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THE USE AND EFFECTS OF GENERATIVE AI TOOLS IN ONLINE EFL TUTORING SESSIONS

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THE USE AND EFFECTS OF GENERATIVE AI TOOLS IN ONLINE EFL TUTORING SESSIONS

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ABSTRACT

THE USE AND EFFECTS OF GENERATIVE AI TOOLS IN ONLINE EFL TUTORING SESSIONS

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This qualitative case study aims to investigate the use and effects of AI Tools in online EFL tutoring sessions. The participants are four EFL teachers who work with different age groups. They were first trained by the researcher in an online session on five generative AI tools, which are Leonardo AI, Suno AI, Curipod, Twee, and Parlay Genie. Then they were asked to incorporate these tools into their online EFL classes. The research questions are: "What are some of the pedagogical outcomes of AI use in online language teaching?", "What are the factors that shape teachers' use of AI?", and "What are the EFL teachers' opinions on integrating AI into their teaching?" In order to track teachers' experiences with using AI tools, data will include video recordings of online tutoring sessions, semi-structured interviews, and demographic information questionnaires. The findings revealed three key themes on the use of and effects of AI in online teaching: Pedagogical Roles of AI, Factors that shaped Teachers' AI Integration, and Teachers' Evaluation of AI Tools.

Keywords: Artificial Intelligence, EFL Teachers, Online English Language Education

ÖZET

ÇEVRİMİÇİ EFL ÖZEL DERS OTURUMLARINDA ÜRETKEN YAPAY ZEKA ARAÇLARININ KULLANIMI VE ETKİLERİ

Dilara Nur Ergenç

Yüksek Lisans, İngiliz Dili Eğitimi

Tez Yöneticisi: Doç. Dr. Elif Burhan Horasanlı

Ağustos, 2025

Bu nitel vaka çalışması, çevrimiçi EFL özel ders oturumlarında Yapay Zeka araçlarının kullanımını ve etkilerini araştırmayı amaçlamaktadır. Katılımcılar, farklı yaş gruplarıyla çalışan dört EFL öğretmenidir. İlk olarak araştırmacı tarafından çevrimiçi bir oturumda Leonardo AI, Suno AI, Curipod, Twee ve Parlay Genie olmak üzere beş üretken yapay zeka aracı hakkında eğitim aldılar. Ardından, bu araçları çevrimiçi EFL derslerine dahil etmeleri istendi. Araştırma soruları şunlardır: "Çevrimiçi dil öğretiminde yapay zeka kullanımının pedagojik sonuçları nelerdir?", "Öğretmenlerin yapay zeka kullanımını şekillendiren faktörler nelerdir?" ve "EFL öğretmenlerinin yapay zekayı öğretimlerine entegre etme konusundaki görüşleri nelerdir?" Öğretmenlerin yapay zeka araçlarını kullanma deneyimlerini izlemek için veriler, çevrimiçi özel ders oturumlarının video kayıtlarını, yarı yapılandırılmış görüşmeleri ve demografik bilgi anketlerini içerecektir. Bulgular, çevrimiçi öğretimde yapay zekanın kullanımı ve etkileri konusunda üç temel temayı ortaya koymuştur: Yapay Zekanın Pedagojik Rolleri, Öğretmenlerin Yapay Zeka Entegrasyonunu Şekillendiren Faktörler ve Öğretmenlerin Yapay Zeka Araçlarını Değerlendirmesi.

Anahtar Kelimeler: Yapay Zeka, EFL Öğretmenleri, Çevrimiçi İngilizce Dil Eğitimi

To my parents…

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TABLE OF CONTENTS

PLAGIARISM

ABSTRACT ..... **iii**

ÖZET ..... **iv**

DEDICATION ..... **v**

ACKNOWLEDGMENTS ..... **vi**

TABLE OF CONTENTS ..... **vii**

LIST OF TABLES ..... **ix**

LIST OF FIGURES/ILLUSTRATIONS ..... **x**

LIST OF ABBREVIATIONS ..... **xi**

CHAPTER

1. INTRODUCTION 1

1.1 Background of the study 2

1.2 Statement of the problem 5

1.3 Significance of the study 5

1.4 Conclusion. 6

2. LITERATURE REVIEW **7**

2.1 Artificial intelligence 7

2.2 AI literacy 8

2.3 AI in online teaching 10

2.4 AI in language teaching 12

2.4.1 Teachers' perspective of AI 13

2.4.2 AI tools 15

2.4.3 AI in classroom use: Critique of AI tools 17

2.5 Conclusion 20

3. METHODOLOGY **21**

3.1 Research design 21

3.2 Participant and settings 21

3.3 Participant profiles 23

3.4 Data collection procedures 24

3.4.1 AI tools training 25
3.4.2 An overview of the data process 28
3.4.3 Demographic information questionnaire 29
3.4.4 Course recordings 29
3.4.5 Semi-structured interviews 30
3.5 Data analysis 31
3.6 Credibility of the qualitative measures 33
3.7 Researcher reflexivity 34
3.8 Conclusion 35
4. FINDINGS 36
4.1 Theme 1: Pedagogical roles of AI 36
4.2 Theme 2: Factors that shaped teachers' AI integration 50
4.3 Theme 3: Teachers' evaluation of AI tools 57
4.4 Conclusion. 61
5. DISCUSSION & CONCLUSION 63
5.1 Aim of the study and research questions 63
5.2 Summary of findings 63
5.3 Discussion of findings of the study in relation to existing literature 64
5.4 Pedagogical implications 67
5.5 Limitations 68
5.6 Future directions. 69
REFERENCES 71
APPENDICES
A. Demographic information questionnaire 84
B. Semi-structured interview questions 86
C. Course video recording dates and durations 87

LIST OF TABLES

TABLES

Table 1 Demographic Information Questionnaire 22
Table 2 Students' Age Groups 28
Table 3 The Duration of Interviews 31
Table 4 Data triangulation in analysis 32
Table 5 Codes that emerged from the first theme 36
Table 6 The use of AI tools 37
Table 7 Codes that emerged from the second theme 51
Table 8 Codes that emerged from the third theme 57

LIST OF FIGURES/ILLUSTRATIONS

FIGURES

Figure 1 Comments grouping. 27
Figure 2 Data analysis procedure 33

IMAGES

Image 1 Screenshot of the training [18.11.2024] 26
Image 2 Screenshot of Canan's lesson [06.12.2024] 38
Image 3 Screenshot of Şeyma's lesson [22.12.2024] 41
Image 4 Screenshot of Canan's lesson [30.11.2024] 45
Image 5 Screenshot of Canan's lesson [30.11.2024] 48
Image 6 Screenshot of Şeyma's lesson [28.12.2024] 48
Image 7 Screenshot of Hale's lesson [07.01.2025] 56

LIST OF ABBREVIATIONS

AI	Artificial Intelligence
EFL	English as a Foreign Language
GAI	Generative Artificial Intelligence
GAN	Generative Adversarial Networks
ML	Machine Learning
NLP	Natural Language Processing
VAE	Variational Autoencoders

CHAPTER 1

INTRODUCTION

According to Haroon Sheikh, Corien Prins and Erik Schrijvers (2023), “Artificial intelligence is systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals” (p. 19). It has been of interest in many fields as a new trend. In the English as a Foreign Language (EFL) context, it has been used to enhance learning and teaching multiple studies have been conducted on AI’s implementation in EFL classrooms and its effects on language learning and teaching (Liu & Yuan, 2024; Wang & Xu, 2024; Zhang et al., 2024). Zhou and Hou's (2025) study can expand this claim; they found that AI tools are important for EFL teachers in preparing teaching materials, grading assignments, machine translation, guiding student practice, and facilitating classroom discussions or interactions. Existing literature has also documented using AI tools to practice language skills. For instance, Li et al. (2020) focused on the use of AI-based chatbots in EFL speaking practice. The study found that learners who used the chatbot showed significant improvement in their speaking proficiency. For writing skills, Wang et al. (2021) explored the effectiveness of AI-based writing feedback on EFL learners' writing performance. Hsiao and Chang (2023) provided an example of how to design a quality synchronous online course on AI tools for EFL reading and writing and found out that students have better experiences in student-centered presentations than in teacher-centered lectures. To summarize, the findings of these studies have shown that the implementation of AI in EFL learning presents several benefits, such as personalized instruction, continuous progress monitoring, and immediate feedback (Gutiérrez et al., 2022).

Since AI is an emerging field, there is a growing need for research on its effective use and implementation in different classroom settings. More specifically, there is a dearth of research exploring how teachers integrate AI in their teaching settings, specifically online classrooms. Therefore, the present study explores four EFL in-service teachers’ implementation of generative AI tools into their settings 1) to examine how teachers integrate AI tools in their teaching ecology, and 2) to document the pedagogical outcomes of their AI tool integration. With this research focus, this chapter will first

present the background of the study, referencing the recent literature on AI and language teaching, and it will continue with the statement of the problem, which will be followed by the aim of the study. The chapter will later present the research questions. Finally, the significance of the study will be explained, and the chapter will be finalized with a brief conclusion.

1.1 Background of the Study

John McCarthy coined the term artificial intelligence in 1956 after the touchstone of Alan Turing's "Computing Machinery and Intelligence," where he described how to create intelligent machines, particularly how to test their intelligence (Haenlein & Kaplan, 2019). Then Minsky (1968) defined artificial intelligence as "the science of making machines do things that would require intelligence if done by men". With this introduction, artificial intelligence was no longer an imaginary product.

This study investigates the use of generative AI tools in EFL classrooms. Generative AI (GAI) creates new content, while AI delves deeper and explores the areas the algorithmic coder intends to take it (Kılınç & Keçecioğlu, 2024). The 1980s and 1990s were the era of generative AI began to make progress in image processing and speech recognition. From the 2000s to the 2010s, generative AI entered a new stage with the Generative Adversarial Networks (GAN) and Variational Autoencoders (VAE), which are technologies enabled generative AI to achieve a qualitative leap in fields such as image, music, and text (Yu & Guo, 2023). Since the late 2010s, deep generative models have replaced traditional machine learning models. The deep generative models are able to handle high-dimensional generative tasks, considering that the present GAI-generated content has become such realistic as to be indistinguishable from real content (He et. al., 2025).

The efforts to bring AI programming into schools happened in the 1980s within constructionist approaches that do not assume a minimally invasive form of education, where the teacher is excluded (Kahn & Winters, 2021). Although it was preceded by the development of Intelligent Tutoring Systems and assisted Instruction systems in the 1960s and 1970s, "AI in education" has existed as a coherent academic research field since at least the 1980s, as marked by the first publication of the International

Journal of Artificial Intelligence in Education in 1989 and the formation of the International AI in Education Society (IAIED) in 1993 (Selwyn, 2019).

With its increasing popularity, many scholars have directed their attention to AI and investigated its use to explore whether or how AI can increase the practice of language skills in ESL/EFL classrooms (e.g., Liu & Yuan, 2024; Wang & Xu, 2024; Zhang et al., 2024). Widiati et al. (2023) demonstrate that tools like Quillbot, ChatGPT, and WordTune significantly contribute to both content development and organization in students' writing processes. Similarly, in the expectation of practicing speaking in EFL classrooms, the use of chatbots has both pedagogical and technological affordances (Jeon, 2022). AI-based chatbots like Ellie and Elsa support students' speaking practice, encouraging them to communicate in English even outside the classroom (Sukyadi et al., 2022; Yang et al., 2022).

