b) systematically vary prompt designs to explore how tone and specificity influence emotional responses and revision behavior, and (c) investigate how pre-service teachers transfer their experiences as AI-supported writers into their emerging practices as providers of feedback. Such research would further clarify how "the pen" and "the algorithm" can be aligned in ways that support both sustainable assessment practices and the development of reflective, agentive language teachers.

Conclusion

This qualitative case study examined how pre-service English teachers experienced AI-generated feedback on their handwritten, exam-style cause-and-effect essays and how they interpreted and acted on that feedback during revision. The analysis showed that students positioned the AI as a "blunt but valuable mentor," simultaneously experiencing its feedback as emotionally harsh yet appreciating its clarity and teacher-like directness. Their trust in the AI was contingent on perceived accuracy and contextual fit; OCR misreadings, misunderstandings of task rules, and disregard for time constraints all triggered skepticism and encouraged more critical scrutiny of suggestions. Ultimately, students' revision behavior was driven by actionability: they were most likely to implement feedback that pinpointed specific problems and clearly indicated how to improve.

Taken together, these findings suggest that AI feedback on handwritten essays can contribute to sustainable assessment in EFL contexts, not simply by saving time but by prompting learners to develop feedback literacy and evaluative judgement. However, the study also highlights the need to frame AI as a fallible, contextualized tool rather than an unquestionable authority, and to embed its use within pedagogical

activities that support emotional management, critical engagement, and reflective revision. For teacher education programs, this means treating AI not just as a writing aid, but as an object of inquiry through which future teachers can explore how feedback works, what makes it trustworthy and actionable, and how they themselves wish to integrate such tools into their own professional practice.

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Constructing Teacher Effectiveness: Turkish EFL Teachers' Conceptualizations across Different School Contexts

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Education is a significant part of society, enhancing sustainable improvements in the country. Teachers, as the central stimulators, conveyors, and directors of the education process, are highly valued for their qualified learning and teaching. Therefore, an effective education system cannot be figured out without the assistance of teachers. The definition of teachers made by Ryan (1970) as the ‘‘ranks of the chalk-soiled, ink-stained, over-challenged, under-supported, memo-ridden, privacy-riddled, patience-worn, school-fatigued, lovers of children and ideas’’ can summarize the significance of the teachers in the vicious cycle of education (Ryan, 1970, as cited in Richards et al., 2017, p. 495). In other words, teachers are the backbones of the teaching and learning issues, and constructing an effective education system is only feasible with a strong teaching staff. Considering the essential characteristics of quality education, the question of what constitutes an effective teacher has long been a focus of scholarly inquiry.

The perception of an effective teacher starts to take shape in the early

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stages of the learning journey. Each teacher a learner encounters contributes uniquely to shaping that learner's expectations of the teaching profession. The expectations from a good teacher are formed, changed, and reformed if necessary. Moreover, the demands from teachers never end regardless of the circumstances (Polat & İskender, 2018). This cycle mostly happens unconsciously. For further explanation, a learner has developed an awareness of an effective teacher without awareness until a specific event in their lives. This reality occupies a foundation for personal schemata under personal construct psychology. When teachers begin their teaching profession, they have already acquired an understanding of what constitutes an effective or ineffective teacher. Although it is possible to reshape several of these constructs during teacher education, the traces of every teacher's schema of an ideal teacher can be observed in their active teaching way to a certain extent.

Teaching is a highly crucial profession that simultaneously demands physical and mental involvement. A teacher is a human being who cannot get totally isolated from his/her personal traits and psychological status in the classroom. Therefore, balancing teachers' professional and personal elements is crucial to enhancing effective teaching (Nias, 1996). In other words, each teacher is unique in terms of who h/she is and what she brings in her luggage to the teaching context. The learner levels teachers educate correspond to a part of the teaching context. The learners are grouped into different school types (primary, secondary, etc.) according to their ages and levels. This crucial aspect of teaching context can also determine teachers' behaviours meaningfully. Furthermore, teaching context is assumed to influence teachers' perceptions of an effective teacher strongly. Meanwhile, the reflections of these features on the teaching environment create an indispensable necessity to deeply analyse teachers' perspectives on effective teaching in terms of their constructs and the teaching contexts in which they are actively involved. Therefore, this paper focuses on conceptualizing an effective teacher as a high school, a secondary school, and a primary school EFL teacher. Moreover, the role

of school types, if any, in the conceptualization of an effective teacher is aimed to be examined rigorously in the study.

This study is an attempt to answer the following research questions:

1. How does a high school EFL teacher conceptualize the qualities of an effective teacher?
2. How does a secondary school EFL teacher conceptualize the qualities of an effective teacher?
3. How does a primary school EFL teacher conceptualize the qualities of an effective teacher?
4. In what ways, if any, do school types play a role in conceptualizing an effective teacher?

Literature Review

This study investigates the conceptualization of an effective teacher by a high school, a secondary school, and a primary school EFL teacher. Furthermore, the role of the school type, if any, in conceptualizing an effective teacher is another issue to be elaborated on meticulously, thanks to the obtained data. To realize these purposes of the study, it is essential to review the literature to provide a concrete base for the study. Hence, this chapter examines the literature on Personal Construct Theory, first articulated by Kelly (1955) as a constructivist framework for understanding how individuals interpret their experiences, as well as research on effective teaching and teacher reflection.

Personal Constructivism Theory

People are born with an intuitive need to make their meaning of the world. Each person creates a different point of view of the world through a unique transparent sheet and then attributes the facts of what the world constitutes (Kelly, 1955). The issue of constructivism is the explanation of people's innate effort to make sense of the world. Constructivism originates from developmental and cognitive psychology (Bruner, 1990; Kelly, 1955; Piaget, 1969). Although humans are socially integrated creatures, each can

look through their glasses from different eyesight. Moreover, daily life-based experiences are individualized, with specific features and effects on people's lives. Therefore, the ideas gain personal meanings within the circle of the constructs built upon these experiences. On this issue, Kelly (1955) pinpoints that every person develops his own construct system of reality in a hierarchy and limits the personal constructs.

Personal construct psychology considers the self as 'constructed, not discovered' (Butt et al., 1997; Epting & Amerikaner, 1980). The process of construing himself or herself urges a metaphor of the personal scientist. In other words, individuals continuously test their constructs by grouping, clustering, practicing about the world, estimating according to their theories, and behaving based on their preconceptions like scientists (Kelly, 1955).

School is among the most significant life experiences for the majority of people. Personal constructs are inevitably created or transformed into different forms in the education process, not only for learners but also for future teachers, since previous learning experiences influence teachers' perceptions and how they teach (Borg, 2003). This aspect of teacher cognition is shaped by teachers' own schooling, which reflects the personal histories and experiences they accumulated as language learners in the classroom (Borg, 2003). This is not just the case for teachers. The experience of schooling is reflected in every human being as individual experiences shape the present and future to a significant degree. Holland et al. (1998) explain this with history in person, defining it as "the sediment from past experiences in which one improvises, using the cultural resources available, in response to the subject positions afforded one in the present" (p. 18).

Teachers are naturally humans and cannot be isolated from their previous lives. Furthermore, teachers' personal history affects their comprehension of instructional strategies more than teacher training programs (Johnson, 1994). This proves how the constructs teachers have developed along with their learning experiences show their impact on the teaching process.

Teachers' daily behaviours are also the consequences of their learning and teaching experiences, although most of them are not expressed explicitly (Moodie, 2016).

Teacher Effectiveness

Teaching is a multitasking duty involving various responsibilities that must be achieved simultaneously. Therefore, the definition of a highly qualified teacher has been a focus of many research studies. There is also a growing interest in speculating the characteristics of an effective teacher to raise the quality of the education system as a whole. Although students' achievement cannot be bound to a specific factor, teachers at the core of the education system are the most influential ones. In other words, effective school learning necessitates good teaching, and good teaching is only possible when qualified professionals educate their students (Porter & Brophy, 1988). In this vein, Buchanan (2012) emphasizes that the quality of the teachers is the determiner of the whole education system. Hence, many studies have attempted to clarify the definition of an effective teacher. However, the subjective perspective of being effective makes it harder to create a standardized list for an effective instructor.

Effective teacher behaviours can be directly linked to student achievement or positive teaching evaluations. Teacher attitudes, behaviours, and beliefs have a considerable effect on students' learning outcomes (Palardy & Rumberger, 2008). Thus, the definition of teacher effectiveness as "the capacity of a given teacher to lead their students to sustained achievement gains" has been made by the World Bank (2011, p.16). This supports the idea that teachers are more significant than the method, and the teachers have the mediator roles for the specific curriculum (Chall, 1967). As a further explanation, teachers are the fundamental elements in the education process, even having the superiority over method and curriculum. Drawing on the apparent importance of the teachers, the qualities of an effective teacher are required to be enlightened rigorously. In addition, the discrimination between good and effective teachers

needed to be unearthed. On this issue, Darling-Hammond et al. (2005) assert:

> Good teachers understand what students everywhere can confirm: teaching is not just talking, and learning is not just listening. Effective teachers can figure out what they want to teach and how to do so so that students can understand and use the new information and skills (Darling-Hammond et al., 2005, p. 88)

Although research on teacher effectiveness deals with the qualities of an effective teacher, there is no consensus on this issue. The question of how teachers become more effective has been an inquiry for social scientists for a long time. With the innovative perspective of teachers in the 21st century, teachers are considered professionals who enhance learning by actively emphasizing the critical components of education (Buchanan, 2015; Burns & Maclntyre, 2017). Teachers gaining a more critical role in this contemporary era have also been issues in research synthesis. This research synthesis suggests five definitions of teacher effectiveness based on an analysis of research and standards. The five-point definition of teacher effectiveness includes the following:

- Effective teachers have high expectations for all students and help students learn, as measured by value-added or other test-based growth measures or alternative measures.
- Effective teachers contribute to positive academic, attitudinal, and social outcomes for students, such as regular attendance, on-time promotion to the next grade, on-time graduation, self-efficacy, and cooperative behaviour.
- Effective teachers use diverse resources to plan and structure engaging learning opportunities; monitor student progress formatively, adapting instruction as needed; and evaluate learning using multiple sources of evidence.
- Effective teachers contribute to developing classrooms and schools that value diversity and civic-mindedness.
- Effective teachers collaborate with other teachers, administrators, parents, and education professionals to ensure student success, particularly the success of students with special needs and those at high risk for failure (Goe et al., 2008, p. 8).

