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Szakdolgozat

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angol nyelv és kultúra tanára- német és német nemzetiségi tanár

osztatlan tanári mesterszak

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EÖTVÖS LORÁND TUDOMÁNYEGYETEM

Bölcsészettudományi kar

Szakdolgozat

A mesterséges intelligencia használata az angol nyelv tanítása során

The implementation of Artificial Intelligence in English Language Teaching

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2026

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Abstract

As Artificial Intelligence becomes increasingly accessible in education, English language teachers are faced with new opportunities and challenges regarding its classroom use. This research investigates the role of AI in English Language Teaching, with particular attention to its influence on teaching and learning processes, its pedagogical applications, teachers' attitudes, and the ethical concerns associated with its use. The study applies a mixed-methods design: data were collected through an online questionnaire completed by 50 English teachers in Hungary and semi-structured interviews with teachers to gain deeper insight into their experiences. The findings indicate that AI is primarily used to support lesson planning, material creation, writing development, and differentiated instruction, while speaking-related applications appear more limited. The results also suggest that teachers' perceived usefulness, ease of use, and self-efficacy influence the extent of AI implementation. At the same time, participants expressed concerns related to plagiarism, false information, overreliance, and the weakening of critical thinking. Overall, the study shows that AI can function as a valuable supportive tool in ELT when it is applied critically, ethically, and with strong teacher guidance.

Keywords: Artificial Intelligence, English Language Teaching, AI in education, teacher attitudes, pedagogical applications, ethical concerns

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1 Introduction

The importance of digital technologies in education became particularly evident during the COVID-19 pandemic, when teachers were required to adapt to online teaching environments. This period showcased how technological competence and its ability to adapt to education are significant, as both teachers and learners had to develop new skills in a short period of time (Williamson & Eynon, 2020). The next stage of this technological evolution is represented by AI, which provides new opportunities to improve language learning while also requiring a critical and informed implementation .

Within this changing educational landscape the role of teachers remains essential. Teachers act as facilitators who guide learning, provide feedback, and support students' improvement (Cahyono & Rusiadi, 2025; Reeve, 2006) Moreover, they function as models of critical thinking, demonstrating how AI can be used effectively while recognizing its limitations. As a result, teachers should be involved in all steps of AI integration, including lesson planning, instructional planning, and assessment processes.

The emergence of AI-powered tools, particularly Large Language Models (LLMs) such as ChatGPT, has drawn attention to both the educational opportunities and the potential threats associated with these technologies. While ChatGPT has been demonstrated to improve students' learning performance, learning perception, and higher-order thinking in specific educational settings, recent scholarship also warns that excessive or uncritical reliance on such tools may reduce mental effort, foster cognitive offloading, and undermine the development of independent and critical thinking when students use them to avoid meaningful cognitive engagement (Deng et al., 2025; Gerlich, 2025; UNESCO, 2023). In language education, these concerns are especially relevant, as AI-based tools can support writing, provide immediate feedback, and enable interactive language practice, thereby contributing to language development (Meurers, 2021).

At the same time, the increasing use of AI in education has raised important concerns regarding academic integrity, critical thinking, and the reliability of AI-generated content (Dwivedi et al., 2023; Selwyn, 2019). More specifically, recent literature has drawn attention to the risk of cognitive offloading, that is, the transfer of cognitive effort to external tools to reduce mental demand. In the context of LLMs such as ChatGPT, this concern is especially significant, as students may use these technologies not merely for support but to bypass active thinking altogether. As a result, excessive dependence on AI may lead to the decrease

of independent reasoning, reduce critical engagement, and negatively affect durable learning. Recent studies show that more reliance on AI is linked to less critical thinking and that using ChatGPT without limits may make it harder to remember what you learn over time ((Barcaui et al., 2025; Risko & Gilbert, 2016; Tian & Zhang, 2025) Furthermore, these developments have also led to broader questions about the role of teachers in AI-supported learning environments.

For this reason, the integration of AI into English Language Teaching (ELT) has become an important research issue. Although AI offers clear pedagogical potential, its implementation in educational practice cannot be understood only in technological terms. Teachers remain responsible for their learners' development, evaluating, adapting, and contextualising AI-generated content within appropriate pedagogical frameworks. In this sense, AI does not replace teachers; rather, it redefines certain aspects of their role and requires new forms of pedagogical awareness, critical evaluation, and professional decision-making (Holmes et al., 2019; Zawacki-Richter et al., 2019).

The research problem addressed in this thesis, therefore, concerns how AI can be integrated into ELT in ways that are pedagogically meaningful, ethically responsible, and supportive of the continuing central role of the teacher.

This thesis aims to provide a structured overview of the opportunities and challenges associated with the integration of Artificial Intelligence into English Language Teaching. The literature review focuses on four central areas: the role of AI in education, its pedagogical applications in ELT, teachers' attitudes towards technology, and the ethical implications of AI use in educational contexts. Building on this theoretical background, the empirical part of the study investigates how English teachers in Hungary perceive and use AI in their professional practice.

The study is guided by the following research questions:

1. How can AI influence teaching and learning processes in ELT?
2. What pedagogical applications of AI can support language learning?
3. How do teachers' attitudes, including perceived usefulness, perceived ease of use, and self-efficacy, influence the implementation of AI technologies?
4. What ethical and pedagogical challenges are associated with the use of AI in education?

To address these questions, the study employs a mixed-methods research design. The quantitative component is based on a questionnaire completed by 50 English teachers in Hungary, while the qualitative component contains detailed observation of 4 teachers' experiences, perceptions, and attitudes towards AI integration. The overall aim of the research is to examine how AI can be implemented effectively in ELT while maintaining the essential role of teachers as facilitators, evaluators, and decision-makers in the learning process.

Although previous research has examined particular applications of AI in education, the broader issue of how AI can be integrated into ELT in a balanced and pedagogically informed way remains only partly explored (Zawacki-Richter et al., 2019). Therefore, this thesis seeks to contribute to the existing literature by offering a structured account of teachers' perspectives on AI use in ELT and by identifying both its pedagogical value and its limitations. The findings are intended to support teachers in understanding the potential of AI and in applying it in a responsible and effective manner in language teaching contexts.

This thesis is organised into five main chapters. Following this introduction, Chapter 2 presents the literature review, discussing digitalisation in education, AI in education, the pedagogical applications of AI in ELT, teacher attitudes towards educational technology, and the ethical and pedagogical concerns associated with AI use. Chapter 3 outlines the methodology of the study, including the research design, participants, instruments, data collection procedures, and methods of analysis. Chapter 4 presents and discusses the empirical findings of the questionnaire and interview data in relation to the research questions. Finally, Chapter 5 provides the conclusion of the thesis, summarises the main findings, addresses the limitations of the study, and outlines the pedagogical implications as well as possible directions for further research.

2 Literature review

2.1 Digitalization in Education

The integration of digital technologies into education has significantly transformed teaching and learning processes over the past decades. As D'yakova and Sechakereva (2019) argue, for the new generation of "digital natives," the internet has evolved not only as a source of information but also as a platform for entertainment, skill development, and professional growth. The established different types of frameworks help to understand the context of technological advancements and their relation to humanity, particularly for educators. This section aims to examine the effects of and relationships among four theoretical frameworks in education: a) CALL b) TAM c) TPACK d) SAMR.

2.1.1 Development of Computer-Assisted Language Learning (CALL)

Computer-Assisted Language Learning (CALL) was developed to support language acquisition through the integration of computer technologies that provide interactive, individualized, and communicative learning opportunities beyond conventional classroom approaches (Warschauer & Healey, 1998).

Early CALL methods were largely based on behaviorism and focused on drills and quick feedback (Warschauer, 1996), meaning that tasks were designed to reinforce correct responses through repetition and correction. Those exercises consisted mainly of drill and practice, fill-in-the-blank, multiple-choice questions, substitution drills, and transformation exercises. Their goal was to create a habit through repetition and immediate correction.

However, the revolution and innovation of technology allowed CALL to merge communicative and interactive approaches, helping learners to interact with authentic materials and participate in effective communication (Warschauer, 1996). Students had the possibility to exchange emails and to have online forum discussions. Furthermore, the new wave of CALL included role-play simulations, problem-solving tasks, and game-based interactions.

Without the emergence of the internet, it would not have been possible to have access to real-world language use, online collaboration, and multimedia resources. Digitalization has become an integral part of modern language teaching.

2.1.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was established to explain and predict users' adoption of technology (Davis, 1989). According to TAM, two key elements—1) perceived usefulness and 2) perceived ease of use—affect users' attitudes towards technology and their intention to use it. Perceived usefulness refers to the degree to which individuals believe that a particular technology will enhance their performance. Perceived ease of use, on the other hand, refers to people's insight about technology.

This model has been widely applied in educational contexts to gain a clearer understanding of teachers' endorsement of digital tools. Teo (2011) affirms that both perceived usefulness and perceived ease of use significantly influence teachers' intention to apply technological innovations in the classroom. It means that, if the teachers admit they are profitable and easy to adapt to the lesson, they will be more likely to incorporate them.

However, TAM has also been expanded and scrutinized in educational research. Venkatesh and Davis (2000) extended the model with additional theoretical constructs, such as social influence and facilitating conditions. The proposed new model highlights the fact that technology incorporation is not only an individual decision but is also shaped by institutional and social contexts. When examining the school systems, this includes both external and internal factors such as leadership support, access to resources, and professional development opportunities. If the institution lacks financial resources, they can barely equip their classrooms with the latest technological devices, which means the teachers cannot practice the use of AI and any other technological advancement.

Regarding AI in education, the relevance of TAM remains a major point of view when it comes to the implementation of AI technologies. AI tools are often described as complex and unfamiliar, which may influence teachers' willingness and demotivate them to adapt to teaching. Therefore, it can be stated that how teachers perceive the usefulness and ease of use of AI technologies is essential for successful adaptation.

2.1.3 Technological Pedagogical Content Knowledge (TPACK)

While TAM explains why teachers adopt technology, it does not comprehensively address how technology is integrated into teaching. The Technological Pedagogical Content Knowledge (TPACK) framework (Mishra & Koehler, 2006) fills this blank. TPACK stresses that effective and successful technology integration requires a complex interaction between three types of knowledge: a) content knowledge (CK), b) pedagogical knowledge (PK), and c) technological knowledge (TK) (Koehler et al., 2013). Teachers must not only understand their subject matter and teaching methods but also be aware of how to use technology to enhance the learning process so students can reach their goals (Koehler et al., 2013).