The existing studies mostly rely on the application of AI in EFL classrooms. However, the implementation of AI in English teaching and learning should also receive similar attention. It is essential to fully integrate AI with English teaching activities, ensuring effective interaction to enhance teaching methods and outcomes, and fostering the healthy development and reform of English education. The literature made me to ask this question: Do these generative AI tools only benefit for the language learners or do they reshape the teaching methods of EFL teachers?

Therefore, the problem was not only to integrate AI tools into EFL classrooms, but also to investigate how EFL teachers integrate these generative AI tools and relate to their teaching methods, and be interested in the pedagogical outcomes. Furthermore, AI isn't just a technical tool; it also intersects with students' cognitive development through the concept of "artificial intelligence literacy." This approach, Ng et al. (2021) associate with Bloom's Taxonomy, aims to empower individuals to become who not only "use" AI, but also understand, critique, and creatively apply it. Therefore, in my research, I seek to understand not only how teachers utilize AI, but also how they guide this process and what kinds of transformations are occurring in online EFL environments.

Sperling et al. (2024) proposed that even though there is much research on AI literacy in education, the literature is lacking in the context of teacher education. AI literacy should focus on enhancing teachers' skills and involving them in the collaborative design of education and AI specialists (Casal-Otero et al., 2023). Effective classroom integration of AI requires teachers to be AI-literate, which means that they are knowledgeable about AI, including understanding, using, controlling, and critically reflecting on its applications in the classroom. To go beyond traditional classroom practices to ensure personalized learning and improve teaching performance, teachers need to comprehend AI applications (Liu, 2024). Further understanding students' perceptions of AI can help teachers strengthen students' learning by using AI-assisted teaching (Demir & Güraksın, 2022). Yet, not only EFL teachers, but nearly half of the teachers feel distressed and unprepared about integrating AI into their classrooms (Langreo, 2023; Prasetya et al., 2024). Even confident teachers use AI for immediate tasks, such as deciding the topic and creating in-class activities rather than integrating it into their pedagogical approaches (Guan et al., 2024).

Scholars have also proposed the need for teacher training to raise AI-literate teachers. For example, Rütti-Joy et al. (2024) argued that to provide proper AI practices in the classroom, teacher education curricula need to cover AI literacy. Likewise, Zaugg (2024) demonstrated a positive change in pre-service teachers' attitudes toward AI tools and proposed the addition of AI literacy in teacher education programs. This view is supported by Özer-Altınkaya and Yetkin (2025), who found that teacher education programs did not adequately prepare teachers to integrate AI into their teaching practices. This result broadly supports the foregoing research on the requirement of theoretical and practical education on utilizing AI in classes (Sperling et al., 2024). According to technology integration literature, teachers' practice of integrating AI involves strategic and thoughtful use of AI tools to improve teaching effectiveness and student learning outcomes in specific subject areas. Scholars explicitly call for further investigation of the effectiveness of generative AI tools in EFL classrooms regarding the diverse learning environments, populations, and research methods (Weng & Fu, 2025; Wang et. al., 2025).

1.2 Statement of the Problem

Existing research has documented the ever-changing nature of technological tools and their potential impacts and contributions to learning settings. However, the idea of using AI in education intimidates educators because of their unawareness of the pedagogical implications of AI in language education. It is also because of the lack of critical reviews of the pedagogical implications and new approaches to adopting AI in education (Kuddus, 2022). Therefore, this qualitative case study aims to investigate the use and effects of AI Tools in online EFL tutoring sessions. With this purpose, the study trains four EFL in-service teachers working as online instructors in Türkiye and then examines how four novice EFL teachers integrate AI into their online English lessons in four consecutive classes. The present study aims to seek answers to the following research questions:

1. What are some of the pedagogical outcomes of AI use in online language teaching?

2. What are the factors that shape teachers' use of AI?

3. What are the EFL teachers' opinions on integrating AI into their teaching?

1.3 Significance of the Study

This study addresses the growing interest in integrating artificial intelligence (AI) into English as a Foreign Language (EFL) education, particularly within online learning contexts. As highlighted by Fidan and Kasimi (2023), there is a need for further investigation into the effectiveness of AI across diverse EFL environments. There are limited remaining studies that examine the artificial intelligence pedagogical implications in online EFL settings, as AI use continues to grow in education. In this study, the researcher focuses on the participants' integration of AI tools and their impacts on the online lessons and teaching. Therefore, this research strives to contribute to the literature by filling this gap. The contributions of the present study can be listed as follows:

1. For EFL Teachers: The study aims to enhance teachers' awareness of AI tools and their practical applications in the classroom. The researcher offers practical

implications for integrating AI tools into online EFL classrooms. Thus, the professional development of teachers is encouraged by presenting the efficiency, effective strategies, and potential challenges.

2. For Administrators and Policy Makers: The findings of the study may give rise to new educational approaches in curricula about integrating AI tools. The participants' comments on AI literacy and the positive outcome of the AI tutoring given by the researcher may foster educational awareness. For the necessity of giving AI courses in faculties of education to ensure that pre-service teachers can integrate AI into their lessons effectively and appropriately.

3. For Future Researchers: This research lays the groundwork for further studies on AI-supported language education. The diversity of participants regarding teaching experiences, ages, and educational background is significant for the literature, as well as the wide range of students who took lessons from the focal participants. From a primary school student to adults, as well as the diverse language proficiency levels among them, make this study a unique and significant model for researchers.

1.4 Conclusion

This thesis consists of five chapters. In Chapter 2, I introduce the conceptual tools as well as existing research on artificial intelligence and language teacher education. In the following chapter, artificial intelligence's location in education and language education is presented, as well as an explanation of the term AI literacy. Chapter 3 presents the research context, data analysis, and the researcher, emphasizing the four focal participants. In Chapter 4, I review the research findings. More specifically, the themes and codes that emerged from the data are explained. In Chapter 5, I discuss the main contributions of the project, linking with the existing literature, and conclude with the limitations of the study.

CHAPTER 2

LITERATURE REVIEW

In this chapter literature review has been conducted regarding the use of Artificial Intelligence in English Language Learning to get the perspective of how other scholars have found regarding this topic. For this purpose, literature regarding Artificial Intelligence, AI literacy, AI in online education, and AI in language teaching is reviewed.

2.1 Artificial Intelligence

Since its conceptualization in the 1950s by Alan Turing, AI has evolved into a multifarious tool. Landmark achievements include IBM's *Deep Blue* defeating Garry Kasparov in 1997, the success of deep learning architectures such as AlexNet in 2012, and advances in reinforcement learning with DeepMind's *AlphaGo* (Wikipedia, 2025). More recently, transformer-based models like BERT and GPT, alongside generative systems such as DALL·E, have revolutionized natural language understanding and content creation (LiveScience, 2024). Today, AI technologies are embedded across healthcare, finance, and communication, while simultaneously raising ethical and societal concerns regarding bias, accountability, and the potential risks of rapid deployment. The history of AI illustrates recurring cycles of innovation, over-optimism, and reinvention, yet it remains one of the most transformative technological forces of the 21st century. The subfield of artificial intelligence known as machine learning (ML) is comprised of algorithms that allow computers to improve their performance on tasks over time via experience. Another essential component of artificial intelligence is known as natural language processing (NLP), which focuses on the interface between computers and human language. As a result of NLP, intelligent tutoring systems, automated grading, and language translation tools have all been made possible. To fully appreciate the revolutionary potential of these artificial intelligence principles in language instruction and other educational methods, it is essential to have a solid understanding of these concepts (Manany, 2024).

According to Tan et. al. (2025), throughout the last several years, the incorporation of artificial intelligence technology into numerous fields of education has emerged as a

viable route for improving the teaching and learning experiences of students. AI's skills provide unprecedented opportunity to help educators in providing more effective and tailored training to various student groups (Mehlhorn et al., 2020). Artificial intelligence's capabilities are particularly beneficial to language teaching, which benefits considerably from these capabilities. In the field of language education, artificial intelligence technologies contain a tremendous amount of promise. It is essential to get an awareness of how instructors use these tools into their teaching methods and how they may enhance their efficacy in order to fully realize the advantages of these technologies. Artificial intelligence is being used more and more in the field of education to improve learning experiences and results (Manany, 2024).

2.2 AI Literacy

Scholars have begun to specify AI literacy as defined in skill sets in varied disciplines (Long & Magerto, 2020). This phrase is the latest in a long series of suggested literacies that are supposed to signify the comprehension of a specific technical construct. For example, digital literacy, media literacy, and more recently, data literacy are all examples of terms that have been proposed. The concept of AI literacy comprises the AI abilities that the general community needs to acquire and, as a result, focuses mostly on students who do not have a background in computer science (non-experts). Long and Magerko (2020) developed a definition of artificial intelligence literacy that is frequently cited. They define it as "a set of competencies that enables individuals to critically evaluate AI technologies, communicate and collaborate effectively with AI, and use AI as a tool online, at home, and in the workplace." This definition is popular because it encompasses all of these aspects.

Additionally, a number of countries have acknowledged the need for artificial intelligence literacy programs in both higher education and adult education. Therefore, artificial intelligence plans have been produced and disseminated by the United States of America (National Artificial Intelligence Initiative Office (NAIIO), 2021), China (PRC Ministry of Education 2019), and Germany (Federal Ministry of Education and Research (BMBF), 2021). In addition, there are pilot initiatives that are backed by the government, such as "Elements of AI" from Finland, which are designed to improve AI literacy for those who are not specialists in the field.

In addition, throughout the last several years, there have been a few programs that have sought to teach artificial intelligence to students who are enrolled in colleges or universities (Laupichler et.al., 2022). In particular, these programs focused on students who come from fields other than information technology, such as medicine, business administration, or teacher education (Laupichler et.al., 2022).

Sperling et al. (2024) proposed that even though there is much research on AI literacy in education, the literature is lacking in the context of teacher education. Effective classroom integration of AI requires teachers to be AI-literate, which means that they are knowledgeable about AI, including understanding, using, controlling, and critically reflecting on its applications in the classroom. To go beyond traditional classroom practices to ensure personalized learning and improve teaching performance, teachers need to comprehend AI applications (Liu, 2024). Further understanding students' perceptions of AI can help teachers strengthen students' learning by using AI-assisted teaching (Demir & Güraksın, 2022). Yet, nearly half of the teachers feel distressed and unprepared about integrating AI into their classrooms (Langreo, 2023; Prasetya et al., 2024). Even confident teachers use AI for immediate tasks, such as deciding the topic and creating in-classroom activities rather than integrating it into their pedagogical approaches (Guan et al., 2024). Rütti-Joy et al. (2024) argued that to provide proper AI practices in the classroom, teacher education curricula need to cover AI literacy. Likewise, Zaugg (2024) demonstrated a positive change in pre-service teachers' attitudes toward AI tools and proposed the addition of AI literacy in teacher education programs. This view is supported by Özer-Altınkaya and Yetkin (2025), who found that teacher education programs did not adequately prepare teachers to integrate AI into their teaching practices. This result broadly supports the foregoing research on the requirement of theoretical and practical education on utilizing AI in classes (Sperling et al., 2024). According to technology integration literature, teachers' practice of integrating AI involves strategically and thoughtfully using AI tools to improve teaching effectiveness and student learning outcomes in specific subject areas.