In conclusion, it is impossible to depend on standardized points of view for an effective teacher. It is because “good teaching” has different

meanings for everybody since teachers are not the same in terms of their personal experiences, perspectives on life, emotions, and wishes. Kivunja (2014) pinpoints that there are no universal rules for effective teaching. Nevertheless, there are several effective teaching methods, as the studies indicate. By combining various elements in the process of teaching, teachers may reach a satisfactory point of being effective in every means.

Teacher Reflection

Professional development is a continuous process that requires determined persistence and engagement in professional life. The world is evolving incessantly. Therefore, professional development is indispensable to keep up with the current issues in the related field. Moreover, teaching is a profession that comprises dynamic components. The main focus of a teaching job is to develop terminal behaviours in individuals. This is possible by following the latest trends and gaining meaningful insights concerning self-development. In addition, it is a way of improving the whole education system and acquiring satisfactory results. Teachers and their development direct and shape classroom practices to a considerable degree (Akbari, 2007; Halliday, 1998; Richards & Lockhart, 1994). Hence, making more profound observations of the factors affecting teacher development is essential. Reflective practice is one of these factors that immensely influence teachers' self-development. Furthermore, reflection is becoming a central aspect of worldwide ESL/EFL teacher education programs. These reasons create a necessity for investigating reflection rigorously with all its concerns.

Teacher reflection can be defined as the process of analysing beliefs, purposes, and actual practices to activate students' engagement and success. Therefore, reflection is often emphasized as a significant feature of an effective teaching process (e.g., British Council, 2015). Teachers experience various unexpected events every day. This stems from the fact that the teaching context is often dynamic and unpredictable. How teachers teach and handle the obstacles in that context is crucial for the education process. Reflection is an endless cycle starting from teaching

action. Teachers observe and evaluate their teaching behaviours and experiences with a critical eye. Determining and improving their effective practices are also the components of the reflection cycle. In addition, teachers also gain a perspective on their deficiencies and weaknesses. Reflective practices create the opportunity to reform their ineffective actions in the classroom. On this issue, Dewey (1929) and Schön (1983) emphasize that teachers' work is complicated and necessitates rigorous and effective reflective practices.

Every teacher graduates with theoretical knowledge of the related field from the universities. Nevertheless, creating a bridge and implementing theory is a different issue. Lester (1998) pinpoints that reflective teachers make necessary relations between theory and practice and create new knowledge foundations since they critically analyse their own actions. Reflection actively gets the teachers involved in their own development process. This aligns with Dewey's (1933, as cited in Jay & Johnson, 2002, p. 74) description of reflection as "active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it". Carefully considering the experiences corresponds to insisting on and developing effective teaching behaviours and dismissing useless practices from the teaching process. In other words, reflection enables a teacher to decide what is efficacious, what is not, and what needs to be developed.

Reflection is an isolated skill that enhances meaningful teacher knowledge beyond theory. This can promote teacher learning, paving the way for necessary changes in the perspective of traditional teacher education programs. Reflective practices are more operative in dealing with teachers' actual beliefs and experiences than theoretical foundations. This approach stimulates teachers' self-development with their own eyes by taking a feeling and wants into consideration (Korthagen et al., 2001). In a nutshell, reflection is a part of teachers' ongoing professional development. It is also a significant tool that triggers teachers' personal and professional development.

Methodology

This study adopted qualitative research to align and reveal personal theories of high school, secondary school, and primary school EFL teachers. Qualitative research interprets how people conceptualize meaning and social concepts in natural settings. The current study is based on Kelly's (1955) personal construct psychology. According to Kelly, internal constructs are unique for each person's perception and reality. This also proposes that different people react differently to similar situations (Shaw, 1980, p.9). Setting off from Kelly's personal construct theory, the inner representations of high school, secondary school, and primary school EFL teachers regarding the qualities of an effective teacher are concerned with investigating personal constructs.

Participants

In the study, which investigates the perceptions and constructs of EFL teachers concerning their conceptualizations of an effective teacher, three EFL teachers working at a state school in Turkey were chosen. Criterion sampling, a type of purposive sampling, was employed to ensure alignment with the scope of the study. The participants were selected among teachers teaching at different school types since the study also aimed to reveal the role of different school types, if any, in conceptualizing the effective teacher. Therefore, this feature supported the effective attainment of the study's aims.

All participants were females, aged 26 to 39, and with 4 to 17 years of experience. The teachers represent varied educational contexts: Teacher 1 teaches in a high school, Teacher 2 in a primary school, and Teacher 3 in a secondary school. Table 1 below demonstrates the demographic information of the participants.

Table 1

Demographic Information about the Participants

Name	*Gender*	*Age*	*Years of Experience*	*School Type*
Teacher 1	Female	32	9	High School

Teacher 2	Female	26	4	Primary School
Teacher 3	Female	39	17	Secondary School

Data Collection Instruments and Procedure

The repertory grid technique, which elicits the EFL teachers' constructs on effective teaching, was utilized to unearth the individual representations of the participants. Denicolo et al. (2016) pinpoint that repertory grids are functional sources that bring out deep insights and theories in a systematic way. The repertory grid technique enables the uncovering of the individuals' construct systems. Furthermore, the obtained data through the rep-grid technique was supported by semi-structured interviews. The semi-structured interviews validate and entail the rep-grid data.

Data Analysis

During the data collection, the participants were invited to write about their constructs on the qualities of an effective teacher. In the first phase, they were asked to consider the characteristics of three effective, three typical, and three ineffective elements from their personal history without explaining the names. The researcher randomly created triads such as T1, I3, and E2 to activate the participants' minds while filling the grids. The participants were expected to evaluate the similarities and differences between the elements (teachers) in the mind. Triads continue until the participant cannot utter any more constructs. Furthermore, the participants gave ratings to each of the constructs on a 1 to 5 scale. 1 represented the closest and five the farthest to the constructs. After analyzing the data through a computer, each grid was designed in a focus analysis figure to visualize how thoughts are associated with the participants' minds. Finally, examining the teachers' constructs through semi-structured interviews enhanced the opportunity to investigate the content deeply (Scherier, 2012). The interviews were recorded and then transcribed in order to illuminate the bonds between the constructs in detail.

Findings

Personal Theories of Teacher 1 Regarding the Qualities of Effective Teacher

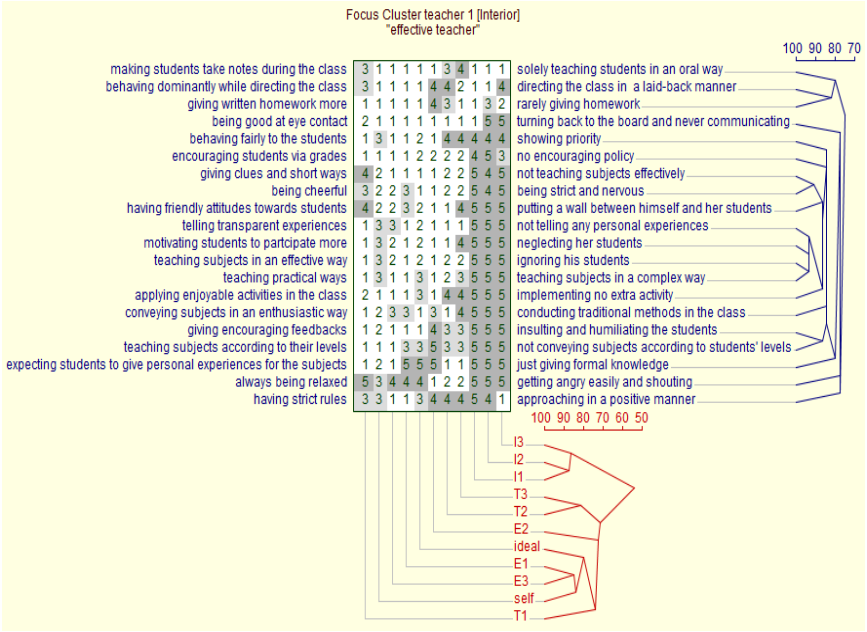


Figure 1 *Teacher 1's FOCUSed Grid*

Teacher 1's grid consists of four clusters, four pairs, and eight isolates. The pair *"behaving dominantly while directing the class"* and *"assigning written homework more"* showed a loose 80% match. She explained that dominant teachers "try to control students more, so they assign extra responsibilities like written homework." A strong 95% association was identified between the constructs "*being strict and nervous"* and "*not teaching subjects effectively"*. She remarked that nervous teachers "reduce students' motivation and avoid enjoyable activities, which harms learning."

Another 95% pair, *"effective subject teaching"* and *"instruction in practical methods,"* suggested that she believed practical instruction supports comprehension: Providing brief, focused, and practice-based instruction enhances students' learning outcomes. "The pair

"enthusiastically conveying subjects" and *"giving encouraging feedback"* (85%) reflected her view that passionate teachers also motivate through positive feedback: When teachers are enthusiastic, they naturally give supportive feedback. Additional constructs *"being cheerful," "friendly,"* and *"giving clues"* highlighted her focus on positive teacher-student relations: A teacher should remove barriers and create a warm environment. In element associations, ineffective teachers (I1–I3) formed a cluster, showing consistent recognition of ineffective behaviour. Typical teachers (T2, T3) formed another pair, and effective teachers (E1, E3) clustered with *Ideal* and *Self*, implying she feels close to her ideal but still improving. Teacher 1 thus viewed effectiveness as a balance of structure, friendliness, and enthusiasm.

Personal Theories of Teacher 2 Regarding the Qualities of Effective Teacher

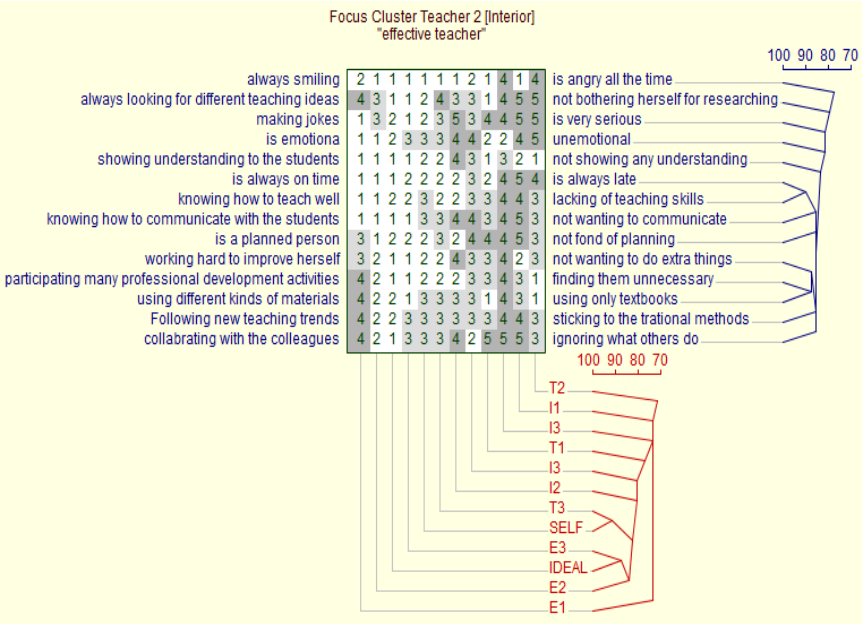


Figure 2 *Teacher 2's FOCUSed Grid*

Teacher 2's grid includes 14 constructs and 11 elements, forming two clusters, two pairs, and several isolates. The first pair—*"is always on*

time" and *"knowing how to teach well"*—showed a 90% link. She commented: "Being late often means poor time management. A teacher who plans well and arrives on time can manage the lesson efficiently. The second pair *"participating in professional development activities"* and *"using different kinds of materials"* matched at 90 %. She stated that professional learning "introduces new teaching techniques and tools that teachers can adapt in class."