According to the TPACK framework, when these three areas of knowledge meet, it leads to a profitable approach. Teachers need to know and understand how technology, pedagogy, and content function together in different teaching scenarios because of the complexity of teaching (Koehler et al., 2013). For example, in English language teaching, a teacher using AI tools needs to have a solid grasp of linguistic content (e.g., grammar or vocabulary), pedagogical strategies (e.g., communicative language teaching), and technological tools (e.g., AI-based applications). Without this integrated knowledge, technology may remain superficial and fail to enhance learning outcomes (Koehler et al., 2013). The advantages and efficacy of a methodology concerning technology utilization may vary based on the students and their distinct personalities.

2.1.4 SAMR Model of Technology Integration

Another important scheme for evaluating technology integration is the SAMR model, which categorizes the use of technology into four levels: 1) substitution, 2) augmentation, 3) modification, and 4) redefinition (Puentedura, 2014). At the substitution level, technology simply replaces traditional tools without remarkable functional alteration (e.g., typing an essay instead of writing it by hand). At the augmentation level, technology provides functional improvements such as using grammar-checking tools. At the modification level, technology allows for task reconfiguration, while at the redefinition level, it enables entirely new learning activities that were previously extraordinary.

The SAMR model is particularly useful for analysing the integration of AI in education, as it highlights the difference between surface-level and transformative uses of technology. For instance, using AI merely to generate exercises represents substitution or

augmentation, whereas using AI to create interactive, adaptive learning environments represents modification or redefinition.

Overall, digitalization in education has created new opportunities for enhancing language learning; however, its effectiveness depends largely on how it is implemented in teaching. The combination of frameworks such as TAM, TPACK, and SAMR provides a comprehensive understanding of technology integration by addressing adoption, implementation, and impact. These structures are essential for analysing the role of Artificial Intelligence in education, as AI represents the next stage in the evolution of digital technologies in language teaching. The next chapter (2.2) aims to examine the implementation of Artificial Intelligence into education and its potential areas of application.

2.2 Artificial Intelligence in Education

Recently, Artificial Intelligence (AI) has emerged as a transformative power, a major force in education, reshaping the previous teaching and learning processes. Holmes et al. (2019) define AI as a multifunctional technological system capable of learning, reasoning, solving problems, and processing language at the same time. Similarly, Zawacki-Richter et al. (2019) emphasize that AI refers to a range of technologies, including machine learning and data-driven systems, which are increasingly applied in educational contexts. These systems rely on algorithms and large datasets to find patterns, make predictions, and generate outputs that can support both teachers' and learners' needs (Holmes et al., 2019). As digital technologies continue to evolve, AI has become increasingly integrated into educational environments, offering new possibilities for personalization, efficiency, and innovation (Holmes et al., 2019).

AI in education is characterized by its power to analyze large volumes of data and provide personalized learning experiences. According to Holmes et al. (2019), AI systems can support and serve various educational functions, including intelligent tutoring, automated assessment, and adaptive content delivery (Holmes et al., 2019). In line with this, Zawacki-Richter et al. (2019) identify adaptive systems, profiling, and prediction as key areas of AI application in education. These applications enable more individualized instruction, addressing the diverse needs of learners and promoting more effective learning outcomes (Holmes et al., 2019). At the same time, the integration of AI should be carefully

considered, and its pedagogical principles must ensure that technology enhances and supports rather than replaces meaningful learning experiences (Holmes et al., 2019).

Overall these applications demonstrate that AI can facilitate both teaching and learning when it is integrated in meaningful ways.

2.2.1 Generative AI

Generative AI, which can generate new text, images, or audio by learning patterns from existing data, is a major advancement in the field of artificial intelligence. Kasneci et al. (2023) characterize generative AI as one of the main developments and powers in artificial intelligence. This is particularly evident through the implementation of large language models (LLM) that can generate human-like text. One of the most prominent examples of generative AI is ChatGPT, a large language model that can generate human-like responses and engage in interactive dialogue (Kasneci et al., 2023). Generative AI tools have gained significant interest in education due to their ability to support a wide range of tasks, including writing assistance, content creation, and language practice. (Kasneci et al., 2023; Holmes et al., 2019).

Furthermore, generative AI has impacted teaching and learning as well. Kasneci et al. (2023) highlight that such systems can assist teachers in creating lesson plans, generating exercises, and providing feedback, thereby reducing workload, and increasing their efficiency. For students, generative AI offers opportunities for independent learning, as it can provide explanations, answer questions, and facilitate the problem-solving process (Kasneci et al., 2023). However, as Kasneci et al. (2023) also argue, the use of LLMs in education also presents challenges, such as the risk of generating misleading information, commonly termed “hallucinations,” and concerns related to academic integrity.

Despite its disadvantages, AI represents a significant advancement in the field of education. Homes et al. (2019) suggest that AI systems can support personalized and interactive learning experiences, which can assist with language development. However, its effectiveness depends largely on how it is integrated into pedagogical practices and whether users evaluate critically its outputs (Kasneci et al., 2023).

2.2.2 AI-Driven Adaptive Learning

Another important application of AI in education is adaptive learning, which refers to systems that adjust course materials and learning paths based on individual learner performance. Zawacki-Richter et al. (2019) describe adaptive learning as one of the most prominent areas of AI application, particularly in higher education contexts. AI-driven adaptive learning systems use data analytics to monitor students' progress, identify strengths and weaknesses, and provide personalized recommendations (Zawacki-Richter et al., 2019; Holmes et al., 2019), which is important in differentiation and provides a system that fits the different learners' needs. For example, in language learning, adaptive systems can modify vocabulary exercises or grammar tasks based on learners' proficiency level, which makes the learning engaging and more effective. This approach contrasts with traditional one-size-fits-all instruction by offering differentiated learning experiences tailored to each student's needs.

AI-driven adaptive learning also supports formative assessment by continuously collecting and analyzing data on student performance. This allows teachers to gain insights into learners' progress and make informed, instructional decisions. However, the implementation of adaptive learning systems requires careful consideration to ensure that personalization does not lead to excessive reliance on technology or reduced opportunities for collaborative learning (Holmes et al., 2019).

2.2.3 Current Global Trends

The use of AI in education has expanded rapidly on a global scale, reflecting broader trends in digital transformation and data-driven decision-making. Zawacki-Richter et al. (2019) observe that research on AI has grown significantly in recent years, particularly in areas such as intelligent tutoring systems, automated assessment, and learning analytics. Educational institutions worldwide are increasingly adopting AI technologies to enhance teaching, learning, and administrative processes (Holmes et al., 2019).

A notable trend is the expansion and incorporation of AI into mainstream educational tools and platforms. Holmes et al. (2019) argue that AI-powered applications are becoming more accessible to both teachers and students, leading to experimentation with new teaching methods. This movement has been further advanced by the Covid-19 pandemic, which higlighted the importance of digital technologies.

At the same time, there is an increasing emphasis on the ethical and responsible use of AI in education, which will be further elaborated upon in section 2.5. Concerns related to data privacy and academic integrity have prompted researchers and policymakers to call for clear guidelines and regulations. Holmes et al. (2019) emphasize that while AI has the potential to improve educational outcomes, its implementation must be guided by ethical considerations and a strong pedagogical foundation.

Furthermore, global discussions about the role of AI in education highlight the importance of maintaining human connections in teaching. Holmes et al. (2019) claim that while AI can support instructional processes, it cannot replace the social, emotional, and interpersonal aspects of education. As a result, the concept "human-in-the-loop" has become central to discussions about AI integration, emphasizing the need for human oversight and decision-making.

In summary, Artificial Intelligence represents a rapidly evolving field with significant implications for education. From generative AI to adaptive learning systems, AI offers useful tools for enhancing teaching and learning processes. However, its successful adaptation depends on a balanced approach that combines technological innovation with pedagogical expertise and ethical responsibility. Section 2.3 will further examine the application of AI in English language teaching.

2.3 AI in English Language Teaching

Artificial Intelligence has become an increasingly important element of the English language. Teaching English offering new opportunities to enhance modern language learning through personalized, interactive approaches. As Selwyn (2019) argues, AI is reshaping educational practices by introducing new forms of interaction between learners and digital systems, while also raising important pedagogical and ethical questions. Similarly, Williamson and Eynon (2020) highlight that AI in education should be understood within broader historical and technological developments, emphasizing its growing role in shaping teaching and learning processes. Within ELT specifically, AI tools support key areas such as writing, giving and receiving immediate feedback, speaking practice, differentiation, and learner autonomy. These applications reflect a shift towards more personalized, interactive, and learner centred approaches to language teaching.

2.3.1 Writing Support

One of the most widespread applications of AI in ELT is writing support. AI-powered tools can assist learners in generating, editing, and improving written texts. According to Kasneci et al. (2023), LLMs can support writing by generating ideas, suggesting structures, and providing linguistic input, thereby facilitating the writing process.

Similarly, Kristiawan et al. (2024) argue that AI tools such as chatbots and writing assistants can enhance learners' writing skills by offering immediate support and interactive guidance. These tools allow students to experiment with language and receive suggestions in real time, which can improve both accuracy and fluency. From a pedagogical perspective, this type of support aligns with process-oriented approaches to writing, where drafting, revising, and feedback play a central role.

At the same time, recent research suggests that the benefits of AI-assisted writing should be approached with careful consideration. A recent study by Kosmyna et al. (2025) examined essay writing under three conditions—LLM use, search engine use, and brain-only writing—and found that participants in the LLM condition demonstrated weaker neural connectivity, lower ability to quote their own essays, and a reduced sense of ownership over their texts compared to the participants in the other groups. The authors argue that although LLMs may increase efficiency and support shorter-term task performance, they may also reduce deep cognitive engagement and encourage cognitive offloading in writing-related educational tasks. Although this study was not conducted specifically in an ELT context, its findings are relevant to language teaching, since writing development in ELT also depends on active idea generation, reflection, language processing, and revision

However, the use of AI in writing also raises important concerns. Selwyn (2019) cautions that students may become reliant on automated recommendations if they use only them to generate different types of texts, which could also limit their abilities for critical thinking and creativity. Additionally, authorship and academic integrity concerns need to be carefully considered, especially in academic writing contexts. AI can therefore improve writing development; however, it must be incorporated in ways that encourage critical thinking and active learner engagement.

2.3.2 Feedback Automation

Additionally, it is also important to mention that AI has significantly transformed the way of giving feedback on language learning. Traditionally, feedback in ELT has been time-consuming and dependent on teacher availability, which may result in delayed delivery, shortened assessments, and limited suggestions. AI systems, however, can provide immediate, individualized feedback, enabling more efficient and continuous learning processes. Holmes et al. (2019) emphasize that AI can support automated assessment and feedback mechanisms, allowing learners to receive responses on time to their work.

Macías-Borrego, (2026) further demonstrate that AI-generated feedback can improve learners' revision processes by offering consistent and detailed suggestions, building a predictable routine for language learners. Such feedback systems help learners to identify errors, understand the structure of corrections, and engage in repetitive learning cycles. Immediate feedback is especially valuable and important in language learning, where timely correction can reinforce learning and prevent the fossilization of errors.