Over the last several years, research on artificial intelligence literacy has moved beyond primary, secondary, and higher education to encompass early childhood education as well. It was claimed by Lee et al. (2021) that an online summer course

not only increased students' engagement and comprehension of artificial intelligence ideas, but it also served as a catalyst for changes in attitudes regarding AI, therefore developing future-oriented viewpoints associated with AI. In their study, Kong et al. (2023) investigated the ways in which high school students acquired knowledge of machine learning and deep learning principles, as well as the ethical concerns that arise in project-based learning. The purpose of this research is to investigate whether or not students in high school can be appropriately prepared for a future in which artificial intelligence is pervasive via the implementation of individualized AI literacy instruction.

Many adult education programs that aim to improve students' understanding of artificial intelligence (AI) are often housed at colleges or universities, and they frequently seem to cater to the particular professional needs of students. The initiatives that are being made to enhance the level of artificial intelligence literacy among children or the general community, on the other hand, are often meant to convey a fundamental knowledge of AI without putting the emphasis on a specific topic area (Laupichler, et.al., 2022).

2.3 AI in Online Teaching

Artificial intelligence (AI) is getting a lot of attention in the area of education, particularly in online learning settings, and it is being utilized extensively to improve both teaching and learning experiences. There are many different components of online education that make use of artificial intelligence, including administration, teaching, and learning.

According to Zawacki-Richter et al. (2019), artificial intelligence (AI) in education may be actively used in four different areas. These areas are as follows: intelligent instructional systems, adaptive systems and customization, evaluation and assessment, and profiling and prediction. Personalized learning experiences and information that is customized to the specific needs of individual students are two of the ways that artificial intelligence helps to promote online education. When it comes to turning educational practice into learning methods, AI-enabled systems are crucial. They can help students find the most relevant information and even monitor their cognitive

actions like self-regulation and control to develop intelligent tutor programs (Sun et al., 2021).

By adapting to the individual requirements and interests of the students, this degree of customization makes online education more successful while also increasing its efficiency. Additionally, artificial intelligence-based systems like as Classtime.com have been shown to be very useful tools for the purpose of administering tests and giving students with quick feedback (Ningsih, 2023). Students are able to enhance their learning outcomes by utilizing these platforms, which are utilized to assess the replies of students online using artificial intelligence algorithms and give these students with individualized feedback. Systems that are empowered with artificial intelligence may also help teachers with administrative responsibilities like grading assignments, which enables them to devote more of their attention to educational activities (Chen et al., 2020).

These kinds of administrative operations that are automated increase both the efficiency and the quality of the activities that are being taught. Studies are being conducted to investigate the use of artificial intelligence in online learning settings. An example of this would be Li and Su (2020), who developed a system for evaluating the quality of online basic education instruction within the framework of artificial intelligence. Jia et al. (2022) conducted a bibliometric study of 64 works that were published between the years 2010 and 2021 and examined how artificial intelligence (AI) was integrated with online learning. They also gave an overview of the trends that have been seen in this field. A comprehensive analysis of the current trend of using artificial intelligence in online education was carried out by Tang et al. (2023).

A study conducted by Fırat (2023) highlighted the fact that artificial intelligence technologies had the capability to significantly enhance the organization of online learning. Furthermore, he explored the ways in which AI technologies may be included into learning management systems. AI has been used to ascertain the distribution of students' learning styles, as shown by García et al., (2007). Additionally, it has been utilized to construct learning systems, as demonstrated by Kurilovas et al. (2015). There is a special focus on eliminating ethical and privacy issues and adopting specific laws, despite the fact that the use of artificial intelligence in online education has a

huge potential to give students with educational experiences that are both individualized and effective, as well as to alter the teaching and learning processes.

2.4 AI in Language Teaching

The use of artificial intelligence in language instruction, on the other hand, differs from educator to educator, depending on variables such as familiarity with technology, pedagogical views, institutional support, and access to resources (Chen & Hsieh, 2020). This is despite the fact that there is the potential for benefit.

Research in the field of education has paid a lot of attention to the incorporation of artificial intelligence technology into language instruction. Several artificial intelligence technologies, including natural language processing (NLP), machine learning, and deep learning, have been investigated by academics, and their potential to improve language learning experiences has been highlighted (Levy & Windmann, 2020). According to Mehlhorn et al., (2020), these technologies have resulted in the creation of conversational bots powered by artificial intelligence, automated feedback systems, adaptive learning platforms, and language-generating models. These innovations have opened up new opportunities for assisting language learners.

There is evidence that artificial intelligence is useful in increasing several areas of language acquisition, as proved by research. According to Reimers and Gurevych, (2020), AI-driven feedback systems are able to offer students with timely and individualized feedback, which ultimately leads to improvements in their writing abilities . According to Baker et al. (2019), artificial intelligence technologies have improved a variety of language abilities, including vocabulary acquisition, grammatical competency, speaking and listening skills, and overall language proficiency. The results of this study highlight the potential of artificial intelligence to meet the varied educational requirements of language learners. Nevertheless, there are obstacles to overcome when using AI into teaching languages. Teachers are confronted with a number of challenges, such as constraints in technological infrastructure, access to resources, the need for teacher training, issues over data privacy, and the necessity to match pedagogical practices with AI-driven technologies (Chen & Hsieh, 2020).

Having an understanding of these issues and finding solutions to them is very necessary in order to guarantee the effective use of AI in language teaching. Several different approaches have been suggested by academics in order to make the most of the use of AI in language instruction. To order, providing training on AI, encouraging collaboration between educators and AI specialists, and promoting pedagogical approaches while integrating AI into existing instructions (Mehlhorn et al., 2020). Furthermore, case studies and best practices from educational institutions and teachers that have effectively incorporated AI into language instruction provide useful insights by providing examples of examples. According to Levy and Windmann (2020), these studies emphasize novel techniques, lessons gained, and practical suggestions for improving the application of artificial intelligence in language instruction.

The findings of a number of studies, such those conducted by Reimers and Gurevych (2020) and Baker et al. (2019), provide compelling evidence that artificial intelligence-driven tools are effective in improving a variety of language abilities. However, other research gives a more cautious perspective on the matter. As an example, Chen and Hsieh (2020) highlight key problems that are associated with infrastructure and training that might impede the effective integration of artificial intelligence. They indicate that if these underlying concerns are not addressed, it is possible that the advantages of AI will not be adequately realized. Furthermore, there are data that contradict each other about the influence that AI has on the involvement of students and the responsibilities that teachers play. There are research that indicate that artificial intelligence technologies may lead to more individualized and engaging learning experiences (Levy & Windmann, 2020). The literature emphasises the need to adopt a well-rounded strategy that incorporates artificial intelligence in ways that supplement rather than replace conventional instructional strategies.

2.4.1 Teachers' Perspective of AI

Teachers' responsibilities and attitudes toward technology are being reshaped as a result of the incorporation of artificial intelligence into classrooms. According to Athanassopoulos et al. (2023), a number of research have been conducted to investigate how educators see artificial intelligence (AI) and the implications of AI technology for their profession. In general, the availability of resources was not a

problem; nonetheless, it is advised that more study be conducted on the readiness of tools.

Chounta et al. (2022) conducted a research with the objective of investigating the perceptions of artificial intelligence (AI) held by Estonian teachers of grades K-12 and the importance of AI within the framework of Fairness, Accountability, Transparency, and Ethics (FATE). The researchers conducted a poll with 140 educators and discovered that despite the fact that educators have a poor understanding of artificial intelligence (AI), they see it as a great possibility for education. This research underlines the need of artificial intelligence help in order to boost teacher efficiency. In addition, educators see artificial intelligence as a tool that may assist them in accessing and using material that is available in several languages. The perspectives of educators about an artificial intelligence-enhanced scaffolding system for STEM education were explored by Kim and Kim (2022). AI was seen favorably by the majority of STEM educators as a means of improving scaffolding assistance. Concerns have been expressed, however, about the changing role of the teacher in the classroom as well as the need for openness in the decision-making process regarding AI.

The incorporation of AI into English Language Teaching has prompted a variety of reactions from both educators and students, showing both the advantages and the difficulties associated with this approach. The automation of repetitious processes, such as grading and the provision of feedback, is an area in which artificial intelligence applications are especially useful for instructors. This automation not only lessens the amount of work that instructors have to do, but it also frees up more time for them to spend to the development of classes that are interesting and significant (Luckin & Cukurova, 2019). In addition, AI systems provide comprehensive insights on the development of learners, which enables educators to recognize areas of difficulty and adjust their teaching tactics appropriately. On the other hand, the use of AI technologies has shed light on a skills gap that exists among instructors. Many educators have expressed the belief that they are not adequately equipped to make good use of these technologies, highlighting the need to implement specialized professional development programs (Chakravarti, 2023). If educators do not get proper

training, they may have difficulty incorporating AI technologies into their pedagogical methods, which will, in turn, restrict the potential influence of these tools.

The findings of the research by Bechabe and Perido (2024) indicate that while artificial intelligence is generally acknowledged to be beneficial in the field of education, especially in terms of facilitating the streamlining of activities, the enhancement of access to learning materials, and the enhancement of teaching efficiency, some educators continue to have difficulties in properly using these technologies. The interfaces of artificial intelligence platforms are often touted as being user-friendly; nonetheless, instructors have reported that they lack the essential skills and confidence to incorporate these platforms into their teaching methods. According to this, there is a significant disparity between the perceived utility and the actual ease of use. On the other hand, instructors who have a greater level of technical proficiency are more inclined to welcome the use of artificial intelligence in the classroom. It is interesting to note that criteria such as age and gender do not greatly impact teachers' attitudes on AI. The research suggests that investments should be made in teacher training, that access should be provided to AI tools and infrastructure, and that more research should be conducted into characteristics such as self-efficacy, perceived dangers, and social influences that may impact teachers' adoption of artificial intelligence technology in the classroom.

2.4.2 AI tools

A broad variety of technology applications that make use of artificial intelligence (AI) approaches to improve language acquisition and competency are included in the category of AI-driven aids for language learning. The purpose of these tools is to deliver individualized learning experiences, quick feedback, and adaptive education (Kim et al., 2020). These tools make use of machine learning algorithms, natural language processing (NLP) methods, and data analytics. Students could interact with computer programs using natural language with NPL, which provides them with practice and improves their language skills in a more immersive and interactive manner. After the subsequent years, research on integrating Artificial Intelligence (AI) and Augmented Reality (AR) in educational contexts became popular in the late 2010s. The studies highlighted that AR, with the combination of AI, developed the students'

learning outcomes (Bassyouni & Elhajj, 2021; Sırakaya & Çakmak, 2018). Natural Language Processing (NLP) has also transformed the education assessment. Dimari et al. proposed an AI-based automated grading system tailored for open-book examinations, and the system appeared to be outstanding as it met the expectations of being accurate, scalable, and efficient. However, there are important concerns regarding fairness, transparency, and the mitigation of biases.