The isolated construct *"knowing how to communicate with students"* revealed her awareness of classroom dialogue: One participant stated, "Even if I know the content, if I can't communicate well, especially with young learners, the lesson won't work." Another isolate, *"working hard to improve herself,"* was conceptually linked to development and material use. The teacher explained, *"A teacher eager to improve will always try extra things, like games and songs, to make lessons lively."* Additional isolates, *"smiling," "making jokes," "showing understanding," "being emotional," "collaborating with colleagues,"* and *"following trends"*, illustrated her belief that caring, openness, and professional engagement shape an effective teacher. Element analysis revealed two pairs. The first (T3 and Self, 92%) indicated she identifies herself with a typical teacher, acknowledging growth ahead. The second (E3 and Ideal, 85 %) suggested that one effective teacher she knew embodies her ideal. Teacher 2's construct system centres on continuous development, preparation, and positive communication.

Personal Theories of Teacher 3 Regarding the Qualities of Effective Teacher

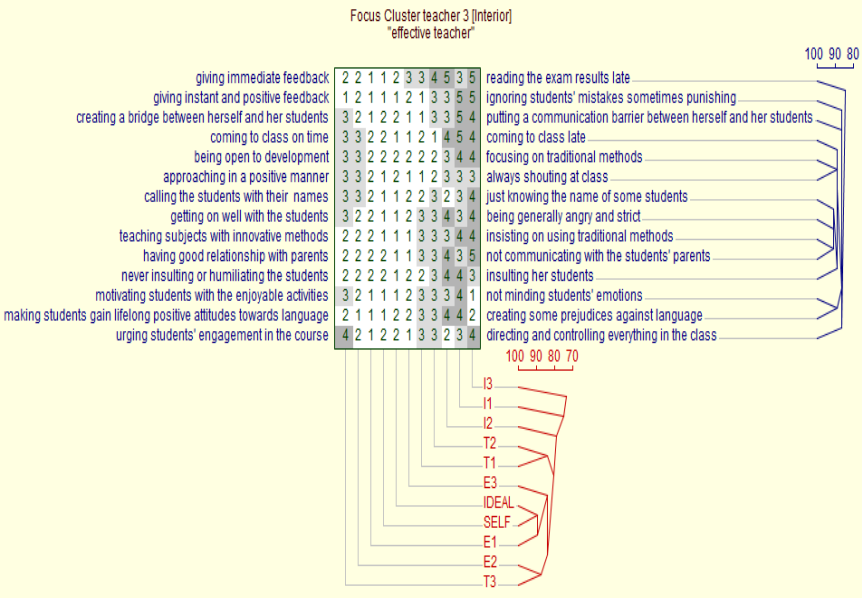


Figure 3 *Teacher 3's FOCUSed Grid*

Teacher 3's grid is composed of 14 constructs and 11 elements, with two main clusters, three pairs, and four isolates at the 80% cut-off. The first pair "being open to development" and "approaching in a positive manner" showed a 90% match, indicating her belief that openness to growth accompanies a constructive stance. As she put it, "When I keep a positive attitude, I am more willing to try new ideas and adjust for my students."

A second association linked "focusing on traditional methods" with "always shouting at class." Teacher 3 described traditional practice as an authoritative style that can drift toward rigid control: "Teachers may shout to keep authority when they rely on old routines instead of engaging activities."

Another loose pair (90%) connected "insisting on traditional methods" and "not communicating with the students' parents." She stressed that parents are children's first teachers and that collaboration supports

learning: “If we avoid communication, we lose support that really helps students.” A further pair brought together “motivating students with enjoyable activities” and “making students gain lifelong positive attitudes towards language.” For Teacher 3, enjoyment drives durable engagement: “If students’ feelings are ignored, they can develop prejudice against the language; valuing emotions builds confidence.”

Among the isolates, “coming to class late” was loosely related (90%) to “focusing on traditional methods.” She regarded lateness as a sign of reduced responsibility and weak planning: “Innovative teaching needs better time awareness; with traditional habits, timing is often neglected.” Another isolate, “calling the students by their names,” captured her conviction that recognition enhances belonging: “Knowing each student’s name helps them feel seen and join activities.” Other isolates, “giving immediate feedback,” “creating a bridge with students,” and “urging engagement”, were not tightly linked in the grid but pointed in the same direction: a relational image of effectiveness grounded in respect, responsiveness, and emotional safety.

In the element map, one main cluster, three pairs, and two isolates appeared. Typical teachers (T1 and T2) formed a 90% pair, reflecting similarity in her experience. A tighter 95% link connected ideal and self, suggesting that she perceives herself as close to her ideal teacher. Effective teachers (E1 and E3) joined this cluster, reinforcing her confidence. A final pair (E2 and T3) at ~90% indicated that a typical teacher shares features with an effective teacher, hinting that her notion of “typical” is moving toward “effective.”

Overall, Teacher 3 portrays effectiveness as relational, empathetic, and affective: optimism and openness to development, partnership with parents, personal recognition, and enjoyable, emotionally aware activities that nurture lasting motivation for language learning.

Discussion

The study examined how three EFL teachers, working in high school,

secondary school, and primary school contexts, conceptualize an effective teacher. Another purpose of the study was to identify the role of school types in conceptualizing effective teachers. The data collected utilizing repertory grids, and follow-up interviews during the study indicate that teachers working at different school types have distinctive points of view regarding effective teachers. In addition, the findings underscore their self-criticism regarding the qualities of an effective teacher as the ideal. When the constructions of the participants concerning their theories were scrutinized, the conclusions drawn from the study aligned with the previous research, which also investigated teacher effectiveness from the perspective of personal theories.

When the FOCUS grid data of each participant are investigated, it is evident that there are meaningful differences in their perceptions of effective teacher's qualities. Nonetheless, several similarities also exist in their constructions of effective teachers. To illustrate, all the participants met at the point of being enthusiastic in the classroom. The construct of *conveying subjects enthusiastically* identified for Teacher 1 aligned closely with Teacher 2's construct of *always smiling and making jokes* and Teacher 3's construct of *motivating students with enjoyable activities*. This overlap between these constructs proposed the consensus regarding the qualities of an effective teacher as "being enjoyable" regardless of the school types in which they work. Their constructs concerning the significance of humour for effective teaching in the classroom are supported by research implying the positive effects of humour on students' achievement and motivation (Blyth & Ohyama, 2011; Kaur, 2019; Malik, 2017).

Apart from the point that all the participants agreed on, some constructs were mentioned by just two, which could be considered their common points. Feedback was one of the concerns that both Teacher 1 and Teacher 3 took into consideration to be an effective teacher. Teacher 1's construct of *giving encouraging feedback* was conceptually similar to Teacher 3's constructs of *giving immediate feedback* and *giving instant, positive*

feedback. It can be interpreted that the high school EFL teacher and the secondary school EFL teacher were concerned with encouraging students by giving feedback on their learning process. On this issue, Brown (2016) asserts that giving feedback should be a focus of attention since it can contribute to students' learning a language for communicative purposes. In addition, this may be connected to the age range of their students since the students between the ages of 12 and 18 at secondary and high schools are more conscious and aware of the feedback. Therefore, Teachers 1 and 3 regarded feedback issues as an important criterion for being effective teachers.

Punctuality was another issue that was emphasized by Teacher 2 and Teacher 3 together. The constructs *coming to class on time* (Teacher 3) and *always on time* (Teacher 2) closely aligned, referring to the timing issue requirement. Moreover, Teacher 2 pinpointed being planned to be an effective teacher, reinforcing the notion of punctuality. Similar to the results of the current study, being planned and on time was counted among the qualities of effective teachers in the study by Kulekci (2018). Teacher 2's giving importance to timing issues may be due to her dealing with young learners between 7 and 11. The rigid curriculum, which is supposed to be handled in 2 hours of course time with that target group, may become a more challenging obstacle if the teacher comes to class late. Furthermore, students are responsible for English in the central "LGS" (the Central High School Entrance Examination in Türkiye) exam at the end of secondary school. Thus, secondary school teachers are expected to be more punctual and strictly keep up with the curriculum. This fact explains why Teacher 3 emphasized the timing concept among the qualities of an effective teacher.

Motivation was another asset of an effective teacher's qualities among the familiar constructs of Teacher 1 and Teacher 3. Their perceptions of motivating issues went hand in hand, as their constructs suggested. Teacher 1 construed it as "motivating students to participate more. Teacher 3 approached the same concept with the constructs *"making*

students gain lifelong positive attitudes towards language" and *"urging students' engagement in the course."* Both considered motivating the students among the characteristics of an effective teacher. Keeping the student-centred education perspective in mind, the necessity of motivation for students cannot be denied. The school type in which Teacher 1 and Teacher 3 work is especially crucial in terms of encouragement since students are more prone to be discouraged and distracted from learning because of their age range. The reality of their being at a critical period of being teenagers may also explain why they need more motivation. In line with the present study's results, the study by Xu and Case (2015) with 1,213 elementary, middle, and high school Mainland Chinese students from grade 1 to grade 11 drew similar conclusions regarding age and motivation. The study's results suggest that the integrative motivation for language learning becomes instrumental because of age and test-driven curriculum as the students' age range increases. Therefore, the importance of motivation for being an effective teacher, as asserted by the high school and the secondary school EFL teachers, is in line with the study.