Despite these advantages, Williamson and Eynon (2020) argue that automated feedback should not replace evaluation by humans. While AI can identify surface-level errors. Such as grammar and vocabulary, it may struggle to assess more complex aspects of language use, including coherence, pragmatics, and cultural context. Therefore, effective feedback systems advised by Williamson and Eynon (2020) should combine AI-generated input with teacher guidance to ensure efficiency and complexity.

2.3.3 Speaking practice

Besides writing and feedback automation, another important area of AI application in ELT is speaking practice. AI-powered conversational agents and speech recognition systems allow learners to practice speaking in interactive and low-anxiety environments. Qiao (2023) showcases that AI-based language learning systems can significantly improve learners' speaking skills by providing opportunities for repeated practice and immediate feedback. These systems empower learners to develop fluency and pronounciation without the pressure of real-time interactions with the teacher or with the classmates.

Comparably, Jantakoon (2025) indicates that AI tools can simulate authentic communication scenarios, enabling learners to practice speaking and listening in contextually relevant situations. These systems can analyze pronunciation, fluency, and

accuracy, providing targeted feedback that supports language development. From a pedagogical perspective, this is in line with communicative language teaching approaches, which emphasize constructive interaction and practice.

Nevertheless, Selwyn (2019) maintains that AI-based communication has limited the social and emotional dimensions of human interaction. Whereas AI can model conversation, it cannot fully reproduce the complexity of real-life communication, including non-verbal cues and cultural nuances. As a result, AI should be utilized as a complementary tool rather than a replacement for human interaction in language teaching.

2.3.4. Differentiation

In addition to the previously mentioned examples, AI plays a significant role in supporting differentiated instructions in ELT. Differentiation involves adapting teaching methods and materials to account for individual differences among learners. Zawacki et al. (2019) indicate that AI can evaluate learner profiles to create personalized learning processes and adaptive content.

In addition, Crompton (2024) further argues that AI supports teachers to modify and adapt instruction by adjusting the level of difficulty, pace, and type of activities based on individual learner profiles. Observing from a language learning point of view, this may integrate adapting vocabulary tasks, grammar exercises, or reading materials according to learners' proficiency levels. This kind of personalization can boost learning efficacy, motivation, and engagement.

On the other hand, differentiation with the help of AI also leads to some challenges. Selwyn (2019) notes that excessive personalization may reduce opportunities for collaborative learning and shared classroom experiences. Accordingly, teachers must balance individualized learning with group interaction to ensure social aspects of learning.

2.3.5. Students' autonomy

After considering differentiation as a strategy for dealing with learner diversity, it is crucial to think about how it affects student agency. While addressing the diverse needs of students, differentiated instruction gives them the chance to take more ownership of their education. In this way, it offers a basis for learner autonomy, which is defined as the ability of students to take charge of their own education (Holec, 1981). As a result, learner

autonomy appears as a natural progression of differentiation, with the emphasis now being on self-directed learning rather than teacher-directed methods.

As previous studies have showcased, AI has significant implications for learner autonomy in ELT. AI tools allow learners to take more control over their learning by establishing access to resources, feedback, and practice opportunities outside the classroom. According to Qiao (2023), learners' self-regulation and autonomy can be improved by AI-based systems with the help of continuous monitoring regarding their progress, and it supports adjusting their learning strategies.

Correspondingly, Kristiawan et al. (2024) claim that AI promotes self-directed learning by offering continuous support and enabling learners to engage with content independently. This is compatible with learner-centred approaches in language education, which highlights independence and responsibility.

However, increased autonomy also requires critical digital literacy skills. Selwyn (2019) emphasizes that learners must be able to evaluate AI-generated content and understand its limitations and risks. In the absence of these skills, there is a high danger that students may rely uncritically on AI tools, which could negatively affect learning outcomes.

In conclusion, AI has made a significant impact regarding innovations in English language teaching, especially in areas such as writing support, feedback automation, speaking practice, differentiation, and learner autonomy. These modern technological advancements enable possibilities for personalized and interactive learning reflecting current pedagogical approaches. However, it is crucial to draw attention to the fact that, as Selwyn (2019) and Eynon (2020) also emphasize, AI should be used as a supportive tool rather than as a replacement for human resources in education.

Overall, the efficiency and successful adaptation of AI in ELT depends on its pedagogical purpose, integration, ethical use, and the ability of both teachers and learners to be involved critically with these technologies. Section 2.4 clarifies further how teacher attitudes influence the successful integration of technology.

2.4 Teacher Attitudes Towards Educational Technology

Teachers' attitudes towards educational technology play a fundamental role in determining whether digital tools are successfully integrated into teaching practices. Although technological innovations, including AI, offer significant potential for education,

their impact is barely visible in education if teachers do not utilize them effectively, confidently, or consistently in their teaching. According to Davis (1989), the way users accept the advancements of technology depends on its usefulness and ease of use. In case teachers do not find them beneficial or manageable within their teaching practice, then the most advanced tools will remain overlooked.

In the world of rapid digital transformation, the attitude of teachers towards any technological advancement is way more important than ever, as their approach is essential for both successful and unsuccessful implementations. As Selwyn (2019) points out, the constant change and evolution of technology is not just a technical process but also a social and pedagogical one, shaped and formed by teachers' beliefs, values, and experiences. From this perspective, understanding how teachers adopt and respond to technology requires the consideration of multiple theoretical approaches. As discussed in Section 2.1, frameworks such as the Technology Acceptance Model (TAM) provide valuable insights into users' behaviour and technology adoption.

2.4.1 Self-efficacy

In addition to perceived usefulness and ease of use, self-efficacy plays a crucial role in shaping teachers' beliefs and attitudes towards technology. Self-efficacy refers to individuals' beliefs in their ability to successfully perform a task (Bandura, 1997). In educational contexts, it can be stated that the higher are the teachers' technological self-efficacy, the more confident they are in using digital tools during their classes.

According to Bandura's studies (1997), individuals with high efficacy are more likely to cope with new challenges, overcome the difficulties, and obtain successful outcomes. In comparison to that statement, individuals with low self-efficacy may end up avoiding challenging tasks. quit more easily.

Furthermore, Teo (2011) highlights that teachers' attitudes towards technology and their intention to use it can be predicted from self-efficacy. There is a parallel between confidence in technological abilities and their integration into the teaching. Teachers who have strong technological backgrounds and are confident are more likely to adopt innovative tools and integrate them into their teaching.

Similarly, Ertmer and Ottenbreit-Leftwich (2010) emphasize that teachers' beliefs and confidence are also primary to the incorporation of technology. They argue that

workshops should not only focus on technical skills but also on soft skills, for example, building teachers' confidence and positive attitudes towards technology.

Lastly, in the context of AI, self-efficacy is especially essential, as these technologies appear complex and overwhelming. Teachers who feel uncomfortable and unconfident using AI tools may be hesitant to apply them, even if they recognize their potential benefits. Therefore, it is crucial to support teachers through training and experience so that their self-efficacy will be higher. Except for the abovementioned factors, there are some other additional elements that may influence teachers' acceptance towards technology. The next section, 2.4.2, will unfold those aspects.

2.4.2 Additional Influencing Factors

While TAM provides a meaningful framework, other factors and elements also influence teachers' attitude towards technology. William and Eynon (2020) argue that technology adoption is formed by extended social, institutional, and political contexts. For example, educational policies, curriculum requirements, and institutional expectations can all have an impact on how teachers perceive and utilize technology.

Furthermore, Selwyn (2019) summarizes that teachers' attitudes are affected by their professional identity and beliefs about teaching. Teachers who value traditional teaching methods and approaches may be more distanced and refuse to implement new technologies, while those who are open to innovation may be more willing to experiment and try out the advancements of the digital world.

All the above-mentioned perspectives showcase that technology adoption is a complex approach influenced by multiple interfacing elements. Therefore, understanding teachers' attitudes requires a comprehensive approach that considers both individual and contextual variables. Lastly, it is also important to highlight the ethical and pedagogical concerns regarding using AI. The next section, 2.5, will discuss its significance and relevant concerns.

2.5 Ethical and Pedagogical concerns

The increased integration of AI into education has raised significant ethical and pedagogical concerns. While AI technologies provide multiple benefits for teaching and

learning, they also involve obstacles that must be carefully overviewed and considered. As Dwivedi et al. (2023) claim, generative AI systems such as ChatGPT primarily undermine traditional notions of authorship, originality, and academic integrity. Similarly, Selwyn (2019) highlights that the increasing implementation and use of AI raises inquiries about the role of teachers, the way of learning, and the ethical implications of technology use. In addition to these concerns, recent research has also drawn attention to the possible cognitive consequences of AI use. A recent preprint study by Kosmyna et al. (2015) suggests that LLM use in essay-writing tasks may reduce deep cognitive engagement, memory performance, and perceived ownership of written work, indicating that the risks of AI extend beyond assessment and authorship to the broader learning process itself.

These concerns are mainly relevant in the context of English language teaching, where AI tools are increasingly used for writing, feedback, and communication. While these advancements can boost learning, they also risk undermining main educational principles in case they are not used critically and responsibly.

2.5.1 Academic dishonesty

One of the most widely discussed concerns related to AI is academic dishonesty. Students can easily produce essays, assignments, and any kind of written work with minimal effort with the help of generative AI tools. Plagiarism and the authenticity of student work are currently raising significant concerns, prompting educational institutions, including schools and universities, to formulate policies regarding the use of AI. Dwivedi et al. (2023) draw attention to the challenges to defining plagiarism if the texts are written with the use of AI, since the output is not directly copied but generated based on patterns in data.

This situation creates challenges for educators as well, as it becomes increasingly difficult to differentiate between original students' work and AI-assisted creations. Williamson and Eynon (2020) suggest that the traditional written assignments should be rethought, and instead of them, schools should implement rather process-oriented and authentic forms of evaluation.

However, when AI is integrated properly, it can support the learning process rather than replace it; it does not necessarily promote dishonesty by itself. If the teachers set up clear boundaries, guidelines, and expectations regarding the ethical use of AI tools, the risk of plagiarism and the incorrect use of the technology can be lowered.

2.5.2 Critical Thinking

In addition to plagiarism, another major concern is that AI may influence students' critical thinking skills, as it can provide rapid responses and generate content easily that could reduce the learners' ability and motivation to engage in deep cognitive processing. According to Selwyn (2019), automated systems lead to passive learning, where students accept the information without questioning its validity.

It is essential to emphasize that students' digital critical literacy skills should be developed so that they can evaluate and verify AI-generated outputs, since those outputs may not always be accurate or reliable, as systems can produce misleading or erroneous information. (Dwivedi et al., 2023).