According to Wang and Wen (2019) and Park and Lee (2021), these tools make use of artificial intelligence algorithms to assess learner data, monitor progress, and provide recommendations for individualized learning routes and practice activities. Another form of tool that is powered by artificial intelligence is called an intelligent tutoring system (ITS). These systems provide tailored education and feedback to students by means of chatbots or virtual tutors (Chen et al., 2020). Machine learning and natural language understanding (NLU) are two examples of artificial intelligence methods that are used by ITSs in order to engage learners in discussion, provide answers to inquiries, and evaluate language abilities (Lee & Lee, 2021). Not just that, but AI automated voice recognition (ASR) systems, which assess learners' pronunciation and offer feedback to enhance speaking abilities, are used by driven tools to aid language learning (Chen et al., 2022). Language learning is made possible via the use of these systems. Generally speaking, AI-driven tools for language learning reflect revolutionary approaches to language education. These tools provide learners with customized, interactive, and efficient methods to acquire and enhance language abilities in a variety of scenarios. Through the use of artificial intelligence (AI) technology, popular AI language learning platforms and apps have transformed the manner in which people acquire and improve their language abilities. These platforms and apps provide learning experiences that are customized, engaging, and effective.

They have enabled students to study whenever they want, wherever they are, and at their own speed, all while receiving tailored teaching and feedback. One of the many advantages that artificial intelligence brings to the field of language acquisition is the ability to provide tailored education, adaptive learning, and greater engagement, among other advantages. (García-Peñalvo et al., 2020) Language learning platforms that are powered by artificial intelligence have the ability to provide learners with

tailored learning experiences. These platforms analyze learners' proficiency levels, learning styles, and progress statistics in order to adjust teaching and material appropriately. According to Chen et al. (2020), personalization results in the development of tailored learning routes that cater to the particular requirements and preferences of learners, eventually leading to an increase in motivation and effectiveness. AI also makes it possible for adaptive learning, which is a kind of learning in which the instructional material and activities are constantly adjusted depending on the replies and performance of the learners. This allows for the provision of tailored assistance and challenges in order to maximize the results of learning (Lee & Lee, 2021).

According to Chiu and Ching (2018), flexibility ensures that learners get instruction at the proper skill levels for them, which in turn promotes continual progress and mastery. In addition, language learning systems that are driven by artificial intelligence make it possible to have immersive and interesting learning experiences by using gamification, virtual reality simulations, and multimedia resources. This, in turn, encourages active involvement and a profound engagement with the language being studied (Kim et al., 2020). Through the use of artificial intelligence technology, language learners are able to take advantage of learning environments that are customized, adaptive, and immersive, hence optimizing their journey of language acquisition.

2.4.3 AI in Classroom Use: Critique of AI Tools

There is an outstanding number of applications of artificial intelligence in English Language Teaching (ELT), which cater to the strengthening of skills in areas such as speaking, writing, grammatical correction, and vocabulary acquisition. The promise of boosting writing competence is shown by systems driven by artificial intelligence, such as Grammarly. Grammarly makes use of sophisticated algorithms to identify grammatical problems, make suggestions for changes to style choices, and give suggestions for terminology that is contextually relevant (Giray, 2019).

Because this input is provided instantaneously, it gives students the ability to improve their writing abilities in a faster way and encourages them to feel more confident in

their language performance. In order to maximize the amount of information that is retained in memory, artificial intelligence-driven flashcard applications such as Quizlet use spaced repetition algorithms. The use of spaced repetition guarantees that students revisit phrases at intervals that have been carefully determined to improve their ability to remember them over the long run (Gu, 2024). Not only does this method improve vocabulary learning, but it also assists students in developing a vocabulary that is more active and useful throughout the course of their studies. AI Speak, which is an intelligent pronunciation training system, is a good example of how artificial intelligence may be used to improve oral fluency. According to Liakina and Liakin (2023), this tool not only offers learners feedback on their pronunciation correctness, pitch, and rhythm, but it also enables them to make adjustments that are specifically targeted. Because it provides learners with real-time analytics and insights that can be put into action, AI Speak helps learners develop a stronger sense of self-awareness, which in turn encourages iterative practice and the mastery of spoken English. There has also been progress made in the field of grammar correction by AI applications. Platforms such as WriteLab integrate linguistic knowledge with machine learning algorithms in order to give nuanced feedback on the structure of sentences, the coherence of sentences, and the tone of sentences. Because of this, students are able to create polished written work that is in accordance with the norms of both academic and professional settings. The adaptability and scalability of artificial intelligence are shown by these applications of AI, which handle a wide range of language abilities. They help learners to accomplish quantitative progress in their language competence by focusing on particular skill sets to improve those skill sets (Kristiawan et. al., 2024).

More than that, artificial intelligence is being used extensively in the field of language learning to improve the language abilities and sub-skills of students (Zhang & Zou, 2020). Language learners have access to a wide variety of AI-assisted language learning tools, which may be accessed on mobile devices and desktops. These technologies allow language learners to study languages more effectively. The use of these tools provides considerable assistance in the improvement of a variety of language learning abilities.

For example, ChatGPT, which is a tool that is supported by artificial intelligence, might be employed in language learning environments to assist students in the development of their language learning abilities and sub-skills (Fang et al., 2023). In order to contribute to the overall language accomplishment of language learners, ChatGPT is able to give language learners with the necessary feedback and comments on a variety of language learning skills and sub-skills concerns. It is possible for ChatGPT to supply learners with phrases that are grammatically correct, which might assist them in producing messages that are well-organized. This language learning tool that is helped by artificial intelligence is also capable of comprehending human questions and providing the most appropriate responses (Huang & Tan, 2023).

Research by Wei, (2023) shows that second language (L2) motivation, self-regulated learning, and English as a foreign language (EFL) proficiency are all much improved when students use AI to facilitate language teaching in the classroom. Students in the AI-enhanced classes fared better than their counterparts in the control group on every metric used to evaluate their progress, including those measuring writing, reading comprehension, vocabulary, and grammar. The use of AI technologies in the classroom had a significant impact on these students' academic performance and learning habits, as they reported more motivation and used self-regulated learning tactics more often. Qualitative data gathered from interviews with students in the test classes corroborated these findings, showing that the use of AI technologies increased student engagement, provided more tailored feedback, and encouraged more independence. Students reported more engagement and a greater feeling of agency in their own education in the AI-enhanced classroom because of the increased interactivity and individualized attention they received. All things considered, the results imply that incorporating AI into classroom education enhances the learning experience by boosting motivation and student autonomy, in addition to enhancing language competency.

Research was carried out by Altwijri, and Alghizzi, (2024), which consisted of a comprehensive review about the incorporation of artificial intelligence in educational settings. According to the findings of the research, the incorporation of Artificial Intelligence (AI) technology into English as a Foreign Language (EFL) education,

within the context of both traditional classroom settings and online learning environments, has a generally beneficial influence on the emotional aspects of learners. These characteristics include motivation, engagement, attitude, and anxiety. Artificial intelligence (AI) technologies such as chatbots, virtual assistants (such as ChatGPT and Siri), and automated writing assessment systems have been successfully used in higher education settings to create environments that are more engaging, customized, and learner-centered. This was discovered via a study of studies that were conducted between 2017 and 2023. By providing learners with rapid feedback, adaptive material, and autonomous learning paths, these technologies assisted in boosting student motivation and engagement. These tools are particularly effective in online and mixed learning contexts, where the presence of the instructor may be restricted. The applications of artificial intelligence have improved traditional classroom-based learning.

2.5 Conclusion

The literature review chapter discusses key terms and concepts related to AI in education, especially in EFL contexts. It begins with an overview of AI's origins and development as an academic field. It sheds light on the lack of research that focuses on teachers' perspectives on the use of AI and their AI literacy by referring to studies that demonstrate the application of AI tools to practice language skills in EFL classroom settings. AI chatbots improve the speaking proficiency and motivation of students and enhance EFL students' writing skills. Additionally, automated grading systems positive impact on EFL students' continuous learning is emphasized. AI literacy is stressed as essential for teachers, involving understanding AI beyond just its application. The literature review chapter stresses the importance of AI literacy for teachers to effectively integrate AI into teaching, requiring collaboration with AI specialists. Next chapter introduces the methodology of the thesis.

CHAPTER 3

METHODOLOGY

This qualitative case study explores the experiences with Artificial Intelligence (AI) of four (4) online English language teachers in Türkiye. The study aims to investigate the use and the effects of AI tools in online English language classes, considering the teachers' perceptions and AI literacy. In this regard, the study addresses the following research questions:

1. What are some of the pedagogical outcomes of AI use in online language teaching?
2. What are the factors that shape teachers' use of AI?
3. What are the EFL teachers' opinions on integrating AI into their teaching?

This chapter is dedicated to the methodology of the study. A detailed description of the context, setting, participants, research design, data collection procedures, data analysis, and the researcher's reflexivity is presented in this chapter.

3.1 Research Design

The study adopted a situated qualitative case study design, with multiple cases selected. A multiple case study aims to compare cases in which the researcher is looking for patterns or relationships across cases (Yin, 2018). I approached the EFL teachers and their practices as a case. Moreover, the participants in this study (four online EFL teachers) presented different individual cases as they had different students in terms of age, linguistic level, and educational backgrounds. In addition, the participants' (EFL teachers) ages, online teaching experiences, and educational backgrounds varied.

3.2 Participants and Settings

The participants are four (4) EFL teachers who tutor students in online settings in Türkiye. I contacted them via social media. All of the participants were female, between the ages of 24 and 28, and held a bachelor's degree in English Language

Teaching (ELT). Three of them deliver individual English lessons on Zoom, while one participant delivers English lessons to a group of 4-6 students. Three participants were still in different M.A. programs of ELT and Educational Technologies, while one participant was not a graduate student (see Table 1 for details about the participants).

Before the study, teachers had at least a year of experience in teaching, and they were teaching in different institutions. Their online teaching experience ranges from one year to six years, and half of them (2 instructors) teach English online in institutions, but the other half (2 instructors) serve as freelance tutors. Except for one participant, all of their learners were adults, and their ages ranged between 20 and 30. Three participants had taken courses on the use and integration of technologies into EFL classrooms before the study. One participant had taken one online course on the use and integration of technology in education from a qualified university; the other three participants had a chance to take courses in their undergraduate and graduate years. Three participants started online teaching while they were undergraduate students, mostly to gain experience in teaching and earn their living. For one participant, the situation was different. She thought that online education would be permanent and more common after COVID-19, as the pandemic had dramatically changed the medium of teaching. Finally, it should be added that all four participants had different teaching hours and styles according to their learners, as two of them worked as freelance teachers.