Specific differences exist in the participants' constructions regarding the qualities of effective teachers. This signifies that EFL instructors in the study do not create a consensus on how an effective teacher should be. To illustrate, Teacher 1, working at high school, dwelled on personality features to be effective. She emphasized the points in her constructs: being "fair, cheerful, relaxed, friendly, dominant and strict." The conclusion drawn from her constructs was that she emphasized personality factors for effective teachers. The phenomenon that a teacher's personality considerably influences the success of teaching is also underpinned by several researchers (Buela & Joseph, 2015; Kim et al., 2019; Putri, 2012). Therefore, being an effective teacher cannot be restricted to having formal knowledge of the related field. Teachers are required to be considered as a whole based on their characteristics. In the same vein, this notion is supported by Anderson (2009), who considers the effective teacher to be a consequence of three components: "ability, personality, and knowledge." The dominance of personality factors among Teacher 1's

constructs verify her perception of an effective teacher's being qualified personally.

When the grid data of Teacher 2 was analysed deeply, it was seen that the most striking point she insisted on was the personal development of the teachers. Her perceptions of professional development were reflected by the constructs "always looking for different teaching ideas," "working hard to improve herself," "participating in many professional development activities," and "following new teaching trends." The implications deduced from her constructs took attention to continuous development to be an effective teacher. Scholars attempt to clarify the necessity of professional development for being an effective teacher (Corcoran, 1995). The field of English language teaching (ELT) has drastically gone under changes over the years due to the inevitable evolution of the world. EFL teachers witness these changes within new processes and techniques in ELT (Bailey, 1992; Turhan & Arikan, 2009; Yurtsever, 2013). Based on this fact, English language teachers need to be updated on innovations in ELT (Bailey et al., 2001) to carry out their teaching duties effectively.

Besides, Teacher 3's grid data comprised constructs corresponding to the teacher-student relationship. The figure of an effective teacher formed in her mind carried the qualifications such as "creating a bridge between herself and her students," "approaching positively," "calling the students by their names," and "never insulting or humiliating the students." From this, her constructs were mainly scattered around personal interaction, highlighting her expectations from an effective teacher. Regardless of the description of an effective teacher, there exists an agreement that such teachers with positive teacher-student relationships enhance long-lasting positive influences on their students (Gibson & Dembo, 1984; Hoy & Woolfolk, 1993). Teacher 3 showed the same concern by pinpointing positive issues in teacher-student relationships.

The study participants' element links indicate where the teachers place themselves among the categories. When the match level between "Self" and "Ideal" in teachers' constructions is considered, only Teacher 3,

working at a secondary school, associated herself with the ideal teacher, proving her feeling sufficient in effective teaching. However, Teacher 1, who teaches at a high school, seems confused regarding her teacher category. Despite being in the same cluster with "Ideal" and two of her effective teachers, loose matches and no direct association reveal her need to improve as an effective teacher. On the other hand, teacher 2, having the duty of teaching at a primary school, linked herself to one of her typical teachers, highlighting her lack of necessary practical teacher qualities. Teacher 1 and Teacher 2 have difficulty in putting themselves in a specific category among teachers. Their indecisive approach to teaching may be based on insufficient self-efficacy and a lack of strong personal judgments of their capacities (Ilin, 2016). Furthermore, this may also be due to the qualitative nature of the term effective teacher. Several synonyms exist for effective teacher: "good, ideal, competent, expert, dutiful, respected, analytical, reflective, satisfying, and diversity of responses" (Cruickshank & Haefele, 2001). Thus, this multi-defined and subjective nature of the term effective teacher may hinder Teacher 1 and Teacher 2 from judging themselves objectively and precisely while evaluating their teaching. Overall, the findings of the study highlight that while Turkish EFL teachers share common perceptions of what constitutes effective teaching, their individual experiences, personal constructs, and teaching contexts shape unique understandings of effectiveness that collectively enrich the broader picture of teacher professionalism.

Conclusion

The results obtained from the repertory grids and follow-up interviews demonstrated that the EFL teachers have common points and distinctions concerning their constructions of effective teachers. The only point they agreed on was being enjoyable to be an effective teacher. However, the participants met at some points, such as "feedback," "punctuality," and "motivation" as pairs. The reason for their producing similar constructs may be linked to the school type in which they work. Moreover, it was found that the age level they teach affected their perceptions of effective

teaching. High school and secondary school EFL teachers attached importance to feedback as their students' age range needs more. In contrast, primary school and secondary school EFL teachers shared the same perspective on being on time issues because of time limitations. Furthermore, high school and secondary school teachers considered motivation an important necessity due to the nature of their students at the target. These similarities showed that school types play an important role in conceptualizing an effective teacher.

The distinctive perspectives of the participants were also visible in their grid data. For instance, it was unearthed that Teacher 1 gave utmost importance to personality factors as characteristics of an effective teacher. Furthermore, the in-depth analysis of the constructs of Teacher 2 showed that professional development was at the core of teaching effectively in long-lasting periods. From another point of view, the constructs produced by Teacher 3 emphasized the teacher-student relationship, which was also hidden behind the concept of an effective teacher for her. As drawn from the participants' constructions of an effective teacher, the dominance of importance they attach to features of an effective were not on the same concerns. In other words, there existed a significant difference between the EFL teachers' conceptualization of the effective teacher despite a number of similarities.

Finally, the findings gathered through repertory grids supported by follow-up interviews revealed similarities and differences in the conceptualization of effective teachers by high school, secondary school, and primary school EFL teachers. Although the participants met on the same points as a whole or as pairs, they construed different items over an effective teacher in their minds. In addition, the outcomes of the findings validated the role of the school type in the conceptualization of an effective teacher. As factors such as students' age range, time limitations, curriculum, and expectations from the features change according to the school types, the figure of an effective teacher in the minds of EFL teachers working at different school types differs inevitably.

Recommendations and Limitations

The current study adopted a qualitative method to fulfil the purpose of the study. Therefore, the study was conducted with three Turkish EFL teachers working at different school types in the Turkish context (high school, secondary school, primary school). As a perspective for future research, it would be valuable to investigate the conceptualization of an effective teacher by at least six participants, two of whom work at the same school type, to check the constructions of the participants in the same context. This may enhance the consistency regarding the qualities of an effective teacher. Furthermore, it would be precious to explore the concept of effective teachers with multicultural perspectives more deeply. This is due to the fact that school types change across the countries. Hence, further studies should be utilized in different contexts, posing that teachers' constructions and school types may vary in different educational settings. Comparing cross-cultural results on this issue would allow researchers to gather more generalizable and valid data.

In terms of the limitations of the present study, it is important to note the difficulty of generalizing the findings across educational settings due to the qualitative nature of the study and contextual variations in teacher experiences. Another limitation is the influence of cultural differences on teachers' construction of an effective teacher, as overlooking cultural nuances in the educational process may limit the applicability of the results to global contexts. It should also be acknowledged that this study only represents a specific group of teachers, namely Turkish EFL teachers, which may limit its broader applicability. Moreover, different school types in different countries could offer alternative perspectives on the results and lead to different conclusions.

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Teaching across Cultures: Exploring Academic English Instructors' Intercultural Communicative Competence[1]

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Since the end of the Second World War, the English language has increasingly assumed the role of a global lingua franca across a wide range of domains, including business, trade, technology, navigation, science, and academia (Jenkins, 2013; Mufwene, 2010; Seidlhofer, 2006; Warschauer, 2000). This unprecedented global spread of English has not only transformed patterns of international communication but has also reshaped educational contexts worldwide. As English has become a principal medium of instruction, interaction, and knowledge exchange, educational institutions – particularly those offering English-medium instruction – have witnessed a remarkable rise in the number of multilingual and multicultural learners at both primary and tertiary levels.

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This growing linguistic and cultural diversity within classrooms necessitates that teachers possess the ability to engage effectively and empathetically with learners from varied cultural and linguistic backgrounds. In this context, English language educators are increasingly required to demonstrate a high level of *Intercultural Communicative Competence* (ICC) – the capacity to understand, appreciate, and negotiate cultural differences in communicative encounters. Developing such competence enables teachers not only to foster inclusive learning environments but also to promote students' awareness of cultural diversity and global citizenship.

The integration of ICC into English language pedagogy has thus become an essential dimension of modern education. It extends the role of the language teacher beyond linguistic instruction, encompassing the facilitation of intercultural understanding, tolerance, and mutual respect. By embedding intercultural elements into classroom practices, English language teachers can help learners become not merely proficient users of English, but also effective intercultural communicators capable of engaging successfully in globalized and multicultural contexts.

Within this framework, this chapter reports on a qualitative study based on one of the components of the first author's PhD research conducted under the supervision of the second author, which explores the ICC of Academic English teachers, aiming to identify how they perceive, experience, and apply intercultural awareness and sensitivity in their professional practice. To guide this inquiry, the following research questions are posed: 1. What intercultural knowledge do EFL teachers possess, and how deep is this knowledge? 2. How do EFL teachers feel and behave when interacting with people from different cultural backgrounds? 3. What attitudes do EFL teachers hold toward cultural diversity? 4. How do EFL teachers promote intercultural awareness in their classrooms? 5. How effectively are EFL teachers able to identify and understand the beliefs, behaviours, and values of people from different cultures? and 6. How capable are EFL teachers of resolving

misunderstandings or problems in their interactions with people from different cultures? By examining teachers' reflections and classroom practices, the study seeks to provide deeper insights into the ways ICC is conceptualized and enacted in English for Academic Purposes (EAP) settings. Furthermore, it aims to contribute to the ongoing discussion on how ICC can be more systematically integrated into teacher education programs and language pedagogy, ensuring that English language teaching aligns with the communicative and cultural realities of an increasingly interconnected world.

Consequently, the cultivation of ICC among teachers represents both a pedagogical imperative and a professional responsibility. It ensures that education in English serves not only as a tool for linguistic competence but also as a medium for intercultural dialogue, empathy, and social cohesion in contemporary global education.

In order to situate this study within the broader academic context, the following section provides a comprehensive review of the literature on ICC. It traces the conceptual development of ICC, examines key theoretical frameworks and models proposed by leading scholars, and explores how ICC has been addressed within English language teaching. This review also highlights gaps in the existing literature regarding teachers' perceptions and practices of ICC, thereby establishing the foundation and rationale for the present study.

Literature Review

Bhawuk and Brislin (1992) argue that successful communication with individuals from different cultural backgrounds requires more than linguistic proficiency; it necessitates a genuine interest in other cultures, sensitivity toward people from diverse cultural contexts, the ability to recognize and interpret cultural differences, and the willingness to adapt one's behaviour accordingly. Such adaptive behaviour, they emphasize, demonstrate respect and openness, which are indispensable for fostering meaningful intercultural relationships. In addition to these affective and

behavioural components, intercultural awareness plays a crucial role in effective intercultural communication. Defined as the capacity to understand, respect, and tolerate cultural differences, intercultural awareness serves as the foundation for building mutual understanding and reducing potential conflicts in intercultural encounters (Bennett, 1993; Chen & Starosta, 1998).