From a pedagogical perspective, it can be stated that AI should be used as a tool to support thinking, to provide ideas rather than replace teachers. As they play a crucial role in guiding and teaching students to use AI tools critically. Furthermore, educators assist in ensuring that each student's data is protected, and it is used ethically. Since Williamson and Eynon (2020) highlight the use of data-driven technologies, it raises concerns about data ownership and the protection of student information. Educational institutions should find the balance between the benefits of data-driven technologies and privacy.

2.5.3 Overreliance on AI

A further concern worth mentioning is the risk of overreliance on AI in education. Students can be dependent on technology, and it is leading them to lose their independence and problem-solving abilities. As Selwyn (2019) also claims, excessive dependence on technology may diminish fundamental skills, leading learners to rely on automated systems instead of developing their own competences.

Dwivedi et al. (2023) similarly make a comparison between the use of technology and students' declining encouragement and motivation, particularly in tasks such as writing and analysis.

Moreover, overreliance on AI may also impact teachers' role in education. The rise of automation may alter teachers' pronunciation, fluency, and accuracy, providing targeted abilities, thereby diminishing their autonomy and professional agency (Williamson & Eynon, 2020) Consequently, it is important to establish a balance between the technical improvements and human participation in teaching.

2.6 Anticipated outcomes of the current research

This review of the relevant literature about the Artificial Intelligence in education and English Language Teaching structured around the four research questions presented in the Introduction part, suggests that AI may function as a valuable pedagogical tool when it is implemented critically, purposefully, and within pedagogical frameworks. At the same time, the literature indicates that the successful integration of AI depends not only on its technological capabilities but also on teachers' attitudes, pedagogical competence, and ethical awareness (Holmes et al., 2019; Selwyn, 2019; Zawacki-Richter et al., 2019). Accordingly, the present study aims to examine how English language teachers perceive and apply AI in their teaching, as well as the opportunities and challenges they associate with its use.

For the empirical part of the study, based on the literature review, several anticipated outcomes may be formulated. Firstly, concerning the question of how AI can influence teaching and learning processes in ELT, it is expected that teachers will find AI as a tool that can make certain aspects of teaching more efficient, flexible, and more adaptive to learners' needs. AI is more likely to become beneficial in lesson planning, material design, or giving immediate feedback to students. At the same time, it is anticipated that participants will stress that AI does not replace the role of the teacher; rather, it reshapes it. Teachers might be required to act as facilitators, decision-makers, and critical evaluators of AI-generated content (Selwyn, 2019; Williamson & Eynon, 2020). In this matter, teachers will be expected to remain as central human connections in AI-supported educational contexts.

Secondly, regarding the pedagogical applications of AI that can support language learning, the study may reveal that the teachers may identify writing support, automated feedback, and speaking practice as the most relevant fields of AI use in ELT. This expectation is based on previous studies indicating that AI tools can help learners in generating ideas, revising texts, and receiving individualized support (Kasneci et al. 2023, Qiao 2023). It is also anticipated that differentiation and learner autonomy will become significant benefits of AI use, as these tools may enable teachers to tailor materials to learners' needs and encourage more self-directed learning (Holec 1981, Holmes et al. 2019,). Nevertheless, it is expected that teachers will primarily use AI as a supplementary pedagogical resource, rather than as a replacement for traditional classroom methods.

Thirdly, regarding teachers' attitudes towards AI, it is anticipated that perceived usefulness, perceived ease of use, and self-efficacy will influence teachers' willingness to implement different AI tools into their teaching practice. Those educators who find the technological advancements useful, reliable, and easy to use are more likely to adapt in their practice. On the other hand, the teachers who lack technological skills and find them irrelevant and pedagogically questionable are more likely to be stuck in the traditional teaching approaches without any technological implementation. It is therefore expected that teachers' attitudes will emerge as a key factor shaping the practical integration of AI in ELT.

Finally, in relation to the ethical and pedagogical challenges associated with AI in education, it is predicted that teachers will identify academic dishonesty, overreliance on technology, and the potential loss of critical thinking as the most significant risks. Previous studies have raised concerns related to plagiarism, the authenticity of student work, and the tendency of learners to accept AI-generated content uncritically (Dwivedi et al., 2023; Selwyn, 2019). Furthermore, it is anticipated that plagiarism and the weakening of students' problem-solving skills will be particularly prominent issues, especially in relation to writing tasks and homework assignments. At the same time, it can be stated these risks can be reduced through pedagogical guidelines, ethical awareness, and critical oversight.

Since the implementation of AI in ELT remains a relatively new and still evolving area of research, the present study aims to provide further insight into teachers' experiences and perceptions within technological advancements. By addressing the four research questions, the empirical part of the research seeks to provide a more complex understanding of how AI influences ELT, which pedagogical applications are perceived as the most useful, how teachers' attitudes shape adoption, and what ethical or pedagogical challenges may appear in practice. Following the review of the literature and these anticipated outcomes, the next chapter presents the methodology of the current study in more detail (Section 3) and the results (Section 4).

3 Methodology

3.1 Research design

The research design is based on mixed-methods in order to examine the role of Artificial Intelligence in English Language Teaching. I considered the mixed-method approach appropriate since it made it possible to combine quantitative data with more detailed, qualitative responses, which allows insight into a broader and deeper understanding of the research topic (Creswell & Plano Clark, 2018).

Both the questionnaire and the semi-structured interview guide were designed around these four research questions. The questionnaire focused on teachers' background, AI use, attitudes, pedagogical applications, and perceived risks, while the interviews examined these topics more comprehensively.

The study aimed to answer the following research questions:

1. How can AI influence teaching and learning processes in ELT?

2. What pedagogical applications of AI can support language learning?

3. How do teachers' attitudes, including perceived usefulness, perceived ease of use, and self-efficacy, influence the implementation of AI technologies?

4. What ethical and pedagogical challenges are associated with the use of AI in education?

3.2 Participants and sampling

The participants of the study were English teachers working in different educational contexts. Based on the questionnaire design, respondents could indicate whether they work in elementary schools, high schools, language schools, or as private teachers (see more details in Section 4.2—Participant Profile).

A total of 50 teachers completed the questionnaire, while 9 teachers took part in the semi-structured interviews, from which 4 teachers were chosen for in-depth analysis to

obtain more detailed responses from various perspectives with different career paths in order to optimize and find useful answers for the research questions.

Participants were recruited through online teacher groups and professional contacts. For this reason, the study primarily relied on convenience sampling since the respondents were selected on the basics of accessibility and willingness to participate. At the same time, elements of snowball sampling were also present, as the questionnaire link was shared further within teachers' professional networks (Goldman, 1961)

The interview participants were randomly selected from among those questionnaire respondents who voluntarily provided their email addresses for possible follow-up interviews. The form clearly stated that providing an email address was optional and would only be used for future interviews.

3.3 Research instruments

3.3.1 Questionnaire

The first data collection instrument was an online questionnaire created in Google Forms. The survey consisted of eight sections and took approximately 10-12 minutes to complete. It included multiple-choice items, checkbox questions, Likert-scale questions, and open-ended questions which made it suitable for collecting both quantitative and qualitative data.

The questionnaire covered several main areas. It aimed to measure teachers' digital competence, familiarity with AI, perceived usefulness of AI, confidence in using AI, future intention to use AI, and opinions about the risks and challenges associated with AI. First, it collected background information (items 2-6) such as teaching experience, workplace, and self-rated digital competence. Second, it explored the use of AI in teaching (items 7-11), including which tools teachers used, how often they used them, and for what purposes. Third, it examined the pedagogical uses of AI (items 12-15) in areas such as writing, feedback, speaking practice, differentiation, and learner autonomy. Finally, it addressed teachers' attitudes towards AI, perceived changes in the teachers' role, and ethical concerns such as plagiarism, misinformation, overreliance, reduced critical thinking, and

data privacy (items 16-23). A sample of the prepared questionnaire is visible in the Appendix A (Section 6).

3.3.2 Semi-structured interviews

The second research instrument was a semi-structured interview guide. Semi-structured interviews were chosen to provide balance between structure and flexibility. While the use of predetermined questions ensures that all relevant topics are addressed, the format also allows the researcher to ask follow-up questions and probe participants' responses in greater detail when necessary (Kallio et al., 2016). Therefore, this method was considered suitable for gaining a more in-depth understanding of teachers' experiences and perspectives regarding the use of AI in English language teaching.

The interview guide began with background questions related to the teaching experience, digital competence, and the role of technology in the participants' teaching practice. It then included questions grouped according to the four research questions of the study. These topics were the effect of AI on lesson planning, teaching methods, student engagement, writing support, feedback, speaking practice, autonomy, teacher confidence, institutional support, plagiarism, critical thinking, and the future role of the teachers. A sample of the semi-structured interview questions is included in the Appendix B (Section 6).

3.4 Data collection procedure

The data collection happened in two parts. First, the questionnaire was distributed online through groups for teachers, especially English teachers, and professional contacts. Participation was voluntary, and the introduction to the questionnaire informed respondents that the research was being conducted for academic purposes only and that responses would remain anonymous and confidential.

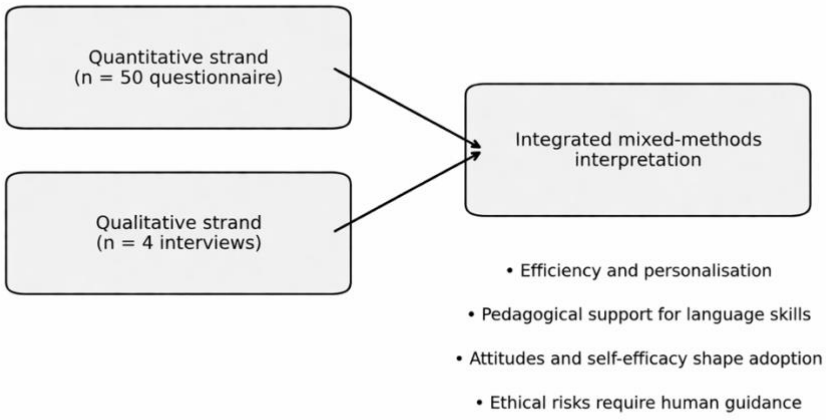
In the second stage, the teachers who were willing to participate further were contacted for interviews. A total of 9 teachers took part in the semi-structured interviews. The interviews were conducted individually and followed the prepared interview guide. Some of them were recorded with the participants and later transcribed for analysis; in other

cases, notes were taken during and immediately after the interviews for the purpose of analysis.

3.5 Data analysis

Since the study used a mixed-methods design, the quantitative and qualitative data were analysed separately, and the results were later compared and integrated (Creswell & Plano Clark, 2018).