Table 1: ***Demographic Information Questionnaire***

Teachers	**Bahar**	**Hale**	**Şeyma**	**Canan**
Gender	Female	Female	Female	Female
Age	26	24	28	28
Native Language	Turkish	Turkish	Turkish	Turkish

Table 1: ***Demographic Information Questionnaire (Continued)***

Teachers	**Bahar**	**Hale**	**Şeyma**	**Canan**
BA	TED University ELT	TED University ELT	Marmara University ELT	TED University ELT
MA	In progress in Education Technologies	None	In progress in ELT	In progress in ELT
Years of experience in teaching	1-2 years	Less than a year	5-10 years	3-5 years
Years of experience in online teaching	1-2 years	1-2 years	1-2 years	More than 5 years
Taken courses on the use of technology	Current Applications of Education Technologies & Information Technologies in Education	None	TED Orientation Programme	Online courses from Arizona State University & Cambridge University

3.3 Participant Profiles

Teacher 1-Bahar

She graduated from TED University, English Language Teaching Department in 2023. She is doing her MA in Educational Technologies at a public university in Eskişehir. She started to teach English online in a private institution with young learners, but she shared her private lessons with a B2 adult learner, which took 20-30 minutes a week.

Teacher 2-Hale

She graduated from TED University, English Language Teaching Department in 2023. For this study, she shared with the researcher the recordings of her one-hour lessons, which she had twice a week with her B1 adult class.

Teacher 3-Şeyma

She graduated from Marmara University, English Language Teaching Department in 2021. She is doing an MA in Social Sciences at the University of Ankara in ELT. She started to teach before graduating. She worked in different private schools. She is currently working for a Chinese company. The reason she started online teaching 4 months ago was to have flexible working hours, and she had a year of experience before her current job. When the pandemic struck, she was working at Bilgiyolu School, and she had to teach in an online setting for a year. For this study, she shared with the researcher the recordings of her 30-minute lessons, which she had twice a week, with one of her young learners.

Teacher 4-Canan

She graduated from TED University, English Language Teaching Department in 2021. She is doing her MA in ELT at Ted University. She worked for many language courses while she was working for private schools. She worked in these language schools as a part-time teacher and worked with adults, young adults, and children. She started online tutoring when she was an undergraduate student in 2018. At first, she started to gain experience, and currently, she has been teaching online for almost 7 years as a freelance teacher from home. For this research, she shared with the researcher the four recordings of her one-hour lesson, which she had once a week.

3.4 Data Collection Procedures

In this study, the researcher introduced the selected AI tools in a maximum of two hours of tutoring sessions, then participants were asked to integrate these AI tools into their online English lessons. The data were collected by means of three instruments adapted and developed by the researcher: A personal data questionnaire, video recordings of the lessons, and semi-structured interviews. The participants and their

students approved a consent form. Şeyma's student is a young learner, so her parent signed a consent form showing approval. In the following sections, data collection tools and data analyses are provided after explaining the AI tools training session.

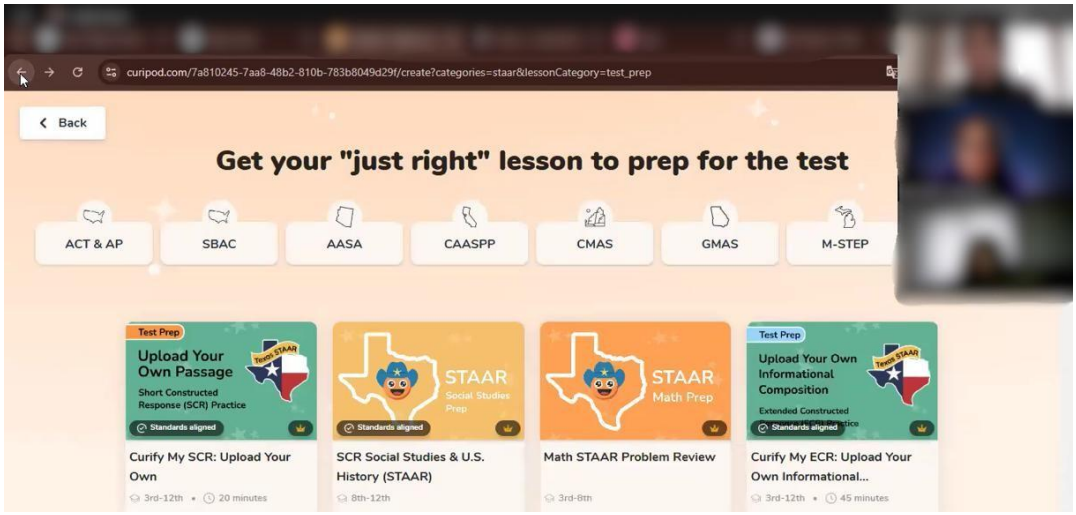
3.4.1 AI tools training

As Zhao et al. (2022) state, AI education is not accessible to most teachers, and there is a need for more diverse AI training based on different subjects and needs. In light of existing research, I thus organized a training and shared AI-based tools with the participants and requested that they integrate these tools into their online English lessons.

In this study, the participants received a maximum of two hours of tutoring sessions on the use of AI tools in an online EFL class. I should note that two participants couldn't attend the training at that moment, but they watched the recording of the training and asked their questions as we stayed in touch during the study. The training covered five AI tools: Twee, Parlay Genie, Leonardo AI, Suno AI, and Curipod. I am an AI enthusiast, and I knew the tools as I self-taught, watched, and read about them. I also choose some of them as they were effective, had a lot of features and they were very famous. I also tried some of them in my classroom as they created fun and engaging classrooms. Leonardo was for me to create good images as a teacher. Suno was great to offer me which song I want as a teacher. Twee and Curipod have lots of features for creating lessons. Lastly, Parlay Genie was particularly attracted me with a feature that allows generating questions from YouTube videos, which is why I decided to incorporate it into my research. These AI tools can assist EFL teachers in creating interactive classrooms. I explained the use and the features of AI tools and demonstrated some example activities, but the desired outcome was up to the teachers' process and originality. In the training, there were no limitations or restrictions on how to use or how many times to use the tools in their lessons. The training lasted almost an hour, and it was completed in two online sessions. In the first part, teachers introduce themselves and share their ideas on artificial intelligence; in the second part, the researcher presents the AI tools. The training was recorded and shared with the

participants. The demonstrated AI tools were chosen in terms of practicality and diversity, and not all of them are educationally based, except for Twee, Curipod, and Parlay Genie. Twee's purpose is to help teachers; teachers can use it to create tests, activities, and assessments. It can generate a list of related multiple-choice or open-ended questions, texts, essay topics, fill-in-the-blank exercises, dialogues, and more from YouTube clips or given vocabulary lists. Likewise, Curipod was developed as a great aide for teachers, and it offers different and fun features like generating exit tickets and brain breaks. Curipod enables users to create activities (e.g., polls and story-writing) and lessons that students can participate in from their devices. For example, the teacher can generate a lesson-long presentations that include activities and explanations by writing a simple prompt about what subject they would teach. Parlay Genie artificial intelligence tool, is a useful question generation tool for both educators and learners, coming from an educational platform, Parlay Ideas. By typing any topic or pasting a link to an article or video, users generate two discussion prompts complete with learning goals and the selected grade levels.

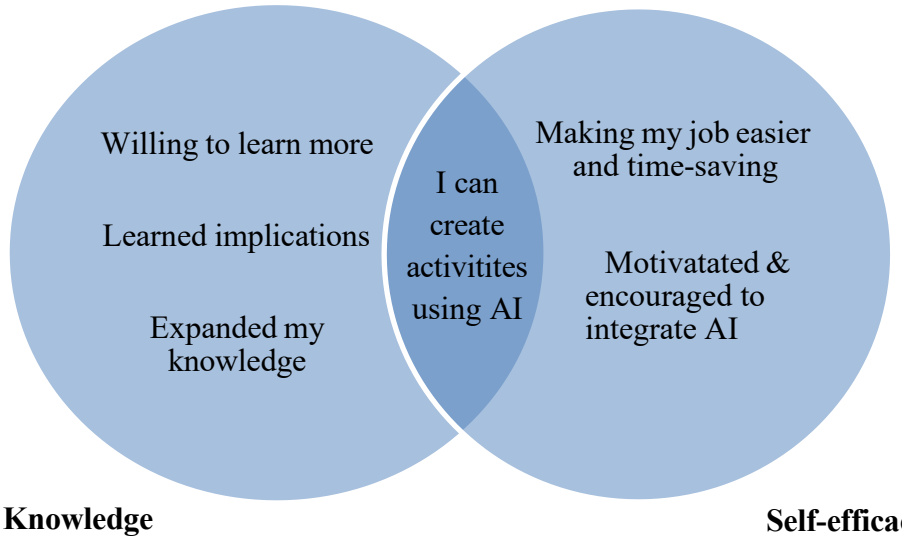
The other non-education-based AI tools are Leonardo AI and Suno AI, which serve different purposes. With text-based prompts, Leonardo AI can easily produce high-quality artwork, stylized illustrations, and photorealistic visuals. During the training, first, I explained how to write a good prompt to create an image, and then how participants can integrate this AI tool into their online English lessons. Suno AI generates a song with two versions from a prompt and provides sound, type, and instrument options. It provides lyrics, too; conversely, users can also write the lyrics and generate the music. I indicated the potential for this AI tool to be used in a listening activity, but underlined the importance of the participants' vision.



Screenshot of the training [18.11.2024]

The participants' comments on the training and the research were grouped based on the two sub-sections: knowledge and self-efficacy. This grouping was visualized through a 2-Venn diagram (Figure 1) to see the interrelations among these aspects.

Figure 1: *Comments Grouping*



3.4.2 An Overview of the Data Process

The data of the present study were collected using four major tools: A demographic information questionnaire, video recordings of the online lessons, teaching materials of the focal participants, and audio recordings of interviews. When the participants decided to take part in the study, I first asked them to complete the demographic information questionnaires to obtain data on their language teaching and learning experiences.

After the teachers were tutored on using the selected AI tools, the participants were asked to video-record four lessons to examine the integration of the tools as required to integrate the advised AI tools. The main data is video recordings of three to four online lessons that teachers have with their students. (see Table 2 for the participants and their students' age group). Each teacher's teaching materials include lesson plans, exercises, and activities, which were collected as data. Afterward, teachers were interviewed and audio recorded by the researcher.

The interview consisted of 10-12 questions that differed among participants and the conversation; the questions were asked to measure the participants' satisfaction with the AI tools and to better understand whether they were capable of integrating the tools into their online classes. Since the interview questions were designed in a semi- structured format for an in-depth understanding of the lessons' video recordings, the interviews' duration varied between 8-20 minutes for each participant (see Table 3 for the duration of the interviews). Petrescu et al. (2017) highlight the importance of considering where the interview takes place. To perform a successful interview, the researcher should choose places other than the respondents' workplaces. Correspondingly, two interviews were performed in a cafe, while the others participated in interviews online as they were based in other cities at that time.

Table 2: ***Students' Age Groups***

Teacher	**Bahar**	**Şeyma**	**Canan**	**Hale**
Student Age Group	Young Adult	Young Learner	Young Adult	Adult (Group of 4-6)

3.4.2 Demographic Information Questionnaire

At the beginning of the data collection process, the participants filled out demographic information questionnaires adapted from Burhan (2020). Using demographic questions to collect background information such as gender, age, academic degrees, previous experience with Artificial Intelligence (AI), and the number of years in EFL teaching and online tutoring could help the researcher better understand each respondent's previous background and identity, and where they fit in within the research population. The demographic information questionnaire is presented as Appendix A.