While intercultural awareness is a prerequisite for successful cross-cultural interaction, scholars have noted that higher levels of competence are needed to communicate effectively and appropriately across cultures. This advanced capacity is conceptualized as *Intercultural Communicative Competence* (ICC). The term ICC was pioneered and extensively developed by Michael Byram in the 1990s, building on foundational concepts of communicative competence introduced by Dell Hymes. According to Byram (1997), ICC encompasses an individual's ability to engage in interaction with members of other cultures through a shared language – whether it is the individual's native language or a foreign one – in ways that are both effective and contextually appropriate. ICC integrates not only linguistic and sociolinguistic knowledge but also intercultural attitudes, skills of interpretation and discovery, and critical cultural awareness.

Similarly, Fantini (2006) characterizes ICC as a comprehensive set of skills and abilities that enable individuals to interact effectively and appropriately with people who differ from them in linguistic and cultural terms. His conceptualization highlights that intercultural competence is multidimensional, involving cognitive, affective, and behavioural dimensions that work together to facilitate intercultural understanding. From this perspective, ICC is not a static attribute but a dynamic and developmental process that evolves through exposure, reflection, and continuous intercultural engagement.

Taken together, these perspectives underscore that effective communication in multicultural contexts requires more than mere knowledge of another culture; it involves cultivating intercultural

sensitivity, awareness, and communicative adaptability. The development of ICC, therefore, stands as a central goal in contemporary language education, where the English language increasingly functions as a global medium of intercultural exchange.

Theoretical Frameworks of Intercultural Communicative Competence

Several models have been developed to explain and assess Intercultural Communicative Competence (ICC), each emphasizing different but complementary dimensions of intercultural interaction. Among the most influential frameworks are Byram's (1997) model, which highlights linguistic, sociocultural, and critical dimensions through the five savoirs; Deardorff's (2006) process-oriented model, which focuses on attitudes, knowledge, and skills leading to effective intercultural behaviour; and Fantini & Tirmizi (2006) model, which underscores the interdependence between language proficiency and intercultural competence (see Table 1 below). These models collectively provide a theoretical foundation for understanding how individuals develop the ability to communicate and interact appropriately and effectively across cultures.

Table 1

Teachers' Experiences in Multicultural Education

Model / Scholar	***Main Components***	***Focus***
Byram (1997)	Knowledge, skills of interpreting/relating, skills of discovery/interaction, attitudes, critical cultural awareness	Developing learners' ability to interact with people from other cultures appropriately and critically
Deardorff (2006)	Attitudes, knowledge, skills → internal outcomes (adaptability, flexibility, empathy) → external outcomes (effective intercultural behaviour)	Process-oriented model focusing on continuous development

Fantini and Tirmizi (2006)	Knowledge, attitudes, skills, awareness and valuing cultural differences	Exploring and assessing ICC in a comprehensive, interconnected way, highlighting the need to integrate these components for effective intercultural communication and competence development.

One of the most influential and widely cited frameworks for understanding ICC is the model proposed by Byram (1997). His conceptualization has been particularly significant in language education, as it integrates linguistic competence with intercultural understanding. Byram argues that effective intercultural communication cannot be achieved solely through mastery of linguistic forms; rather, it requires the development of intercultural attitudes, knowledge, and skills that enable individuals to interpret and mediate between cultures. His model comprises five key components: *Attitudes* (savoir être; p. 91), *knowledge* (savoirs; p. 94), *skills of interpreting and relating* (savoir comprendre; p. 98), *skills of discovery and interaction* (savoir apprendre/faire; p. 99), and *critical cultural awareness* (savoir s'engager; p. 101) (Byram, 1997).

The first component – *attitudes* – involves curiosity and openness toward other cultures, as well as a readiness to suspend disbelief about other cultural norms and to question one's own cultural assumptions. Such attitudes foster empathy and a willingness to understand others from their own cultural perspectives. The second component, *knowledge*, refers to an individual's understanding of both their own culture and that of others, encompassing social groups, cultural practices, and communicative conventions. This knowledge provides a foundation for meaningful intercultural interpretation and interaction. The third and fourth components – *skills of interpreting and relating* and *skills of discovery and interaction* – are concerned with the ability to interpret cultural meanings, relate them to one's own cultural framework, and apply this understanding in real-time communication. These skills enable individuals to identify cultural references, explain them appropriately, and engage effectively in

intercultural encounters by adapting their behaviour and communicative strategies. The final component is *critical cultural awareness* (or savoir s'engager). It represents the evaluative dimension of ICC. It entails the ability to critically reflect on cultural practices, values, and beliefs – both one's own and others' – through a lens of equality, respect, and ethical responsibility.

Byram's (1997) model thus emphasizes that intercultural competence is not limited to language proficiency but extends to a broader educational and ethical goal: preparing learners to act as intercultural mediators. In this sense, language education becomes a means to promote intercultural understanding, democratic citizenship, and social responsibility. The model has had a profound influence on curriculum design, teacher education, and assessment practices in English language teaching, offering a comprehensive framework for integrating linguistic and intercultural dimensions within communicative pedagogy.

Building on earlier conceptualizations such as Byram's (1997) model, Deardorff (2006) proposed a *Process Model of Intercultural Competence* that emphasizes the developmental, cyclical, and reflective nature of intercultural learning. Unlike static or outcome-based models, Deardorff's framework presents intercultural competence as a continuous process of personal growth and transformation. It highlights how individuals progressively develop intercultural understanding through ongoing interactions, reflection, and adaptation in multicultural contexts.

Deardorff's (2006) model consists of both internal and external outcomes that evolve through the interaction of three core components: *attitudes*, *knowledge and comprehension*, and *skills*. The process begins with the cultivation of fundamental attitudes, such as openness, curiosity, and respect toward cultural diversity. These attitudes form the motivational basis for engaging meaningfully with others across cultural boundaries. As individuals engage with new experiences, they develop knowledge and comprehension about cultural self-awareness, deep cultural understanding, and sociolinguistic awareness – knowledge that allows

them to interpret cultural behaviours and communication styles accurately.

The third component, skills, involves the ability to observe, listen, evaluate, and interpret effectively during intercultural interactions. When combined, these internal elements lead to the internal outcome of a more flexible, adaptive, and ethnorelative worldview. Over time, these internal transformations manifest externally as appropriate and effective communication and behaviour in intercultural settings, which constitute the external outcomes of the model. Importantly, Deardorff (2006) stresses that this process is iterative rather than linear: individuals continually refine their intercultural competence through feedback and reflective practice.

Deardorff's (2006) model is particularly relevant for educators and language professionals, as it underscores that intercultural competence cannot be fully taught or measured in a single instance. Instead, it must be nurtured through experiential learning, self-reflection, and intercultural engagement. This process-oriented view aligns closely with pedagogical approaches that promote intercultural experiences in language education – such as project-based learning, virtual exchanges, and international collaboration – learners are encouraged to construct intercultural understanding through authentic communication.

Complementing the process-oriented view of Deardorff (2006), Fantini (2006, 2009) offers another influential framework that conceptualizes ICC as a multidimensional construct integrating linguistic, sociolinguistic, and intercultural abilities. Fantini and Tirmizi's (2006) model situates language at the core of intercultural communication, arguing that linguistic proficiency and cultural understanding are inseparable in shaping one's capacity to communicate effectively across cultures. In his view, intercultural competence develops through the interplay of four interrelated dimensions: *knowledge*, *attitude*, *skills*, and *awareness*. Together, these dimensions facilitate an individual's ability to interact appropriately and effectively with people from different linguistic and

cultural backgrounds.

According to Fantini (2006), knowledge involves understanding one's own and others' cultural frameworks, values, and communication norms, while attitude reflects openness, curiosity, and respect toward cultural diversity. Skills refer to the practical abilities to interpret, relate, and adapt behaviour in intercultural encounters, and awareness functions as the integrative dimension that allows individuals to critically reflect on their own cultural assumptions and communicative behaviour. Fantini emphasizes that these dimensions are not fixed traits but dynamic capacities that evolve through experience and reflection, reinforcing the idea that intercultural competence is a developmental and lifelong process. A distinctive contribution of Fantini's work is his inclusion of linguistic competence as an essential and complementary component of intercultural competence. He argues that language serves both as a means of communication and as a medium through which cultural meanings are constructed, negotiated, and understood. Therefore, developing ICC necessarily entails enhancing one's linguistic and sociolinguistic abilities alongside intercultural understanding. Fantini (2009) also introduces the idea of developmental stages of intercultural growth – ranging from awareness to adaptation and eventual transformation – highlighting the progressive nature of intercultural learning.

Fantini and Tirmizi's (2006) model has particular relevance in contexts where English functions as a lingua franca, such as EAP settings, where teachers and learners interact within culturally diverse environments. It underscores the importance of integrating intercultural reflection and linguistic practice within the same pedagogical framework, enabling learners and educators to move beyond grammatical accuracy toward meaningful, culturally responsive communication.

Taken together, the models proposed by Byram (1997), Deardorff (2006), and Fantini (2006, 2009) provide a comprehensive theoretical foundation for understanding ICC as a multifaceted and developmental construct. While each model offers a distinct perspective, they converge on the view

that intercultural competence involves the integration of cognitive, affective, and behavioural dimensions that enable individuals to communicate both appropriately and effectively across cultural boundaries. Byram's model highlights the educational and ethical dimensions of ICC, positioning language learners as intercultural mediators who critically engage with cultural meanings. Deardorff's framework, in contrast, emphasizes the process-oriented and experiential nature of intercultural learning, portraying ICC as an ongoing cycle of reflection, adaptation, and personal growth. Fantini and Tirmizi's (2006) model situates language and communication at the core of intercultural competence, underscoring the interplay between linguistic proficiency and cultural awareness. Despite their differing emphases, all three models emphasize that intercultural competence extends far beyond linguistic ability. It encompasses attitudes of openness and curiosity, knowledge of cultural frameworks, and the capacity for critical self-reflection and behavioural adaptation. These shared elements reflect a holistic understanding of communication as a socially and culturally embedded practice. For educators – particularly those teaching EAP – these frameworks collectively offer valuable insights into how ICC can be fostered through pedagogy. By integrating linguistic instruction with intercultural reflection and experiential learning, teachers can prepare students not only to use English fluently but also to engage empathetically and ethically within multicultural academic and professional communities.