Figure 1. Mixed-methods integration model used in the results chapter



3.5.1 Quantitative data analysis

The quantitative data from the closed-ended questionnaire items were analysed using descriptive statistics. Frequencies, percentages, and mean scores were used to identify overall patterns in teachers' responses. This method was appropriate because the purpose of the questionnaire was to describe teachers' use of AI, their attitudes, and their perceptions of its pedagogical value rather than to assess correlations.

3.5.2 Qualitative data analysis

The qualitative data included the answers from the open-ended questionnaire items and from the interview. These were analysed using thematic analysis to identify, organise and interpret recurring patterns in the different datasets (Braun & Clark, 2006).

The analysis involved four steps. First, becoming familiar with the data through repeated reading. Second, creating initial codes based on recurring ideas and responses. Third, organising these codes into broader themes. Finally, reviewing the topics and interpreting the themes according to the research questions. This approach made it possible to identify common patterns in teachers' perceptions of AI while also providing an opportunity to show their individual opinions.

3.5.3 Integration of the findings

To follow the steps of the important features of the mixed-methods research, the quantitative and qualitative data had been analysed separately, and then the findings were compared and integrated (see the comparison in the Appendix C). Since it helps interpret how the two datasets support, explain, or complement one another (Fetters et al., 2013). In the present study, the interview findings were used to provide a deeper explanation for the statements that emerged from the questionnaire data.

3.6 Ethical considerations

Ethical considerations were considered throughout the research process. Participation in the study was voluntary, and respondents were informed about the purpose of the research. The questionnaire stated that all responses would remain anonymous and confidential and that the results would be used for academic purposes only. In addition, email addresses were requested only optionally for possible follow-up interviews. Interview participants also took part voluntarily, and their identities were not revealed in the analysis. Any personal data collected during the research process were treated confidentially.

This exploratory study will be summarized in the Results Section (4) through the analysis of quantitative and qualitative data, as well as the literature review.

4 Results and Discussion

This chapter presents the findings of the empirical research on the use of AI in ELT. The results are organised and interpreted according to the four research questions (see Section 3.1) and the broader concerns outlined in Chapter 2. First, a brief participant profile is presenAted. This is followed by the results, presenting the key findings and statements. The interview data deepen the findings by showing how teachers used AI to personalise tasks, reduce preparation time, and broaden access to examples and prompts. At the same time, both data sets identified ethical and pedagogical tensions, especially around plagiarism, false information, overreliance, and the possible weakening of critical thinking.

To reflect the mixed-methods design, each major subsection brings the survey results into dialogue with the interview data rather than treating them as separate sections. The quantitative findings are based on the questionnaire completed by 50 English teachers, while the qualitative findings are based on the interviews conducted with 9 voluntary English teachers, from which 4 teachers' opinions were chosen and interpreted in a more detailed manner. Although all the 9 interviews were reviewed but those 4 were chosen as they provided the most appropriate, information-rich data for addressing the research focus.

4.1 Participant profile

As shown in Table 1, 50 teachers participated in the research voluntarily, representing diverse professional backgrounds and vocations. The majority of the respondents were women (92%, n=46) with over 20 years of teaching experience (46%, n=23), primarily teaching elementary and high school students or providing individual lessons. Assessing their digital literacy skills, they are categorized as advanced (M=4), indicating they use technology with confidence and efficiency alongside moderate familiarity (M=3.46) with AI tools.

Table 1 *Demographic and professional profile of questionnaire respondents (N = 50)*

Variable	**Category / Statistic**	**n**	**% / M**
Gender	Women	46	92%
Gender	Men	4	8%
Teaching experience	Over 20 years	23	46%
Teaching context	Elementary / high school / individual lessons	—	Most frequent contexts
Digital literacy	Advanced	—	M = 4.00
Familiarity with AI	Moderate	—	M = 3.46

Note. Percentages are based on the total number of questionnaire respondents.

4.1.*2* Quantitative patterns showed that AI was already a regular part of teachers' professional practice

The questionnaire responses show that AI use had already entered everyday professional use for most participants. 40% of the respondents reported using AI daily, and another 40% reported using it several times a week with a relatively advanced digital competence (see further details in Table 2). Only 4% indicated rare use. This pattern shows that AI is not a new idea in this sample, but rather an increasingly common part of teachers' professional lives.

Figure 2: Frequency of AI use among questionnaire respondents (n = 50).

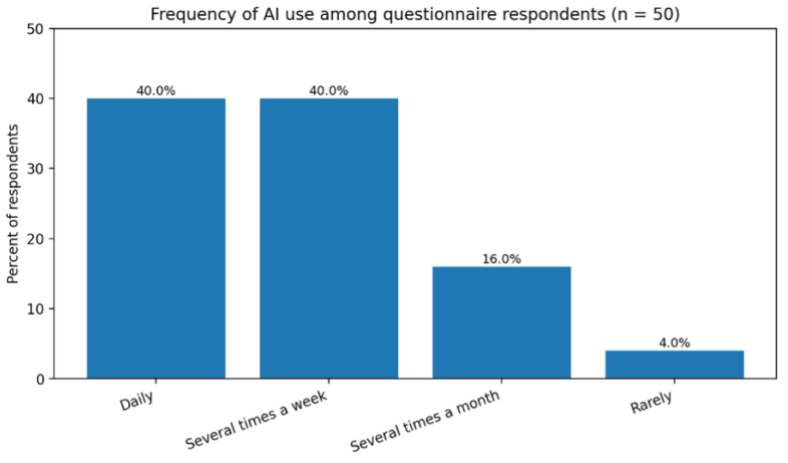


Table 2

Indicator	Result	Interpretive note
Digital competence (mean)	4.00/5	Respondents generally rated their digital competence as relatively strong.
Familiarity with AI tools (mean)	3.46/5	Familiarity was moderate rather than expert-level.
AI usefulness in teaching (mean)	4.00/5	Teachers tended to see AI as useful in their practice.
AI improves teaching effectiveness (mean)	3.96/5	Perceived effectiveness was clearly positive overall.
AI tools are easy to use (mean)	3.74/5	Ease of use was positive, but less uniform than usefulness.
Confidence in using AI (mean)	3.70/5	Self-efficacy appeared adequate but not equally strong across respondents.
Teachers remain essential despite AI (mean)	4.40/5	Human pedagogy remained central across the sample.

Note: Selected descriptive indicators from the questionnaire (n = 50).

4.2. AI primarily enhanced efficiency and personalisation in ELT practice

The strongest quantitative pattern concerned the practical uses of AI. The most frequently reported uses were creating new materials (94%), lesson planning (78%), and vocabulary or grammar support (68%). These results indicate that AI was valued mainly as a tool that reduces preparation time and allows access to adaptable pedagogical resources. In this respect, the findings align with the wider argument stated in the literature review that teachers tend to adopt technologies first where the immediate practical value is visible in their everyday workflow. The interviews reinforced this pattern. In response to the interview question “How has AI changed the way you plan your lessons?” participants repeatedly

emphasized speed, flexibility, and easier way to create personalized materials. One teacher explained that AI made planning “significantly faster and more creative," while another stated that “it supports my planning on a daily basis.” These responses suggest that the AI was seen more as a way to increase the efficiency with lesson planning and give teachers more options rather than as something that would replace their planning decisions. These findings align with the expectations mentioned in Section 2.6.“It has made planning significantly faster and more creative. I use AI to brainstorm lesson hooks, generate authentic-sounding reading materials, and create structured scaffolds that would previously have taken hours to design manually.” (T1)

Personalisition emerged as a second major pattern. Teachers described using AI to create personalised materials, tailored videos, differentiated task versions, and contextualised examples. The quantitative result that differentiation received one of the highest mean ratings among pedagogical applications of AI (M = 3.66) is also complemented by this qualitative pattern. Taken together, the findings suggest that teachers saw AI not only as a time-saving tool but also as a means of adjusting content to learner level, professional context, or task type.

A further aspect emerging from the combined datasets is that AI seems to change the way teachers work instead of just making their jobs easier. Participants consistently reported AI for its time-saving capabilities; however, the findings indicate that the time saved in routine preparation may be allocated to more complex professional responsibilities, including the selection of appropriate prompts, the verification of the accuracy and complexity of generated materials, and the customization of outputs for specific learner demographics. In this context, efficiency should not be interpreted as pedagogical simplification. Instead, AI appears to transfer some of the educators' responsibilities from content generation to evaluative, editorial, and decision-making functions. This is especially important in ELT settings where language use, level of understanding, and relevance to the situation are still very important. The data indicate a more complex interpretation: AI facilitated personalization most effectively when educators used it as a flexible tool, while the ultimate pedagogical value of the materials remained dependent on human judgment and critical thinking.

In relation to the literature review and the anticipated outcomes, this finding broadly confirms the expectation that AI would be valued for efficiency, flexibility, and more adaptive material design. Furthermore, the findings are consistent with the human-centred

perspective outlined earlier in the thesis, but they suggest a more redistributed than reduced form of teacher work.

At the same time, the data also indicates that the influence of AI on pedagogy was not consistent across all environments. Some teachers reported a stronger transformation in their role, especially towards facilitation and guidance, while others stated that their methods had remained the same; only the tools had changed. Taking these results into consideration, it can be highlighted that AI may be shaping some pedagogical aspects of teaching, such as lesson planning, rather than transforming the pedagogy in an automatic way.

4.3 AI was applied most often to writing, grammar and vocabulary work, and differentiated support, while speaking remained more limited

This section focuses on concrete pedagogical use of AI in language teaching. Both findings suggest that teachers used AI most confidently in areas where text generation, revision, and adaptation were central, whereas skills requiring higher levels of interaction were less consistently supported.