3.4.3 Course Recordings

The course recordings of teachers' online English lessons formed the primary sources of data. These recordings included teachers' AI use in their lessons and the students' reactions to the AI tools. Overall, in 2 months, I collected nearly 8 hours of video recordings of participants' online English lessons. To understand how different AI tools are integrated, the participants shared their four lessons. Each one of them shared four lessons. This also allowed me to trace the feedback teachers and students provided to each other and helped me observe the impacts of the AI use. The length of the lessons and the parts of AI used varied. One participant, Canan, shared all four videos, but it appears that she did not use any of the AI tools in the first lesson she shared, as she thought the AI tools were not appropriate for the subject of the lesson. While three participants shared their full-length lessons, one participant, Hale, trimmed that video and shared with me only the parts where she used AI in her lessons because her institution did not allow her to share all of her course videos. The detailed course video recording dates and durations are presented in Appendix C.

The video recordings were transcribed using a selective transcription technique. I transcribed only the parts where participants used AI tools, which constituted the major elements of the study. I used time stamps to locate the specific codes during the data analysis. Dates are given after each excerpt (e.g., class time, 15/12/2024).

3.4.5. Semi-structured Interviews

Another instrument applied in this study was semi-structured interviews. A semi-structured interview is similar to a structured one in terms of pre-planned questions, but the order and further questions are decided based on how the conversation goes (Aslam et al., 2022). The interview was conducted to obtain more in-depth information about the video recordings and teachers' AI literacy and competency. The video recordings of teachers' AI-integrated online lessons provided the basis of the findings; however, exploring the process of selection and adaptation of the tools was essential to answer the research questions. Therefore, an interview was needed. One interview was conducted with each participant. All interviews were conducted in the same month, January, depending on the participants' availability status; two participants attended the interview online. The other two attended the interview face-to-face, and their interviews were audio-recorded. The questions were prepared related to the research questions and the aim of the study. The underlying purpose of the questions was to apprehend the teachers' knowledge, opinions, and experiences about the usage of AI in the L2 online lessons before, during, and after the study.

Following Rubin and Rubin's suggestion (2005), the specific topics and the main questions were already prepared by the interviewer prior to the interview time. Teachers' AI knowledge and competency were the main topics of the interview. As Drever (2003) suggested, I designed the interview questions with a perspective to provide an in-depth understanding of the chosen participants rather than looking to cover the whole population. I had a list of questions as guidance, but the interviews were run flexibly depending on the participants' responses during the interview. There were 10 pre-planned questions. The first question was asked to gain information about the participants' use of the AI tools before the study. The second question was about the AI tools tutoring session. The following 5 questions served to answer the research questions. Also, with regard to the pedagogical outcomes of the integration of AI tools, questions related to the changes in students' learning processes and their reactions were asked. Other than these questions, which served as a guide for me, I asked further questions based on the participants' answers. For example, when talking about the struggles of AI tools, I asked problem-solving types of questions. In addition, to

acquire more specific responses and opinions, no pre-planned leading questions were asked. The semi-structured interview questions are presented in Appendix B.

Table 3: ***The Duration of Interviews***

Participant's Name	The Duration of the Interview
Bahar	00:14:10
Hale	00:08:15
Şeyma	00:21:35
Canan	00:20:09

3.5 Data Analysis

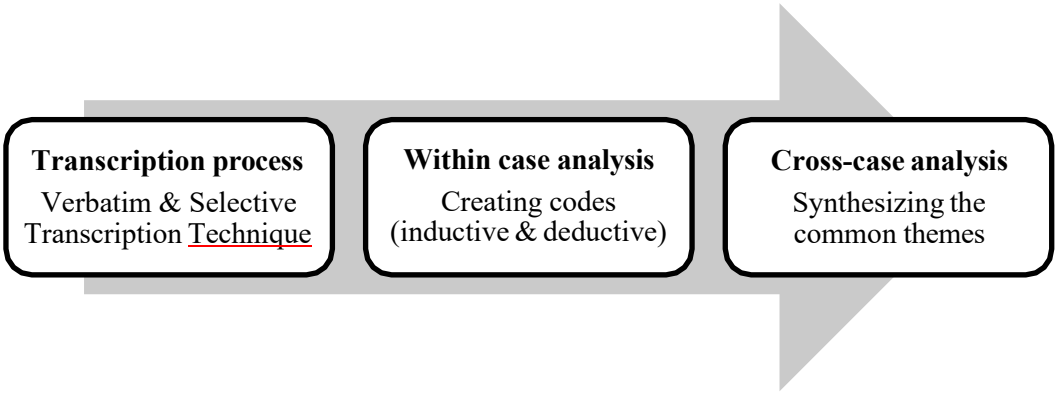
The data consists of approximately 16 course video recordings (4 recordings with each participant, 16 recordings in total) and audio recordings of semi-structured interviews. The data analysis started with the transcription process. I first transcribed the course video recordings with a selective transcription technique and used verbatim transcription for the interviews. After transcribing and reading the dataset multiple times on paper copies, the data were analyzed thematically, using a coding process to identify recurring themes both on paper, on hard copy, and on screen, on soft copies of the data. Thematic analysis is a technique for describing and analyzing patterns within the data (Clarke & Braun, 2006). As it allows the identification and interpretation of themes, within the dataset thematic analysis method was chosen. Creating themes within-cases and synthesizing the common themes from cross-case analysis offered a rich and detailed account of participants' experiences. During the analysis process, I kept a research log and reviewed all the data to build color codes according to my research questions. I labeled all the related segments uncaringly by tagging a dataset segment with more than one code. Coding means not only the

reduction but also the organization of the dataset (Terry et al., 2017). Therefore, I reviewed the data segments and codes repeatedly to aggregate them using inductive coding. The next step was to create themes that emerged from the pattern codes. A theme emerges from the researcher's reflections and insights gathered throughout the data collection process; their analytical observations and strong theoretical grounding support the development of themes from the identified codes (Carey, 2017). I constructed themes as a link between the research questions and the data, which include patterns and relations between different codes. The emerging themes are 1) Pedagogical roles of AI, 2) Factors that shaped Teachers' AI Integration, and 3) Teachers' Evaluation of AI Tools. Table 4 presents the data triangulation to answer the research questions.

Table 4 : ***Data triangulation in analysis***

Research Questions	**Data Source**	**Data Analysis**
What are some of the pedagogical outcomes of AI use in online language teaching?	• Course video recordings • Semi-structured interviews	• Inductive and deductive coding (Miles & Huberman, 1994)
What are the factors that shape teachers' use of AI?	• Course video recordings • Semi-structured interviews	• Inductive and deductive coding (Miles & Huberman, 1994)
What are the EFL teachers' opinions on integrating AI into their teaching?	• Semi-structured interviews	• Inductive and deductive coding

Figure 2: *Data analysis procedure*



3.6 Credibility of the Qualitative Measures

As a researcher interested in Artificial Intelligence in English language education, I acknowledged my role during the data collection process and set aside my AI literacy and competency to some extent, excluding the information session. However, data analysis requires continuous decision-making, and if the documentation is insufficient, the researcher is likely to confuse or forget subtle elements (Dornyei, 2007). Maintaining a research log during the data analysis gave me new insights into my own experiences conducting the research and helped me overcome intrinsic bias. Additionally, the research log adds validity to my data as it documents the narrative of my research journey throughout.

To ensure the trustworthiness of the study, triangulation was achieved, as being aware that the triangulation of data sources may not provide a single steady picture (Patton, 2002). The cross-data consistency checks were provided by diverse instruments like semi-structured interviews and video recordings of AI-integrated lessons. In the following analysis process, reading and re-reading the printed data, I created some codes, and my advisor approved them, but she was not a second coder. Before the codes were categorized into emerging themes, they were systematically coded on the computer again.

3.7 Researcher Reflexivity

Since this is a qualitative study, it is important to acknowledge my position as the researcher. According to Saygın and Fındıklı (2023),

> ...the researcher does not only collect data but also analyzes and reports with various methods, participates in the construction of the research, empathizes, sometimes experiences events and phenomena with the participants, and interprets the results from the perspective he has gained in this way (p.66).

The importance of the researcher is implicated in this statement thus, it is significant to present my portrait as a researcher because my roles are observer, tutor, interviewer, and analyst in this study.

My background in teaching English as a Foreign Language (EFL) and experience in Artificial Intelligence in the EFL context have shaped my perspective on this topic. In my bachelor's years, I was an AI enthusiast. However, my interest multiplied when I took the Using Technology in English Language Teaching course in my graduate study. I started to integrate the research I did for this course, the articles I read, and the artificial intelligence tools I found into my lessons, and observed the positive feedback from my students. This situation made me love and be curious about AI more, therefore, the topic of my thesis was decided by me and my advisor.

The research questions and the aim of the study were the result of my friends' influences. I have friends who teach English online, and their challenges seemed significant and different than face-to-face teaching. Like the other teachers, they were unaware of the comprehensive use of AI. Yet, the AI tools I know may be a solution to some difficulties experienced in online classes, and they are very applicable. This thought motivated me to present my knowledge of the tools and analyze the AI tools along with the teachers' perceptions. Further, I realized that there is a lack of studies related to analyzing Artificial Intelligence in online English language teaching settings in the literature.

As the researcher conducting this study, my disposition as an AI enthusiast led me to interpret the data with attention. The continuous self-reflection via my researcher log and the meetings with my advisor helped to mitigate the potential bias. While remaining aware of my own positionality in shaping the research process, I designed

the interview questions. Still, the connection between the participants and me encouraged them to share their experiences in as much detail as possible. Being a female and a member of the same institution as the participants influenced our interactions. They were open about sharing their experiences during training, lessons, and interviews.

Even though she was eager to integrate AI tools into her teaching, Bahar's student dropped out of the course; therefore, her course video recordings were hobbled. That situation caused a delay in the data collection schedule. As I aimed to consider participant benefits, I always provided the option of deleting all the data and withdrawing from the research. However, Bahar found another student in the meantime and scheduled four lessons in one week since it's urgent. I believe that our friendship over time has had an impact on this compensation.

3.8 Conclusion

This chapter has outlined the setting and participants, research design, data collection, analysis procedures, and researcher reflexivity. The next chapter will present the findings that highlight key themes that emerged from the analysis of collected data.

CHAPTER 4

FINDINGS

The recursive analysis of the data collected via multiple instruments indicated three themes: Pedagogical Roles of AI, Factors that shaped Teachers' AI Integration, and Teachers' Evaluation of AI Tools. This chapter will present the codes that emerged under the themes using excerpts from relevant data sources.

4.1 Theme 1: Pedagogical Roles of AI

In the first research question, the study explored the pedagogical contributions of AI tools in the online English classes of the participants. More specifically, the study adopted the following research question:

RQ 1: What are some of the pedagogical outcomes of AI use in online language teaching?

Table 5 represents the pedagogical outcomes of the AI tools.

Table 5: ***Codes that emerged from the first theme***

Themes	**Codes**	**Participants**			
		Bahar	Hale	Şeyma	Canan
Pedagogical Roles of AI	Promoting learner-centered classroom	11	4	10	5
	Fostering critical thinking	3	0	5	2
	Giving feedback	0	2	3	8
	Grammar revision	0	0	2	3
	Vocabulary teaching	1	0	3	5

Before revealing the themes in detail, the use of the chosen generative AI tools in the online EFL classes is provided in the table below.