In summary, the theoretical models of Byram (1997), Deardorff (2006), and Fantini and Tirmizi (2006) provide complementary perspectives that together shape contemporary conceptions of ICC. Their collective insights form a robust foundation for examining how teachers perceive and implement intercultural principles in their own practice. In the context of the present study, these models guide the exploration of Academic English teachers' understandings and applications of ICC, serving as both an analytical framework and a pedagogical reference for interpreting how

intercultural awareness and competence are enacted in real educational settings.

Qualitative Studies on EFL Teachers' Intercultural Communicative Competence

A growing body of qualitative research has explored EFL teachers' ICC in various educational contexts, highlighting how teachers perceive, develop, and apply intercultural understanding in language classrooms (see Table 2 below). These studies collectively show that while teachers often recognize the importance of intercultural learning, they face challenges in systematically integrating it into their teaching practices.

Table 2

Qualitative Studies on EFL Teachers' ICC

Author(s) & Year	***Context / Participants***	***Method***	***Main Focus***
Arasaratnam & Doerfel (2005)	Intercultural communicators (not limited to teachers)	Qualitative inquiry	Attributes of competent intercultural communicators
Byram & Wagner (2018)	Theoretical–practical perspective	Conceptual and reflective discussion	Experiential development of ICC
Çiftçi (2016)	Turkish EFL teachers	Interviews	Teachers' perceptions of ICC in Turkish context
Çiftçi & Karaman (2019)	Turkish pre-service EFL teachers	Interviews and reflective tasks	Conceptualization and classroom integration of ICC
Sercu et al. (2004)	EFL teachers in Europe	Interviews and classroom observations	Teachers' perceptions of ICC and their role as intercultural mediators
Sercu et al. (2005)	Multi-country European study	Qualitative interviews and document analysis	Teachers' readiness to integrate ICC in language education

Young & Sachdev (2011)	Language teachers in the UK and France	Interviews	Teachers' perceptions and practices of interculturality in multicultural classrooms

One of the early and influential studies in this field, Sercu et al. (2004), examined EFL teachers' perceptions of intercultural competence and their roles as intercultural mediators. Through interviews and classroom observations, the study revealed that teachers valued intercultural learning but often lacked the pedagogical knowledge and training to effectively promote it in their classrooms. They tended to focus primarily on linguistic competence rather than intercultural or critical awareness, indicating a gap between teachers' positive beliefs and their actual classroom practices.

Similarly, Sercu et al. (2005) conducted a multi-country project investigating teachers' readiness to integrate intercultural competence into foreign language education across Europe. Using qualitative interviews and document analysis, the study found that teachers were aware of the importance of ICC but faced barriers such as curricular limitations, lack of resources, and insufficient conceptual understanding. The study emphasized the need for teacher education programs to provide explicit training in intercultural teaching and assessment.

Young and Sachdev (2011) further explored language teachers' perceptions and practices related to interculturality in multicultural classrooms in the UK and France. Their findings indicated that teachers generally held open-minded and empathetic attitudes toward cultural diversity and valued intercultural communication as part of language education. However, most relied on personal experiences rather than established ICC models – such as Byram's (1997) model of Intercultural Communicative Competence or Deardorff's (2006) Process model – to address intercultural situations in class.

In a more communication-oriented perspective, Arasaratnam and Doerfel (2005) investigated the attributes of competent intercultural

communicators and identified empathy, open-mindedness, adaptability, and mindfulness as key features. Although not limited to teachers, these attributes align closely with the skills and attitudes components of ICC frameworks, offering useful insights for understanding teacher–student interactions in diverse language classrooms.

Byram and Wagner (2018) contributed a more recent perspective by emphasizing that ICC should not remain a theoretical construct but should be developed experientially through communication and reflection. They argued that authentic tasks, meaningful interaction, and reflective practices are essential in enabling both teachers and learners to engage in intercultural mediation and negotiation of meaning, thus fostering deeper intercultural understanding.

Research conducted in the Turkish EFL context has revealed similar findings, reinforcing international trends while highlighting context-specific challenges. Çiftçi (2016) examined Turkish EFL teachers' perceptions of ICC and found that teachers were generally aware of intercultural dimensions of language teaching but lacked practical strategies for implementation due to limited training opportunities and curricular constraints. Extending this line of inquiry, Çiftçi and Karaman (2019) explored how Turkish pre-service teachers conceptualized ICC and incorporated intercultural elements into their teaching. The study revealed that participants valued intercultural awareness but needed more explicit integration of ICC components in teacher education programs to translate theory into practice.

Collectively, these studies – both international and Turkish – demonstrate a consistent pattern: EFL teachers recognize the importance of intercultural competence but often lack the pedagogical support and systematic training to apply it effectively. This highlights the continuing relevance of Byram's (1997) model, which focuses on attitudes (savoir être), knowledge (savoirs), skills of interpreting and relating (savoir comprendre), skills of discovery and interaction (savoir apprendre/faire), and critical cultural awareness (savoir s'engager). Likewise, Deardorff's

(2006) process model underscores the developmental and reflective nature of ICC, emphasizing adaptability, empathy, and internal outcomes such as respect and openness.

In summary, the reviewed qualitative studies suggest that while EFL teachers across contexts – including Turkey – display positive attitudes toward intercultural learning, they continue to face challenges related to conceptual clarity, pedagogical application, and institutional support. Addressing these issues requires embedding ICC more deeply into teacher education curricula, fostering reflective practice, and providing teachers with experiential opportunities to engage in authentic intercultural communication.

Context and Purpose of the Study

Although previous research (e.g., Çiftçi, 2016; Çiftçi & Karaman, 2019; Sercu et al., 2004; Sercu et al., 2005; Young & Sachdev, 2011) has extensively examined EFL teachers' ICC, most studies have focused on general English education rather than Academic English instruction in higher education. The findings consistently indicate that while teachers value intercultural learning, they often lack the training and pedagogical frameworks necessary to integrate it effectively into their practice. Moreover, research remains limited in multilingual and international higher education settings, where cultural diversity is central to classroom interaction.

In Northern Cyprus, 23 international universities currently offer English-medium education (Universities, Higher Education Planning, Evaluation, Accreditation and Coordination Council [YÖDAK], 2025), attracting students from a wide range of linguistic, cultural, and educational backgrounds. As Bochard (2017) observes, such institutions exemplify the increasingly multicultural and multilingual nature of contemporary classrooms, where English serves as both the medium of instruction and a lingua franca for communication among diverse participants. Within this context, ICC becomes essential for fostering effective and inclusive teaching and learning. Academic English instructors must not only

demonstrate linguistic and pedagogical expertise but also exhibit intercultural awareness, empathy, and adaptability in their interactions with students.

Anchored in Byram's (1997) model of ICC, Deardorff's (2006) process model, and Fantini's (2006, 2009) framework, the present qualitative study conceptualizes ICC as a dynamic and developmental construct encompassing attitudes, knowledge, skills, and awareness that enable effective intercultural communication. Addressing a clear research gap, this study investigates how Academic English teachers in the Foreign Languages Division (FLD) of the Foreign Languages and English Preparatory School (FLEPS) at an international university in Northern Cyprus perceive, experience, and enact ICC in their professional practice. Specifically, it explores how they interpret intercultural communication within their pedagogical context, integrate cultural dimensions into their "Communication in English" courses, and engage students in activities that promote intercultural understanding and competence.

Methodology

In line with the theoretical underpinnings of Byram's (1997), Deardorff's (2006), and Fantini's (2006, 2009) frameworks, the present study adopts a qualitative research design to explore how Academic English teachers conceptualize and implement ICC within their teaching practices. Given that intercultural competence is inherently context-dependent and deeply embedded in personal beliefs, experiences, and interactions, a qualitative approach is particularly well suited to capture the complexity of teachers' perceptions and behaviours. This approach allows for an in-depth examination of teachers' lived experiences, reflective practices, and classroom strategies, offering rich insights into how ICC is interpreted and enacted in authentic educational settings.

Data Collection Instruments and Procedure

A semi-structured interview protocol was developed to examine the ICC of Academic English teachers. The instrument was designed based on the

theoretical frameworks of Byram (1997), Deardorff (2006), and Fantini (2006, 2009), and informed by findings from previous empirical studies. It consisted of three main sections – *Cultural Awareness and Attitude*, *Cultural Knowledge*, and *Skills* – to capture the multidimensional nature of ICC and to elicit teachers' reflections on their intercultural awareness, pedagogical experiences, and communicative practices.

To ensure reliability and content validity, the interview questions were reviewed by two experts in the field of English Language Teaching (ELT). A pilot study was subsequently conducted with five Academic English teachers who taught the Communication in English II course offered across 42 English-medium departments. With the permission of the participants, the pilot interviews were audio- and video-recorded and then transcribed and analysed. Based on the feedback, several items were refined for clarity, coherence, and relevance.

The finalized interview comprised ten open-ended questions distributed across the three sections. These questions explored teachers' approaches to engaging students in intercultural activities, consideration of students' cultural norms, strategies for learning about students' backgrounds, and their skills in interpreting and responding to intercultural differences.

The interviews were audio-recorded with participants' consent to ensure accuracy in transcription and analysis. Prior to participation, participants were informed about the study's purpose, procedures, and confidentiality measures, and both written and oral consent were obtained.

Participants

Twelve Academic English teachers, representing 30% of the total teaching staff (N = 40), participated in the study. The majority of the participants were female (75%, 9 teachers), while 25% (3 teachers) were male. Most teachers (83.3%, 10 teachers) were Cypriot, and the remaining 16.7% (2 teachers) were originally from England but currently residing and teaching in Cyprus. Regarding age distribution, half of the participants (50%, 6 teachers) were between 46 and 50 years old, one third (33.3%, 4 teachers)

were aged 41–45, one participant (1 teacher) was between 36 and 40, and one participant (1 teacher) was over 50 years old.

As shown in Table 3, all participants (100%, 12 teachers) reported having experience of teaching English to multicultural classes, indicating that each teacher had direct professional interaction with linguistically and culturally diverse student populations. However, none of the teachers (0%) reported having received formal training in ICC. This finding underscores a notable gap between teachers' extensive exposure to multicultural classroom contexts and the lack of structured professional development opportunities in intercultural education.