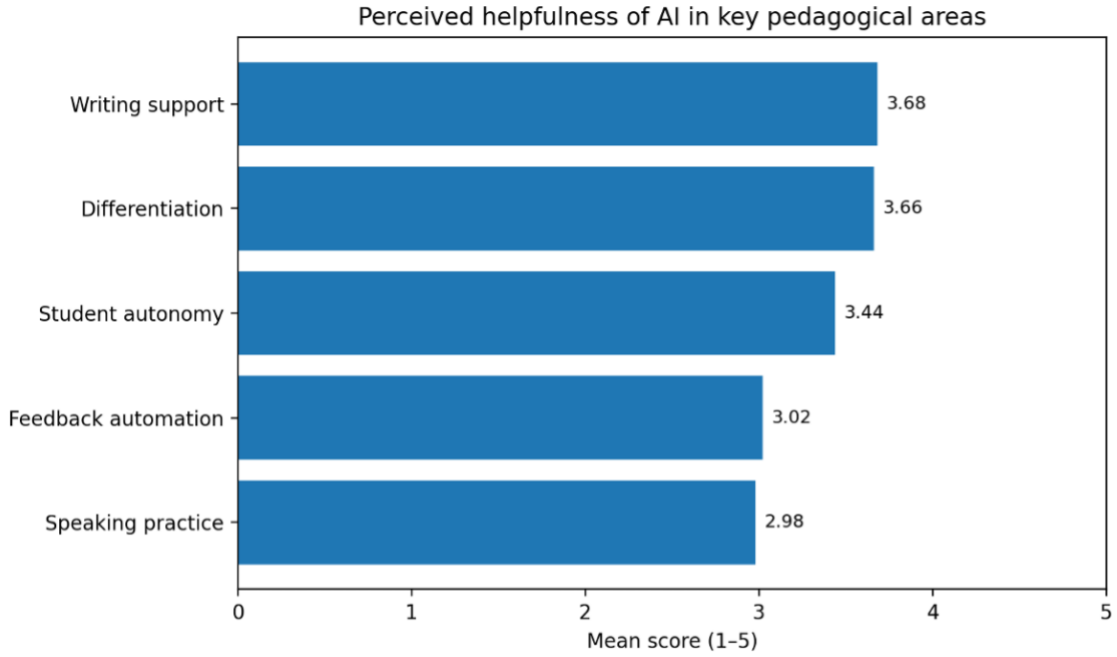


Figure 3. Perceived helpfulness of AI in key pedagogical areas (1 = not helpful at all; 5 = extremely helpful).

Among the rated pedagogical areas, writing support received the highest mean helpfulness score (M=3.68), closely followed by differentiation (M=3.66). Student autonomy was rated moderately positively (M=3.44), whereas surprisingly, feedback automation (M=3.02) and speaking practice (M=2.98) received lower mean ratings. These statistics show that teachers thought AI was especially useful when it could make changes or modify language materials in different ways.

Table 3. Mean helpfulness ratings core pedagogical areas

Pedagogical area	Mean (1–5)
Helpfulness: writing support	3.68
Helpfulness: feedback automation	3.02
Helpfulness: speaking practice	2.98
Helpfulness: differentiation	3.66
Helpfulness: student autonomy	3.44

The more specific survey items reinforce this interpretation. Respondents most often reported using AI to generate prompts (70%), correct grammar (60%), and improve vocabulary (58%). Speaking- related use was more limited: 54% used AI for discussion topics, but only 12% reported using simulated conversations, and 22% stated they did not use AI for speaking at all.

These findings fit closely with the interview data and help explain these differences. In response to the interview question *"How do you use AI tools for teaching writing skills?"* one participant reported generating weak examples for students to develop critical thinking, while another described asking learners to write independently and then compare their own text to an AI-generated version. These practices show that AI was not used only for production but also for reflection, comparison, and revision."I ask students to write their compositions on their own. After that they can ask AI to do the same and compare the solutions." (T3)

Surprisingly, the frequency of speaking-related uses was lower than anticipated. One participant referred to voice-to-text tools and AI conversation partners, but others used AI more directly to create images for conversations or discussion prompts. According to the

current sample, AI appeared to be more reliable for generating and modifying the written language input, rather than for facilitating the pragmatic, interpersonal, and spontaneous aspects of communication.

There is a clear connection between the current results and the literature review, which found that writing support, feedback, and speaking practice are important ways to use AI in the classroom. Nonetheless, the current sample only partially validated the expected results. Writing support and differentiation were very important; however, speaking-related applications were not as important as expected. This difference may mean that teachers trust AI more when it comes to tasks that involve visible, revisable language output than when it comes to situations where communication needs to be spontaneous and practical.

Additionally, it is also worth interpreting the opinions and experiences coming from the teachers regarding the connection between AI and learners' autonomy. Both data suggests that AI may support autonomous learning by providing constant assistance outside of the classroom; however, the interviews repeatedly highlighted the fact that autonomy is only supported when learners utilize AI as a tutor rather than as a replacement for their creativity and critical thinking.

Consequently, the findings indicate an overlap between promoted independence and passive dependence. This difference is especially important for ELT since language development depends on more than just competence to find answers. It requires active participation in analysing appropriate form, meanings, and communicative purposes.

Table 4

Most common pedagogical uses of AI reported in the questionnaire.

Questionnaire area	Most frequent response	Percentage
General uses of AI	Creating new materials	94%
General uses of AI	Lesson planning	78%
General uses of AI	Vocabulary/grammar	68%
Writing uses	Generating prompts	70%
Writing uses	Correct grammar	60%
Speaking uses	Discussion topics	54%
Speaking uses	Do not use AI for speaking	22%

4.4 Positive attitudes and self-efficacy shaped the depth of AI implementation

This section integrates the quantitative attitude data with interview questions 21-30. The merged findings indicate that teachers generally viewed AI as useful and worth expanding; however, the extent of the implementation depended strongly on ease of use, confidence, and access to support.

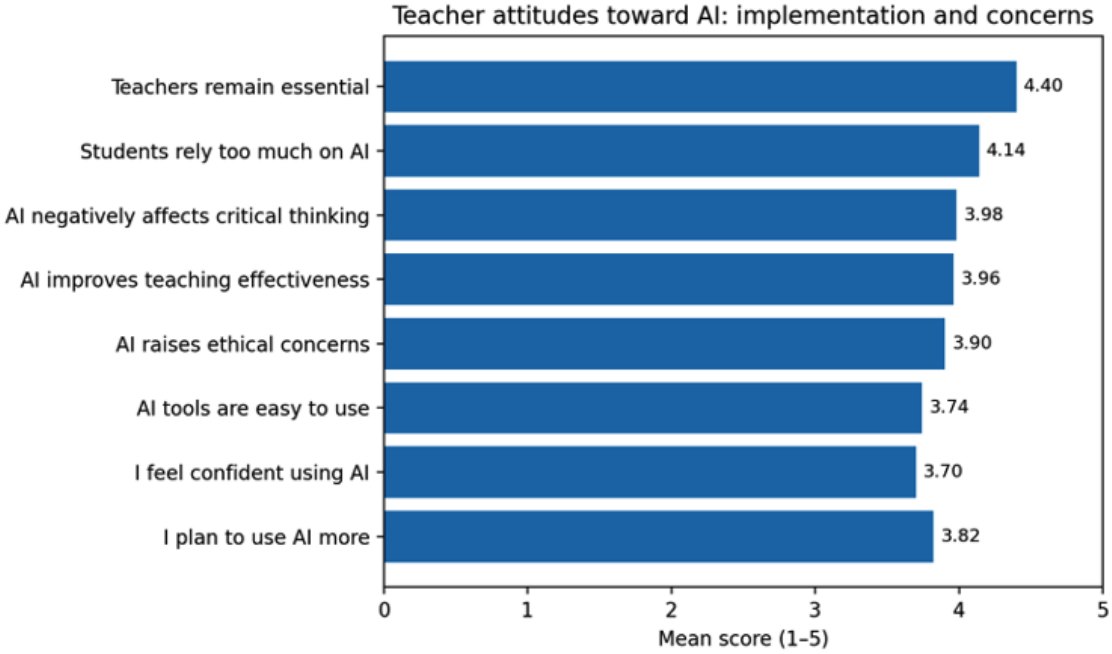


Figure 4. Teacher attitudes towards AI: implementation and concerns (1 = strongly disagree; 5 = strongly agree).

The questionnaire results show generally positive attitudes towards AI. The mean rating for overall usefulness was 4.00, and the mean for the statement "AI improves my teaching effectiveness" was 3.96. Ease of use (M=3.77), confidence in using AI (M=3.70), and intention to use AI more in the future (M=3.82) were also positive, although slightly lower. These scores suggest that respondents saw AI as valuable but not always effortless to use.

Table 5. Descriptive statistics for digital competence, familiarity, and AI-related attitudes.

Attitudinal construct	Mean (1–5)
Digital competence	4.00
Familiarity with AI tools	3.46
Overall usefulness of AI	4.00
AI improves teaching effectiveness	3.96
AI tools are easy to use	3.74
I feel confident using AI	3.70
I plan to use AI more in the future	3.82
AI changes the role of teachers	3.26
Teachers remain essential despite AI	4.40

The qualitative findings help explain why these attitudes mattered. In response to the interview questions, “How useful do you find AI in your teaching practice?" "How easy or difficult do you find AI tools to use?” and “How confident do you feel when using AI in teaching?” Teachers often linked successful implementation to experience and evaluative oversight. Users who were more confident said that AI was easy to use and that they could tell when it was giving them wrong or strange results. Less confident participants stressed the importance of trying things out, being unsure, and testing out different tools before finding the right one. “I’m not very confident; I have to experiment a lot to see which AI tool is the best for certain tasks.” (T3)

Those aspects highlight the fact that the more experienced teachers were braver and more confident when it came to using new technologies, like AI.

Another recurring pattern concerns professional support. In response to “What kind of training or support would help you integrate AI more effectively?”, participants asked for practical workshops, ethical guidance, and help with prompting. Responses to “Do colleagues influence your attitude towards AI?” also suggest that implementation was shaped by local professional culture as well as by individual preference. Those results perfectly show that AI integration into ELT does not depend only on the technical availability but also on teacher learning, institutional culture, and pedagogical confidence.

The results also support the hypotheses formulated in the literature review and in Section 2.6 concerning TAM-related factors. Perceived usefulness, ease of use, and self-

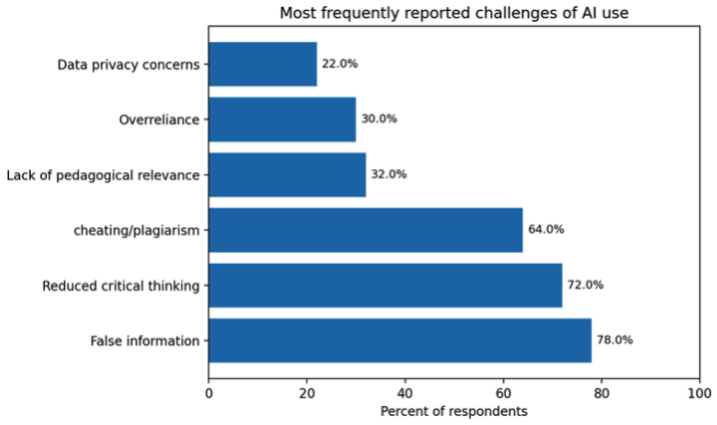
efficacy appeared to influence implementation. This corroborates the expected result that teacher attitudes would be important mediating variables. The interviews indicate that these factors are not fixed personal attributes but evolve through experimentation, collaborative engagement, and access to training.

To summarize, teachers who saw clear benefits in AI were more likely to use it, but how well it was used and how much of it was used seemed to depend on self-efficacy, critical literacy, and the availability of professional help.