Table 6: ***The use of AI tools***

AI Tools	Promoting learner-centered classroom	Fostering critical thinking	Giving feedback	Grammar revision	Vocabulary teaching
Parlay Genie	✓	✓			
Curipod	✓		✓	✓	✓
Twee	✓	✓	✓	✓	✓

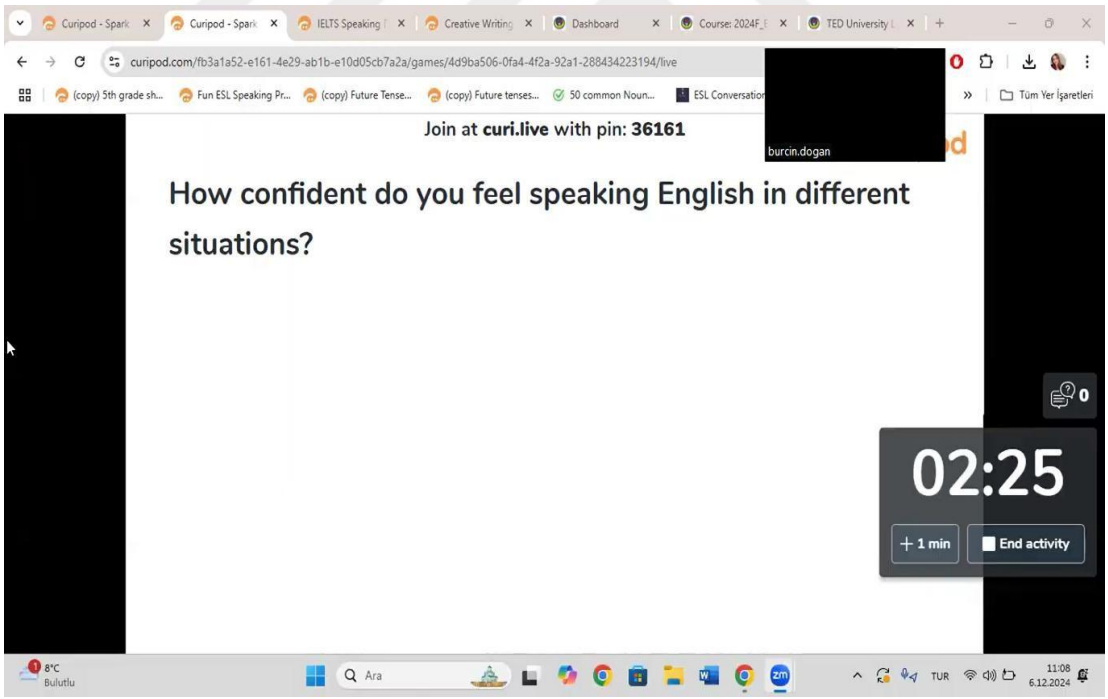
Findings indicated that the participants' use of AI resulted in five different pedagogical outcomes: promoting learner-centered classroom settings, fostering critical thinking, giving feedback, grammar revision, and vocabulary teaching.

Promoting learner-centered classroom settings. The findings show that the participants' AI integration promoted student-centered learning. More specifically, using AI tools, teachers promoted students' active involvement, and led to the emergence of a learner-centered online teaching setting. To exemplify, the teachers used Twee as one tool in their classes. One of the features of this tool is that it enables teachers to create more than one activity on a specific topic or vocabulary. Using Twee, teachers, utilizing AI, encouraged learners to reflect on their learning processes and helped them identify their needs in the English language.

Bahar effectively used Twee to personalize her lessons around the students' lives and professional contexts. In her second and third lessons, Bahar designed activities using an AI tool, where students reflected on topics such as time management, relationships, and professional collaboration. By asking questions like, "How do you manage your

time to focus on your interests or hobbies?" and "Have you ever been involved in the launch of a new product? What was your role?" [06.12.2024, class time], she created opportunities for learners to draw on their personal experiences. This approach encouraged critical reflection and deepened engagement, as students connected academic content to their own lives.

Similarly, Canan utilized Curipod to generate speaking and writing prompts tailored to the students' personalities and imagination. Curipod enables teachers to create effective lessons or activities. Using Curipod, Canan generated open-ended, creative questions such as, "If you were a city, which one would you be and why?" and "What superpower would you choose, and how would you use it?" [06.12.2024, class time]. These types of questions allowed her student to be involved in the content. Besides generating creative questions, it was observed that she used basic AI-generated questions, which are shown below:



Screenshot of Canan's lesson [06.12.2024]

Excerpt 1:

Canan: How confident do you feel speaking English in different situations? For instance, when you are waiting in the bank account for opening a bank account. Or when you are at the bus stop. Or when you are talking with a native speaker.

So think about those situations. And how confident do you feel speaking English in different situations? I'm going to start the activity. And you will start to write. You will start to write. And then A.I. will give you feedback. And I will give you feedback.

…

So, okay. Let's look at the answer. Actually, I feel bad when I speak English. Because I'm worried and I can't speak fluently in different situations. Okay. So, why do you think in that way? Why do you think that you feel bad? Why do you think that you feel worried? And why do you think that you cannot speak fluently? What's the reason behind it? Have you ever thought about it?

S: Because I can't speak fluently. And this situation, this situation I feel... Actually, I feel endişelenmeme sebebiyet veriyor aslında. (*It actually makes me feel concerned*.)

Canan: That's why. OK. I understand.

…

What aspect of your spoken English do you wish to improve the most? So, in your speaking English, which one do you wish to improve the most? Like your fluency, your vocabulary knowledge, your anxiety, like your sentence structure, and giving deeper meanings.

…

I want to improve my speaking fluency. Sometimes I need more time to find the right words, but my work is very busy. I also want to be more confident when talking with others. Perfect, actually. You explained your problem really well. You want to improve your fluency.

S: I want to improve my English, really. I'm ready for that.
[06.12.2024, class time]

Teacher Şeyma also demonstrated a strong commitment to learner-centered teaching through her use of AI tools like Twee. In her lessons about weather and healthy eating, she incorporated personalized questions that prompted students to share their feelings, preferences, and routines. This personalization led the classroom to be more supportive, allowing the student to write or tell their answers.

Excerpt 2:

Şeyma: Elif, when your mom or your dad bakes the pizza, is it healthy or unhealthy?

S: Healthy.

Şeyma: Of course. When you bake it at home, it's healthy. You are amazing. Elif, so who makes the pizza? Your mom or your dad?

S: My mom.

Şeyma: Oh, your mom is the cook?

S: No.

Şeyma: Oh, she's not? Did you say no?

S: Yes.

Şeyma: Who is the cook at home? Who is the chef? Oh, you don't know? Who is cooking? Who is cooking?

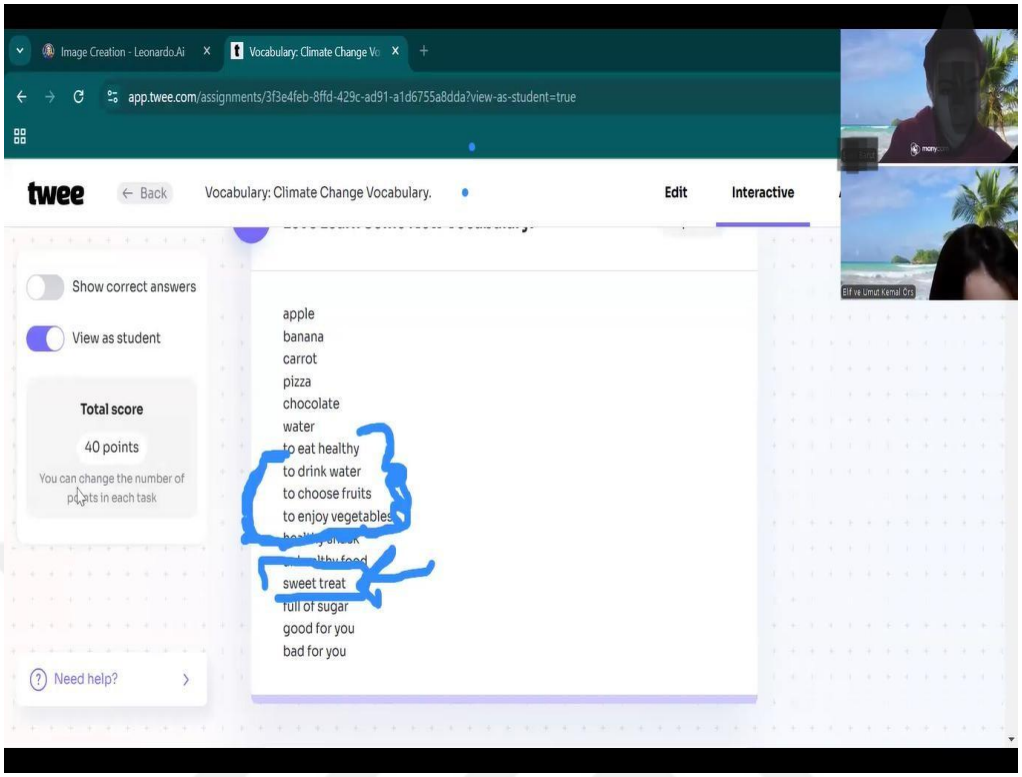
S: Me. Yeah.

Şeyma: You? Oh, my God. Can you bake the pizza?

S: Yes.

[22.12.2024, class time]

In the screenshot below and the excerpt above, Şeyma uses Twee to introduce new vocabulary to her student. Şeyma encouraged active participation in her lessons, often asking these types of questions. While teaching the vocabulary, by asking personalized questions, she tries to make her online course student-centered and fun.



Screenshot of Şeyma's lesson [22.12.2024, class time]

Teacher Hale focused on creating discussion-based, collaborative activities using Parlay Genie and Curipod. She generated discussion questions related to social issues like fashion, individuality, and financial responsibility.

Excerpt 3:

Hale: Could you please share your opinions whether young people should have credit cards or not, that will you talk about?

S1: Okay, firstly, I will say first sentences. They can use for their financial responsibility, budget yani kendi bütçeleri için *(for their budget)* and spending but budget limits. They can use the credit card, but that's all.

Hale: That's all. So, Fadime, will you add something?

S2: If there is an emergency situation, they can use a credit card. And credit cards provide teenagers with to learn financial management skills.

Hale: Yeah, that was a great point. So, thank you, arkadaşlar. Well, then let me continue with group two.

S3: It can, my opinion, it can be dangerous for teenagers to have credit cards. Since teenagers don't work, they spend their parents' money. They don't know how money is earned. So, they spend a lot. Therefore, they cause big debts.

Hale: Exactly.

[18.12.2024, class time]

By prompting students to share opinions and debate in groups, this shows that Hale facilitated peer discussion, critical thinking, and negotiation of meaning—all hallmarks of a learner-centered approach.

Across all four teachers, the findings show that a common pattern emerged. AI tools were not simply used to automate tasks but were intentionally selected to foster dialogue, personalize learning, and encourage student participation.