Table 3

Teachers' Experiences in Multicultural Education

	n	***%***
Having taught English to multicultural classes	12	100 %
Having received training on Intercultural Communicative Competence (ICC)	None	0%
Having joined in seminars or workshops	8	66.7 %

In terms of professional enrichment activities, only one-third of the teachers (33.3%, 4 teachers) reported having attended seminars or workshops related to intercultural or multicultural education, while the majority (66.7%, 8 teachers) had not participated in such events. These findings suggest that although teachers in the current study possess substantial experiential knowledge through teaching multicultural groups, their formal preparation and continuous professional development opportunities related to ICC remain limited. This imbalance may influence the extent to which they are able to consciously and effectively integrate intercultural dimensions into their teaching practices.

Data Analysis

The collected data were analysed using QDA Miner Lite, a qualitative data

analysis software that facilitates systematic coding, categorization, and interpretation of textual data. This program allows for the organization and retrieval of interview excerpts, enabling the researcher to identify patterns and emerging themes efficiently. The study employed a thematic analysis framework, which involved systematically coding the data, identifying patterns, and categorizing recurring ideas into meaningful themes. Following a thorough review and iterative coding process, the interview data were categorized under seven major themes: (1) teachers' knowledge of different cultures; (2) teachers' feelings in their interactions with individuals from diverse cultural backgrounds; (3) teachers' attitudes towards people from different cultures; (4) teachers' engagement of students in activities aimed at developing intercultural awareness; (5) teachers' ability to express their thoughts and ideas clearly during intercultural interactions; (6) teachers' capacity to identify and understand diverse beliefs, behaviours, and values; and (7) teachers' ability to resolve problems arising from intercultural communication.

Results

Teachers' Knowledge of Different Cultures

When asked about their familiarity with different cultures, half of the teachers (50%, 6 teachers) reported having substantial knowledge of other cultures, while the remaining half (50%, 6 teachers) stated that their knowledge was only partial.

The teachers identified specific cultures they were familiar with to varying extents. The distribution of cultural knowledge showed that 19.2% of the participants (2 teachers) were familiar with African culture and another 19.2% (2 teachers) with Arabic culture. Smaller proportions reported familiarity with Turkish (3.8%, 1 teacher), English (3.8%, 1 teacher), Chinese (3.8%, 1 teacher), and Russian (3.8%, 1 teacher) cultures. (see Figure 1).

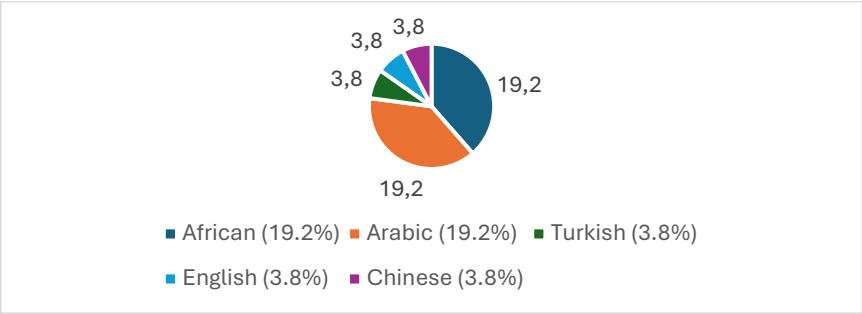


Figure 1 *The Cultures Teachers Have Knowledge about*

When asked about their knowledge of other cultures, the teachers identified several areas of familiarity. The most frequently mentioned area was greetings (11.5%, 3 teachers), followed by food (7.7%, 2 teachers). Other aspects included values, traditions, clothing, political and economic issues, hospitality, social practices (e.g., paying bills), hand gestures, famous athletes, and levels of conservatism (each 3.8%, 1 teacher). These findings suggest that teachers' intercultural knowledge was largely limited to visible and surface-level aspects of culture, rather than deeper cultural values or perspectives, which is consistent with previous studies reporting EFL teachers' descriptive rather than analytical cultural knowledge (Sercu et al., 2005; Young & Sachdev, 2011).

Teachers' Feelings in their Interactions with People from Different Cultures

When examining teachers' emotional responses during interactions with individuals from different cultural backgrounds, several key themes emerged (see Table 4 below). One-third of the participants (33.3%, 4 teachers) reported feeling a sense of responsibility toward their students. For instance, T5 stated, "If I'm the teacher in the classroom, I feel that responsibility towards my students." Additionally, 22.6% of the teachers (3 teachers) expressed positive emotions such as happiness and curiosity in intercultural interactions. For example, T9 mentioned feeling "happy and curious" when communicating with people from other cultures. Likewise, T2 noted that she enjoyed such interactions, explaining that she

liked to learn about a culture before visiting its country. These findings suggest that teachers' emotional engagement in intercultural contexts is often linked to professional responsibility and personal interest in cultural learning.

Table 4

Teachers' Feelings in their Interactions with People from Different Cultures

Theme	***Codes***	***f***	***%***	***Teacher Number***	***Example Sentence***
Feelings	Responsible	4	33.3	5, 7, 8, 9	"If I'm the teacher in the classroom, you know I feel that responsibility towards my students."
	Comfortable	3	25	1, 2, 6	"I feel comfortable. Because I can speak English and speak to them. I can convince them before having a problem. "
	Happy and curious	3	22.6	2, 7, 9	"I enjoy because I also like traveling, as I said, and when I travel somewhere at least I have an idea of how to react or how to behave in the beginning, or maybe even about food, food culture, it's also important."

A quarter of the teachers (25%, 3 teachers) reported feeling comfortable when interacting with individuals from different cultural backgrounds. For instance, T1 attributed his comfort to his ability to communicate effectively in English, stating, "I feel comfortable because I can speak English and speak to them. I can convince them before having a problem." This indicates that linguistic competence in English contributed to teachers' confidence and ease in intercultural communication, allowing them to manage potential misunderstandings proactively.

Teachers' Attitudes towards People from Different Cultures

Analysis of teachers' attitudes toward individuals from different cultures revealed seven key themes: respect for diversity and differing values, consideration, non-judgmental behaviour, encouraging intercultural interaction, sensitivity, empathy toward different values, and lack of empathy toward different values (see Table 5 below).

Table 5

Teachers' Attitudes towards People from Different Cultures

Theme	*Codes*	*f*	*%*	*Teacher Number*
Attitudes	Respect for diversity and different values	9	74.97	2,3,4,5,7, 8,9,10,12
	Being considerate	4	33.32	2,5,10,12
	Being sensitive	3	24.99	2,6,12
	Being non-judgmental	2	16.66	6,10
	Encouraging people to interact	2	16.66	2,6
	Feeling Empathy for different values	2	16.66	5,10
	Feeling no empathy for different values	1	8.33	1

When teachers' 'Respect for diversity and different values' was examined, the great majority (74.97%, 9 teachers) (T2, T3, T4, T5, T7, T8, T9, T10, and T12) of the teachers reported that they respected diversity and different values.

T9 emphasized her respect for the diverse values of people from different cultures, noting that her 15 years of teaching experience had enabled her to better understand and appreciate such differences. She explained that she actively listened to her students and acknowledged their values to demonstrate respect for their cultural perspectives. Similarly, T4 highlighted her respect for religious diversity. Referring to individuals who wear the hijab or adhere to stricter religious practices, she described these variations as personal choices that merit understanding and respect,

reflecting her open and tolerant attitude toward cultural and religious differences.

Approximately one-third of the teachers (33.3%, 4 teachers) reported being considerate of cultural differences in their interactions with individuals from diverse backgrounds. Approximately one-fourth of the teachers (25%, 3 teachers) reported being sensitive toward individuals from different cultural backgrounds. A smaller proportion of teachers (16.7%, 2 teachers) described themselves as non-judgmental toward individuals from other cultures. Similarly, 16.7% (2 teachers) of the teachers stated that they actively encouraged interaction among individuals from different cultural backgrounds. Another 16.7% (2 teachers) of the teachers expressed empathy toward the differing values of people from other cultures. Conversely, one teacher (8.3%, 1 teacher) reported having no empathy toward differing cultural values. These results confirm previous findings that EFL teachers often demonstrate positive attitudes but limited critical cultural reflection (Sercu, 2004; Byram & Wagner, 2018).

Approximately one-fourth of the teachers (25%, 3 teachers) reported being sensitive toward individuals from different cultural backgrounds. For instance, T12 stated that she was always cautious about her behaviour, noting that what might be humorous or acceptable in the Cypriot culture could be perceived differently or even inappropriately by people from other cultures. She emphasized the importance of maintaining cultural awareness and sensitivity in interpersonal interactions.

A smaller proportion of teachers (16.7%, 2 teachers) described themselves as non-judgmental toward individuals from other cultures. For example, T10 explained that she avoided labelling people from different cultural backgrounds as “good” or “bad,” recognizing that each culture has its own norms and values. She highlighted the need to approach others with empathy and respect, reflecting an inclusive and tolerant attitude.

Similarly, 16.7% (2 teachers) of the teachers stated that they actively encouraged interaction among individuals from different cultural

backgrounds. T6, for example, noted that her main goal as an English teacher was to help students communicate by finding shared or contrasting discussion topics. She emphasized that fostering dialogue and trust among culturally diverse students contributed to a more effective classroom environment.

Another 16.7% (2 teachers) of the teachers expressed empathy toward the differing values of people from other cultures. T10 mentioned that she made conscious efforts to understand and appreciate cultural differences through an empathetic and open-minded approach.

Conversely, one teacher (8.3%, 1 teacher) reported having no empathy toward differing cultural values. T1 described perceiving some behaviours of individuals from African countries as inconsistent with his own cultural norms, particularly regarding social conduct and adherence to rules. This view reflects limited intercultural sensitivity and underscores the variability in teachers' attitudes toward cultural diversity.

Teachers' Engaging Students in Intercultural Awareness Developing Activities

Almost all teachers (91.7%, 11 teachers) reported engaging their students in activities designed to promote intercultural awareness, while only one teacher (8.3%, 1 teacher) indicated that she did not. The activities most frequently mentioned included pair-work discussions (28.6%, 4 teachers), talking about students' own cultures (21.4%, 3 teachers), teamwork (14.3%, 2 teachers), and role-play (14.3%, 2 teachers) (See Figure 2 below). Less frequently reported activities were interviews (7.4%, 1 teacher), question-based discussions (7.4%, 1 teacher), and presentations (7.4%, 1 teacher). These findings suggest that teachers actively integrate interactive and communicative tasks to foster students' intercultural understanding.