4.5 Teachers recognised major ethical risks, and continued to view human pedagogy as essential

This section integrates the questionnaire data with interview questions 31–35. Across both strands, teachers acknowledged significant ethical and pedagogical risks, and they also strongly rejected the idea that AI could replace teachers.

Figure 5. Most frequently reported challenges of AI use.



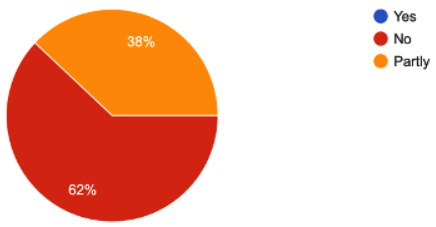
The challenge data show that concern was widespread in the sample. The most frequently reported difficulty was false information (78.0%), followed by reduced critical thinking (72.0%), cheating or plagiarism (64.0%), lack of pedagogical relevance (32.0%), overreliance (30.0%), and data privacy concerns (22.0%). These results are mirrored by the attitudinal items: students' reliance on AI received a mean of 4.14, the statement that AI negatively affects critical thinking received a mean of 3.98, and ethical concerns received a mean of 3.90. The interview data deepen this pattern. In response to the questions about ethical concerns, teachers referred repeatedly to plagiarism, unreliable content, bias, privacy, and unequal access. Importantly, the interviews also suggested that the pedagogical

consequences of AI depend on how activities are structured. One participant argued that AI can weaken critical thinking when used blindly but may sharpen it when students are required to compare, critique, and evaluate outputs:“While it is a useful tool, overreliance on it can reduce students’ ability to think critically and solve problems independently. Instead of developing their own ideas, many students simply accept AI-generated answers without questioning them.” (T4)

In terms of ethical issues, the results are mostly in line with what was found in the literature review and what was expected, especially when it comes to plagiarism, overreliance, and the possibility of critical thinking being weakened. According to the current findings educators did not view AI as a threat but rather as a tool whose risks are greatly affected by task design, assessment format, and teacher guidance; this is a slight departure from a problem-centric expectation. This introduces a more conditional pedagogical perspective to the concerns previously articulated in the thesis.

At the same time, the data also show a strong and consistent commitment to the continuing role of the teacher. The survey item “Teachers remain essential despite AI” received the highest mean in the quantitative dataset (M = 4.40). Likewise, when asked “Can AI replace teachers?”, 62.0% answered no and 38.0% answered partly; no respondent selected full replacement. In the interviews, responses to “How do you see the future role of teachers in an AI-supported educational environment?” framed teachers as mentors, learning architects, and providers of empathy and ethical guidance.

Figure 6. Questionnaire responses to the item “Can AI replace teachers?”



Overall, the ethical findings show that teachers see AI as both useful and dangerous at the same time. The results do not support either a completely positive or completely negative view. They recommend that educators acknowledge the significant pedagogical potential of AI while also recognizing the need for critical oversight, reformed assessment strategies, and clear instructions for students regarding proper usage.

4.6 The integrated findings point to a cautious but constructive role for AI in ELT.

When the quantitative and qualitative findings are considered together, four broad conclusions emerge. First, AI was primarily used to improve efficiency and increase the flexibility of lesson preparation. Second, its strongest pedagogical applications were identified in writing support, grammar and vocabulary work, and differentiated task design. Third, the depth of implementation was influenced by teachers' attitudes, perceived usefulness, confidence, and access to practical support. Fourth, educators acknowledged ethical and pedagogical risks yet maintained that human judgment, empathy, and relational engagement are essential in English Language Teaching (ELT).

These conclusions require careful interpretation. The sample shows important trends, but it does not support generalizations about all teachers or all ELT settings. The consistency between the two datasets, on the other hand, makes the main patterns more believable. The chapter suggests that AI has already emerged as a significant element of English Language Teaching (ELT) practice in Hungarian schools; however, its educational efficacy is dependent on teacher assessment, pedagogical context, and the maintenance of human-mediated learning relationships.

5 Conclusion

This thesis aimed to examine how Artificial Intelligence can be integrated into English Language Teaching and how teachers perceive its pedagogical potential and limitations. More specifically, it addressed four research questions concerning the influence of AI on teaching and learning processes in ELT, the pedagogical applications through which AI can support language learning, the role of teachers' attitudes in AI implementation, and the ethical and pedagogical challenges associated with its use. Based on the literature review and the mixed-methods findings, the study suggests that AI has already become a meaningful, though still carefully negotiated, component of contemporary ELT practice.

5.1 Addressing the research questions

Regarding the first research question, the findings indicate that AI influences teaching and learning processes in ELT primarily by increasing efficiency, supporting lesson planning, and enabling more personalised instructional design. In the present sample, teachers used AI most frequently for material creation, lesson preparation, and task adaptation. The qualitative findings further showed that AI can make planning faster, broaden teachers' access to ideas and resources, and support the planning of personalised materials for learners with different needs. At the same time, the results do not indicate that AI transforms pedagogy automatically. Rather, its influence appears to depend on how teachers integrate it into their teaching practice and how critically they evaluate its role.

Regarding the second research question, the study found that AI was perceived as most useful in pedagogical areas where language can be generated, adapted, revised, or supported. The most effective applications were identified in writing support, grammar and vocabulary development, and differentiated instruction. Teachers described using AI to generate prompts, create exercises, produce model texts, and support reflection through comparison and revision. In contrast, speaking-related applications seemed more limited, particularly in areas requiring spontaneous interaction, pragmatic awareness, and non-verbal communication. The findings also suggest that AI may support learner autonomy, but only when students use it as a support tool rather than as a replacement for independent thinking and active engagement.

Concerning the third research question, the results confirm that teachers' attitudes play a significant role in shaping AI implementation. Perceived usefulness emerged as a significant motivating factor, while perceived ease of use and self-efficacy influenced how confidently and critically teachers applied AI in practice. Teachers who considered AI useful and manageable were more likely to integrate it into their professional routines, whereas less confident participants emphasised experimentation, uncertainty, and the need for further support. The findings also indicate that implementation is influenced not only by individual attitudes but also by institutional culture, professional contacts, and access to practical training. In this respect, the results support the relevance of theoretical perspectives such as TAM and the literature on teacher self-efficacy discussed earlier in the thesis.

Finally, with regard to the fourth research question, the study shows that ethical and pedagogical concerns remain highly significant. Teachers associated AI primarily with false

information, plagiarism, overreliance, and the possible weakening of students' critical thinking. The qualitative data also highlighted further concerns related to bias, privacy, and unequal access. However, the results do not necessarily indicate that AI has only negative impacts on learning. When learners are guided to compare, critique, and evaluate AI-generated content, AI may also support reflection and analytical thinking. Nevertheless, the overall results indicate that ethical awareness, pedagogical caution, and clear guidance are essential if AI is to be used responsibly in ELT. Importantly, the study also found strong agreement that AI cannot replace teachers. Instead, teachers continue to be viewed as mentors, facilitators, evaluators, and providers of empathy, ethical guidance, and human connection.

The study indicates a vigilant yet positive role for AI in English Language Teaching. AI appears to offer clear practical and pedagogical benefits, particularly in relation to efficiency, personalisation, and support for written language work. However, these benefits are accompanied by important risks and limitations, which means that their value cannot be separated from teachers' professional judgment and pedagogical expertise. In this way, the results support a model of AI use in language learning that is human-centred.

5.2 Limitations of the study

Several limitations of the present study should be acknowledged. First, the quantitative sample was relatively small and consisted of 50 teachers, while the qualitative interpretation focused on 4 selected interview responses. Therefore, the findings cannot be generalised to all English teachers or all ELT contexts.

Second, the study relied on convenience sampling and elements of snowball sampling, which means that the participants may have been more interested in digital tools or more open to technological innovation than the average teacher.

Third, the research was based on self-reported data, which may not always fully reflect actual classroom practice. Teachers' responses may have been influenced by personal interpretation, memory, or a desire to present their practice positively.

Finally, because AI is a rapidly developing field, some of the tools, perceptions, and practices described in this study may change quickly over time. For these reasons, the findings should be interpreted as exploratory rather than definitive.

5.3 Pedagogical implications

Despite these limitations, the study has several important pedagogical implications. First, the findings suggest that AI can be integrated most effectively when it is linked to clearly defined pedagogical aims, such as material development, differentiated instruction, writing support, and structured language practice.

Second, the results indicate that teachers require professional development not only in the technical use of AI tools but also in critical evaluation, prompt design, ethical awareness, and pedagogically appropriate classroom implementation.

Third, the study highlights the importance of developing learners' critical AI literacy. Students need support in questioning AI-generated content, recognising its limitations, and using it as a learning tool rather than as a shortcut that replaces thinking.

Fourth, the findings imply that assessment practices may need to be reconsidered in AI-supported educational contexts, especially in relation to writing tasks, homework, and academic integrity. More process-oriented, reflective, and classroom-based forms of assessment may help reduce misuse while preserving the educational value of AI-supported learning.

Overall, the study supports a balanced pedagogical approach in which AI is incorporated as a supportive tool with clear and understandable teacher guidance.

5.4 Suggestions for further research

The present study also points to several directions for further research. Future studies could examine larger and more diverse samples in order to provide a comprehensive overview of teachers' AI use across different educational levels and institutional settings. It would also be beneficial to investigate students' perspectives in greater depth since the present study focused primarily on teachers' perceptions. In addition, classroom-based observational research could complement self-reported data and provide more direct evidence of how AI is actually used in ELT practice. Another promising direction would be to explore the long-term effects of AI-supported teaching on learner autonomy, writing development, speaking performance, and critical thinking. Finally, future research could examine how teacher training programmes can more effectively prepare both pre-service and in-service teachers for the pedagogically informed and ethically responsible use of AI in language education.

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6 Appendix

Appendix A- Questionnaire

Dear Respondent! My name is Laura Fodor and I am writing my MA thesis about Artificial Intelligence in English Language Teaching.

This questionnaire aims to explore how Artificial Intelligence (AI) is used in English Language Teaching (ELT), as well as teachers' attitudes, experiences, and perceptions regarding its implementation.

The results will be used for academic research purposes only. Your responses will remain anonymous and confidential.

This survey has 8 sections and takes about 10-12 minutes to complete!

In case you are willing to be interviewed about your experience using AI as an English teacher, please provide your email address at the beginning of this survey!

Should you have any further questions, please contact me on the following email address:

floci1999@gmail.com

Thank you for your participation!

Section 1 Contact- Optional

E-mail addresses will only be used for possible future interviews regarding using AI in EFL teaching.