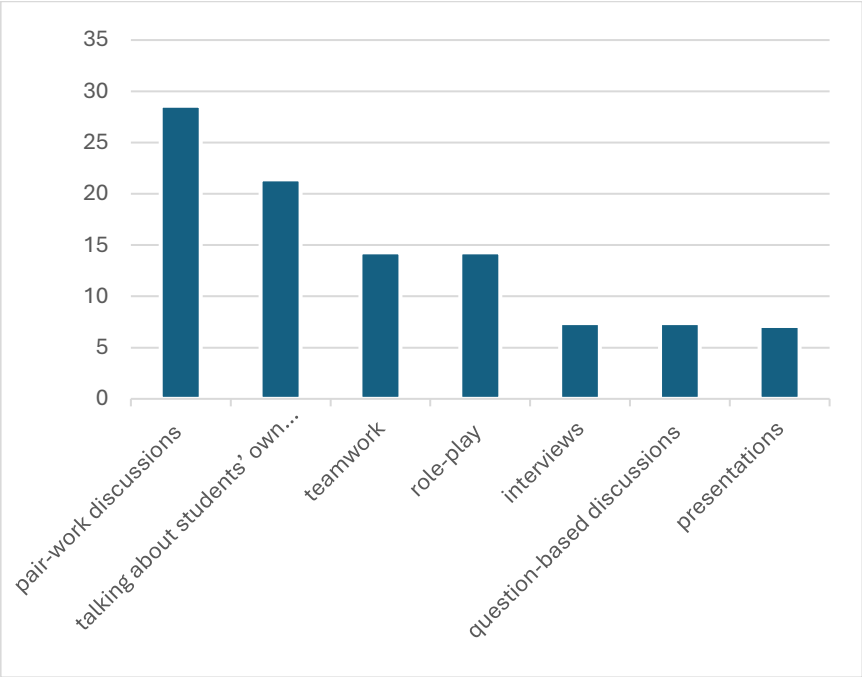


Figure 2 *Teachers' Engaging Students in Intercultural Awareness Developing Activities*

Teachers' Identifying and Understanding Different Beliefs, Behaviours, and Values of People from Different Cultures

The majority of teachers (58.3%, 7 teachers) reported that they were always able to identify and understand the beliefs, behaviours, and values of people from different cultures (see Figure 3 below). Meanwhile, 41.7% of the teachers (5 teachers) indicated that they were 'sometimes' able to recognize and understand such cultural differences. These results align with prior findings that EFL teachers often possess practical communicative skills but have limited depth of intercultural knowledge (Çiftçi, 2016; Young & Sachdev, 2011).

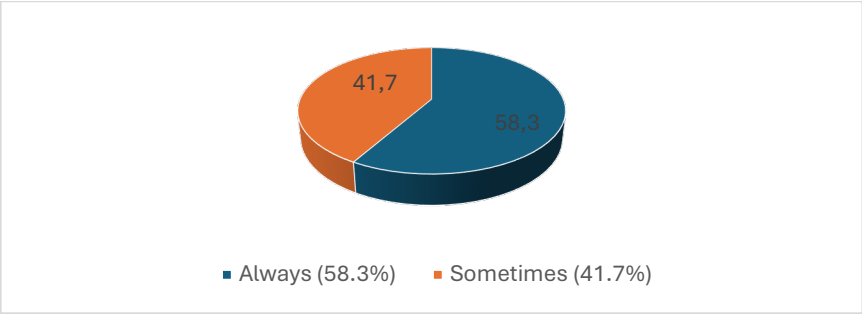


Figure 3 *Teachers' Identifying and Understanding Different Beliefs, Behaviours, and Values of People from Different Cultures*

Meanwhile, 41.7% of the teachers (5 teachers) indicated that they were 'sometimes' able to recognize and understand such cultural differences. For instance, T7 admitted uncertainty about how effectively she could interpret her students' behaviours and beliefs. None of the teachers stated that they were never able to identify or understand cultural differences.

Teachers' Ability to Solve Problems in their Interaction with People from Different Cultures

The majority of teachers (83.3%, 10 teachers) stated that they were 'always' able to solve problems, such as misunderstandings, in their interactions with people from different cultures (See Figure 4 below).

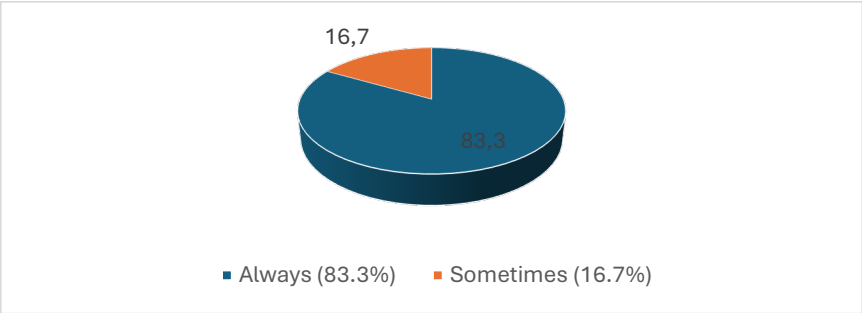


Figure 4 *Teachers' Resolving Misunderstandings*

T9, for instance, described herself as a problem-solver who could effectively manage intercultural issues. Similarly, T3 explained that when

faced with a problem, she first communicated with the students to identify the issue before finding a suitable solution. T1 shared that he used diplomacy and open communication to resolve conflicts among students, emphasizing calm discussion and mutual understanding.

On the other hand, 16.7% of the teachers (2 teachers) mentioned that they were 'sometimes' able to solve such problems. For example, T2 stated that resolving conflicts depended on the openness of the other person, noting that it was difficult to reach an agreement with narrow-minded individuals. None of the teachers reported that they were 'never' able to solve problems in intercultural interactions. This indicates a relatively stronger practical realization of ICC compared with previous research where teachers' classroom application was limited (Sercu et al., 2005).

Discussion

The findings of this study provide valuable insights into the ICC of Academic English teachers in an international university context in Northern Cyprus. Overall, the teachers demonstrated positive attitudes and effective communication skills toward culturally diverse students but showed limited depth of intercultural knowledge and critical cultural awareness. These findings are consistent with patterns observed in previous qualitative studies on EFL teachers' ICC in various contexts (e.g., Çiftçi, 2016; Sercu et al. 2004; Young & Sachdev, 2011).

Teachers' Attitudes Towards Other Cultures

The teachers in this study exhibited high levels of respect for diversity, openness, consideration, and non-judgmental behaviour, indicating strong development in the attitudinal dimension of ICC. According to Byram's (1997) model, attitudes such as curiosity, openness, and readiness to suspend disbelief about other cultures are central to developing intercultural competence. Similarly, Deardorff (2006) emphasizes that attitudes form the foundation of ICC and are essential for fostering empathy and adaptability.

Çiftçi (2016) found that while Turkish pre-service EFL teachers held

positive attitudes toward intercultural communication, their skills and critical awareness were still emerging.

Teachers' Knowledge of Other Cultures

Half of the teachers in the current study reported partial or limited knowledge of other cultures, focusing mainly on surface-level cultural aspects such as greetings, food, and traditions. This finding aligns with the observations of Sercu et al. (2005) and Young and Sachdev (2011), who noted that many EFL teachers tend to exhibit a descriptive rather than analytical understanding of intercultural issues. According to Byram (1997), intercultural knowledge involves not only familiarity with facts about other cultures but also an understanding of the relationship between one's own and others' cultural perspectives. The results suggest that the teachers' cultural knowledge in this study remained at an early stage of development, with limited engagement in comparative or reflective analysis.

This lack of deep cultural understanding may be attributed to the limited professional training opportunities related to ICC in many EFL contexts, as highlighted by Baker (2015) and Sercu et al. (2004). These studies argue that without institutional support and systematic intercultural education, teachers often rely on personal experience rather than pedagogical frameworks to interpret cultural diversity.

Teachers' Intercultural Communication Skills

In terms of communication, the majority of teachers reported that they were able to express their thoughts clearly, solve intercultural misunderstandings, and adapt their communication styles in multicultural settings. These findings align with the 'skills' dimension in both Byram's (1997) and Deardorff's (2006) models, which emphasize interpreting, relating, and interacting as core components of ICC. The teachers' reliance on interactive activities such as pair work, role plays, and discussions to enhance intercultural awareness further supports Byram and Wagner's (2018) claim that experiential communication practices are effective in developing ICC.

These results are comparable to those of Arasaratnam and Doerfel (2005), who found that effective intercultural communicators share common attributes such as empathy, adaptability, and mindfulness. Similarly, Çiftçi and Karaman (2019) reported that Turkish EFL teachers were generally confident in managing intercultural communication but lacked systematic pedagogical approaches to embed ICC into their curriculum.

Critical Cultural Awareness

While teachers demonstrated positive intercultural attitudes and practical communication skills, there was little evidence of critical cultural awareness – the ability to evaluate and question cultural values, practices, and perspectives, as emphasized by Byram (1997). None of the teachers explicitly referred to challenging stereotypes, addressing cultural inequalities, or reflecting critically on power dynamics in intercultural interactions. This limitation is consistent with findings from Sercu (2004) and Byram and Wagner (2018), who noted that EFL teachers often focus on promoting cultural tolerance rather than fostering critical cultural reflection.

Conclusion

The findings demonstrate that the teachers' ICC aligns closely with the attitudinal and behavioural dimensions proposed in Byram's (1997) and Deardorff's (2006) models, while their knowledge and critical cultural awareness remain underdeveloped. Compared to earlier studies, these results reaffirm that positive attitudes and communicative adaptability often precede deep cultural understanding and critical reflection in EFL teaching contexts. This suggests that while teachers are well-positioned to facilitate intercultural dialogue, there remains a pressing need for systematic ICC-oriented professional development to strengthen their theoretical grounding and critical engagement with cultural diversity.

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Ethical Declaration and Committee Approval

This study was conducted in accordance with the principles of scientific research and publication ethics. Ethical approval for this research was obtained from the Ethics Committee of Eastern Mediterranean University, with approval number (ETK00-2021-0174, 16.06.2021).

Proportion of Authors' Contribution

Author 1: Conceptualization, Methodology, Data Collection, Formal Analysis, Writing – Original Draft.

Author 2: Conceptualization, Review & Editing, and Visualization and Last Draft.

Sustainability has emerged as a defining concept across education, language studies, and the humanities, extending far beyond environmental concerns to encompass ethical responsibility, pedagogical continuity, social inclusion, and cognitive durability. In language-related disciplines, sustainability is increasingly understood as the capacity to design learning environments, theoretical frameworks, and cultural interpretations that remain responsive to global challenges while supporting long-term educational and social development. *Insight Meets Innovation*: *Interdisciplinary Explorations in Language* brings together international scholars who approach sustainability as a multidimensional and interdisciplinary concept, explored through language education, linguistics, literature, translation, and educational studies.