2. Teaching experience
Question type: Multiple choice

- ☐ Teacher trainee
- ☐ 1–5 years
- ☐ 6–10 years
- ☐ 11–20 years
- ☐ More than 20 years

3. Where do you teach?
Question type: Checkboxes (multiple answers possible)

- ☐ Elementary school (1–4 graders)
- ☐ Elementary school (5–8 graders)
- ☐ High school (9–13 graders)

☐ Language school
☐ Private students
☐ Other: _____

4. On a scale of 1 to 5, how would you rate your digital competence?
Question type: Linear scale (1–5)

Value	Label
1	very low (little to no digital skills)
2	basic (can do simple tasks)
3	intermediate (comfortable with common tools)
4	advanced (uses tools efficiently and solves problems)
5	expert

5. On a scale of 1 to 5, how familiar are you with AI tools?
Question type: Linear scale (1–5)

Value	Label
1	not familiar at all
2	slightly familiar
3	moderately familiar
4	very familiar
5	expert

Section 2. General use of AI in ELT

6. Which AI tools do you use?
Question type: Checkboxes (multiple answers possible)

☐ ChatGPT
☐ Gemini
☐ Grammarly
☐ Copilot
☐ Duolingo
☐ Claude
☐ NotebookLM
☐ Canva AI
☐ Other: _____

7. How often do you use AI?
Question type: Multiple choice

☐ Daily
☐ Several times a week
☐ Several times a month
☐ Rarely

8. What do you use AI for?
Question type: Checkboxes (multiple answers possible)

☐ Lesson planning
☐ Creating new materials
☐ Feedback
☐ Assessment
☐ Student interaction
☐ Vocabulary/grammar

9. Do you use AI with students?
Question type: Multiple choice

☐ Yes
☐ No

10. On a scale of 1 to 5, how useful do you find AI in your teaching?
Question type: Linear scale (1–5)

Value	Label
1	not useful at all
2	slightly useful
3	somewhat useful
4	very useful
5	extremely useful

Section 3. Pedagogical applications of AI

11. On a scale of 1 to 5, how helpful do you find AI in the following areas?
Question type: Grid / linear scale (1–5)

Item	Scale
Writing support	1–5
Feedback automation	1–5
Speaking practice	1–5
Differentiation	1–5
Student autonomy	1–5

12. How do you use AI for writing?
Question type: Checkboxes (multiple answers possible)

- ☐ Generating prompts
- ☐ Provide feedback
- ☐ Correct grammar
- ☐ Improve vocabulary
- ☐ Assess writing
- ☐ I do not use AI

13. How do you use AI for speaking?
Question type: Multiple choice

- ☐ Discussion topics
- ☐ Pronunciation support
- ☐ Simulated conversations
- ☐ Role-play
- ☐ I do not use AI

Section 4. AI's influence on teaching

14. In this section, on a scale of 1 to 5, indicate how strongly you agree with the following statements.
Question type: Grid / linear scale (1–5)

Item	Scale
AI improves my teaching effectiveness	1–5
AI tools are easy to use	1–5
I feel confident using AI	1–5
I plan to use AI more in the future	1–5

15. On a scale of 1 to 5, indicate how strongly you agree with the following statements.
Question type: Grid / linear scale (1–5)

Item	Scale
AI changes the role of teachers	1–5
Teachers remain essential despite AI	1–5

16. Can AI replace teachers?
Question type: Multiple choice

- ☐ No
- ☐ Partly

17. Why yes / not / partly?
Question type: Short answer

Response:

Section 5. Challenges and future perspectives

18. What challenges have you experienced so far?
Question type: Checkboxes (multiple answers possible)

☐ Cheating/plagiarism
☐ False information
☐ Overreliance
☐ Reduced critical thinking
☐ Data privacy concerns
☐ Lack of pedagogical relevance
☐ Other: _____

19. On a scale of 1 to 5, what is your opinion about the following statements regarding AI?
Question type: Grid / linear scale (1–5)

Item	Scale
AI negatively affects students' critical thinking	1–5
Students rely too much on AI	1–5
AI raises ethical concerns in education	1–5

20. What benefits of AI have you experienced in your teaching?
Question type: Short answer

Response:

21. What challenges do you face when using AI?
Question type: Short answer

Response:

22. How do you think AI will change English language teaching in the future?
Question type: Short answer

Response:

Appendix B- Interview

Interview questions

(semi-structured interview: questions were selected according to participants' fields of interest)

Section 1- Background

1. Can you briefly describe your teaching experience and the context in which you teach?
2. How would you rate your digital competence?
3. What role does technology play in your teaching practice?

Questions for RQ1: How can AI influence learning and teaching processes in ELT?

4. How has AI changed the way you plan your lessons?
5. In what ways has AI influenced your teaching methods?
6. How does AI affect student engagement during lessons?
7. How does AI influence students' learning processes?
8. Have you noticed any changes in students' motivation when using AI tools?
9. How does AI impact interaction in the classroom (teacher–student / student–student)?
10. Can you describe a situation where AI significantly improved or worsened learning?
11. Overall, do you think AI enhances or limits teaching effectiveness? Why?

Questions for RQ2: What pedagogical applications of AI can support language learning?

12. How do you use AI tools for teaching writing skills?
13. How do you use AI for providing feedback to students?
14. In what ways do you use AI for speaking practice?
15. Do you use AI for vocabulary or grammar teaching? How?
16. How does AI support differentiated instruction in your classroom?
17. Does AI help students become more autonomous learners? How?

18. Which language skills (reading, writing, listening, speaking) benefit most from AI?
19. Which skills are less effectively supported by AI?
20. How do students typically respond to AI-based learning activities?

Questions for RQ3: How do teachers' attitudes influence AI implementation?

21. How useful do you find AI in your teaching practice?
22. How easy or difficult do you find AI tools to use?
23. How confident do you feel when using AI in teaching?
24. What challenges did you face when first learning to use AI tools?
25. What motivates you to use (or not use) AI in your teaching?
26. How do your beliefs about teaching influence your use of AI?
27. Does your school or institution support the use of AI? How?
28. Do colleagues influence your attitude toward AI? In what way?
29. Would you like to use AI more in the future? Why or why not?
30. What kind of training or support would help you integrate AI more effectively?

Questions for RQ4: What ethical and pedagogical challenges are associated with AI?

31. What ethical concerns do you associate with using AI in education?
32. Have you experienced issues with plagiarism or academic dishonesty related to AI?
33. Do you think AI affects students' critical thinking skills? How?
34. Do you think students rely too much on AI? Why or why not?
35. How do you see the future role of teachers in an AI-supported educational environment?

Appendix C

C.1 Integrated theme table for the qualitative and quantitative results

Overarching theme	Representative initial codes	Interview question set	Interpretive summary
AI primarily improved efficiency and personalisation	time-saving; faster planning; material generation; personalised resources; mixed-ability support	Q4–Q11	AI was mainly described as a support tool that reduced routine work and made instruction more adaptive.
AI supported language development most strongly in writing, grammar/vocabulary, and differentiated tasks	writing prompts; grammar correction; vocabulary support; speaking preparation; feedback; learner autonomy	Q12–Q20	Teachers used AI most where text manipulation and task variation were required; communicative nuance remained more dependent on human interaction.
Positive attitudes and self-efficacy shaped the depth of implementation	perceived usefulness; ease of use; confidence; experimentation; need for training; colleague influence	Q21–Q30	Teachers adopted AI more deeply when they found it useful, manageable, and aligned with their professional values.
Ethical risks were recognised, but teachers remained central to pedagogy	plagiarism; false information; overreliance; reduced critical thinking; privacy; bias; human guidance	Q31–Q35	Participants associated AI with real risks, yet they consistently argued that human empathy, judgment, and mentoring cannot be replaced.

Table C1 Note: Thematic summary based on Braun and Clarke's (2006) analysis framework.

C.1.2 Integrated matrix of findings by analytical section

Section focus	Key quantitative pattern	Key qualitative pattern	Integrated interpretation
Efficiency, personalisation, and task support	AI use was frequent; 80.0% used it daily or several times a week. The most common uses were creating new materials (94.0%) and lesson planning (78.0%).	Interviewees repeatedly described faster planning, greater creativity, and easier tailoring of materials, but also warned against passive student use.	AI mainly altered how teachers prepared and scaffolded learning rather than replacing pedagogy itself.
Pedagogical applications for language learning	The highest mean helpfulness ratings were writing support (M = 3.68) and differentiation (M = 3.66), while speaking practice was rated lower (M = 2.98).	Teachers described AI use for writing prompts, comparison tasks, grammar and vocabulary practice, image prompts, and differentiated versions of the same task.	AI appeared strongest in text-based and adaptive areas of ELT, while socially and pragmatically complex skills still depended more on human mediation.
Attitudes, usefulness, ease of use, and self-efficacy	Teachers reported generally positive attitudes: AI usefulness (M = 4.00), confidence (M = 3.70), and future use intentions (M = 3.82).	Implementation varied by confidence level; more experienced users reported stronger evaluative control, whereas others emphasised experimentation and training needs.	Adoption was encouraged by usefulness, but the quality of implementation depended on self-efficacy and support.
Ethical and pedagogical challenges	Concerns were prominent: false information (78.0%), reduced critical thinking (72.0%), plagiarism (64.0%), and ethical concerns (M = 3.90).	Interviewees linked AI to plagiarism, unreliable information, overreliance, and equity issues, yet stressed that teachers remain irreplaceable as guides.	Teachers accepted AI as useful but insisted that ethical oversight and human pedagogy remain essential.

Table C.1.2: Integration of survey and interview findings by analytical section.

Appendix D

D.1 Quantitative descriptive tables

Construct	Mean (1–5)
Digital competence	4.00
Familiarity with AI tools	3.46
Overall usefulness of AI	4.00
Helpfulness: writing support	3.68
Helpfulness: feedback automation	3.02
Helpfulness: speaking practice	2.98
Helpfulness: differentiation	3.66
Helpfulness: student autonomy	3.44
AI improves teaching effectiveness	3.96
AI tools are easy to use	3.74
I feel confident using AI	3.70
I plan to use AI more in the future	3.82
AI changes the role of teachers	3.26
Teachers remain essential despite AI	4.40
AI negatively affects critical thinking	3.98
Students rely too much on AI	4.14
AI raises ethical concerns	3.90

Table D1. Descriptive statistics for the main Likert-scale questionnaire items.

D.2 Selected multiple-response questionnaire results

Response category	n	%
Creating new materials	47	94.0
Lesson planning	39	78.0
Vocabulary/grammar	34	68.0
Assessment	13	26.0
Student interaction	7	14.0
Feedback	6	12.0

Note: Main reported uses of AI in teaching.

Response category	n	%
False information	39	78.0
Reduced critical thinking	36	72.0
cheating/plagiarism	32	64.0
Lack of pedagogical relevance	16	32.0
Overreliance	15	30.0
Data privacy concerns	11	22.0

Table D2. Reported challenges of AI use.