“With the Curipod, it was like a gamification, and she boosted her motivation with that tool. So, it definitely contributed.” [Canan’s Interview, 15.01.2025]

Rather than following a rigid, teacher-directed structure, lessons became dynamic spaces where students' voices, experiences, and choices shaped the learning process. AI-assisted content creation empowered teachers to design activities that were both relevant to students' lives and aligned with the pedagogical goals of lesson plans, with the help of setting personalized, learner-centered online classrooms.

Fostering critical thinking. Findings revealed that AI-facilitated instruction might foster critical thinking skills in online English language teaching. Teachers used AI-generated questions and activities through Parlay Genie and Twee to encourage students to analyze, infer, evaluate, and create, rather than merely recall information. Across participants, there was a clear shift toward prompting students to think deeper about topics, express reasoning, and make connections between ideas. To illustrate, in the excerpt below, Bahar posed questions that fostered critical thinking, and her student responded as follows.

Excerpt 4:

Bahar: Do you think the idea of not having enough time is more about actual time constraints or it's because of the priority-prioritization of the things we are doing?

S: Yes. I think, for example, I also like painting, but painting requires a lot more time than playing a game, or maybe it's because a little bit more tiring, I tend to prioritize gaming more. Sometimes, I mean, you know, I played the game enough today. Let's do something different. I say in my mind, for example, and I try to paint from time to time. So, it's actually really about prioritizing your hobbies and tasks. I think, I mean, people should really learn how to prioritize tasks and hobbies and try to eliminate that thing that really doesn't add anything on their life. I mean, if you have a hobby, I think you should prioritize it more so that you enjoy life more.

[27.12.2024, class time]

The student's self-reflection, evaluation, and generalization might indicate critical thinking. Bahar also guided her student to think beyond surface-level responses and engage with more complex, real-world scenarios using AI-generated dialogues and questions.

Excerpt 5:

Bahar: What is the best way to understand customer needs during product development?

S: You have to find people that going to use that product and ask them directly, or if you are also a customer who might use that product, you can ask yourself what do I need from this product. I mean, for example, when I was a student in university and designing this notebook, I was asking myself if I want this notebook to be spiraled or not, and other qualifications.

[06.12.2024, class time]

In her second lesson, she guided her student to analyze problems and propose solutions as follows, which reflects critical thinking. Similarly, Teacher Şeyma incorporated activities that promoted critical thinking even at the elementary language level. We can observe that she utilized AI in her lessons to foster her student's critical thinking. Twee generated reading comprehension questions from a text, and in the following excerpt, Şeyma asked her student to infer unstated information from the text.

Excerpt 6:

Şeyma: How long is the party expected to last? How many hours, Elif? How many hours? Elif, the party starts at 5 p.m., so it's evening time, and it ends at 11 a.m.

S: Yes.

Şeyma: So, how many hours are here, Elif? How many hours? I'm counting. 6, 7, 8, 9, 10, 11, 12. Seven hours plus?

S: 11

Şeyma: Bravo. 11 hours too. It makes what, Elif? How many hours in, Elif? How

many hours?

S: Eighteen.

[03.12.2024, class time]

In the following excerpt from her third lesson, she also used hypothetical scenarios to encourage students to predict consequences and apply reasoning.

Excerpt 7:

Şeyma: Of course, Elif. Water is so important. Can you imagine in the school, for example, the teacher says, No, you can't drink water in the class, and you forgot to drink during the break time. So, when you don't drink too much, long hours, what happens?

S: Ill.

Şeyma: Of course.

[22.12.2024, class time]

Through the AI-generated questions about main ideas and making her student identify missing details in a story, Bahar cultivated critical thinking in her online classroom setting.

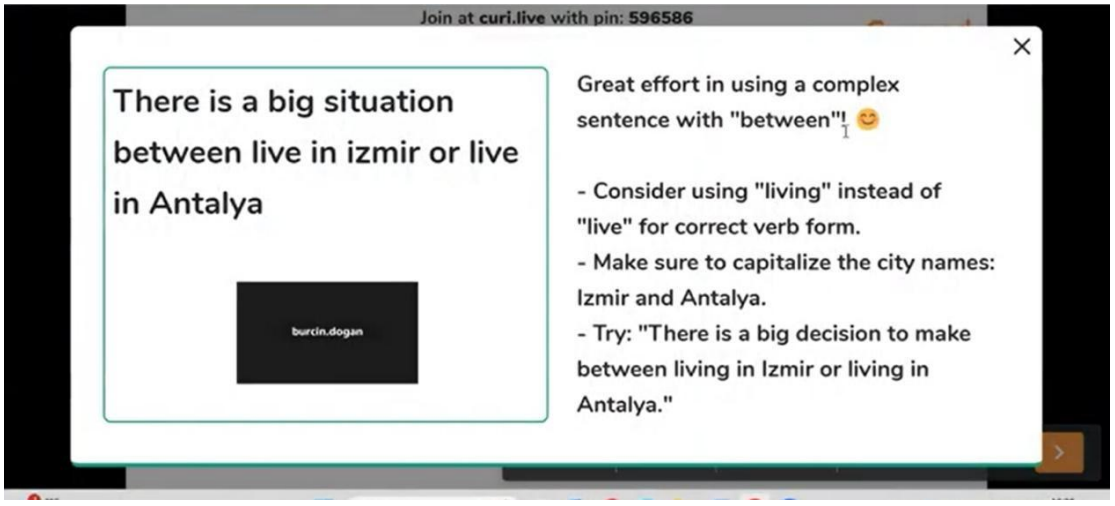
Overall, teachers leveraged AI to scaffold critical thinking at different age groups and language levels. Furthermore, the use of personalized, real-world, and imaginative scenarios allowed students to connect learning to their own lives, making critical

engagement more relevant and accessible. AI-supported lessons assisted teachers in helping students improve their inference skills (as Şeyma did) and problem-solving skills (as Bahar did) in online English language classrooms.

Giving feedback. The data indicated that the immediate and personalized feedback mechanism of AI is one of the appreciated factors of the three participants' AI integration. Except for Bahar, the participants highlighted that AI-supported feedback differed from traditional teacher-led feedback, both in delivery and in student reception. The rapidity of AI in analyzing an answer and giving feedback was found advantageous, for instance, Canan, who frequently used AI tools like Curipod in her online English lessons. Curipod, to reiterate, is a slide show presentation-style tool that combines polls, word clouds, drawings, and more to offer a digitally interactive space for teachers and students. Canan explains why she finds it helpful as follows:

> Excerpt 8:
>
> "AI can give immediate feedback to the student and can detect the correctness or the appropriateness of students answers faster than the teacher."
>
> [Interview, 15.01.2025]

Canan found AI's feedback effective and sufficient because it was very prompt; therefore, she translated the AI's feedback without adding anything to it most of the time.



Screenshot of Canan's lesson [30.11.2024]

The screenshot above is from the online class, which exemplifies one of the instances in which Canan provided feedback to her student via Curipod. She aims to teach student how to use complex prepositions in context in this lesson. At the beginning of the lesson, Canan refers to the past lessons to remind the propositions, then she explains and gives examples of the complex propositions. In her lesson plan, she stated this activity as sentence-building with prepositions, and this screenshot is the AI-generated feedback of this activity.

Importantly, she commented on how students' emotional reception of feedback differs from AI to a human teacher. She experienced that AI can be more successful at creating a less judgmental learning environment than a human teacher, as students are more willing to accept criticism when it comes from AI. She stated:

> Excerpt 9:
>
> "It was really beneficial because when they get feedback from me, [it] can be offensive sometimes. But they get the feedback from the AI, and they care. Oh, okay. I guess this one is true because AI told me that this is wrong. So, actually, it was definitely beneficial."
>
> [Interview, 15.01.2025]

Hale also highlighted the effectiveness of AI in supporting real-time, personalized feedback through the use of Curipod. She reported, "Curipod, my student's reaction was really great, and they said that they liked it and it was an interactive tool. For example, I used it for writing purposes, and they wrote it down, and then I gave them very beneficial feedback." By using AI tools, she was able to provide instant, individualized feedback during class sessions, which contributed to a more dynamic and responsive learning environment. Hale described how this approach "enhanced the learning experience" and fostered "a dynamic classroom environment," [Interview, 08.01.2025] suggesting that AI-supported feedback can transform the traditional, static feedback process into a lively interaction. These results point toward AI's growing potential to act not just as an evaluator but also as a motivator and guide for learners' language development.

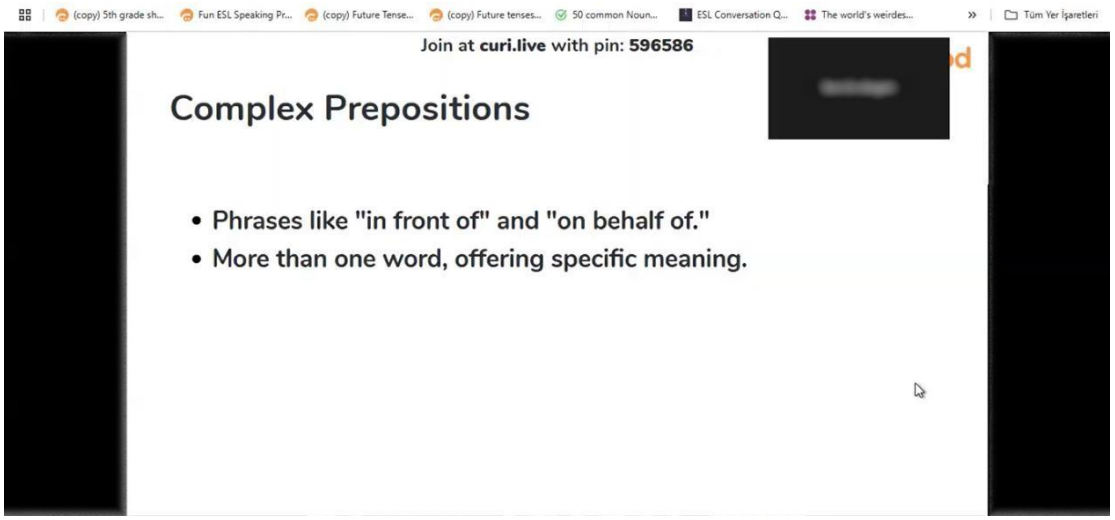
While giving feedback, Şeyma used AI differently from Hale and Canan. Şeyma used Twee to generate interactive reading comprehension questions, and after her student

answered the questions, Twee gave feedback. In the following Excerpt from Şeyma's lesson, we see how AI can correct not only students but also teachers.

> Excerpt 10:
>
> Şeyma: So, Elif, which hour the last all the guests can be there? Which hours? Do we know about this?
>
> S: Five p.m.
>
> Şeyma: Oh, is it the last hour? Susan says, Oh, if you don't come to the party till 5 p.m., so don't come. Do we know this?
>
> S: No.
>
> Şeyma: No. So we say no specific time is mentioned. They don't say anything about this. Okay, Elif? Okay. Let's see, Elif.
>
> …
>
> Elif, you were right. You said it's 5 p.m., but I made you choose the wrong one. I'm sorry, Elif. Your option was true. 5 p.m.
>
> [03.12.2024, class time]

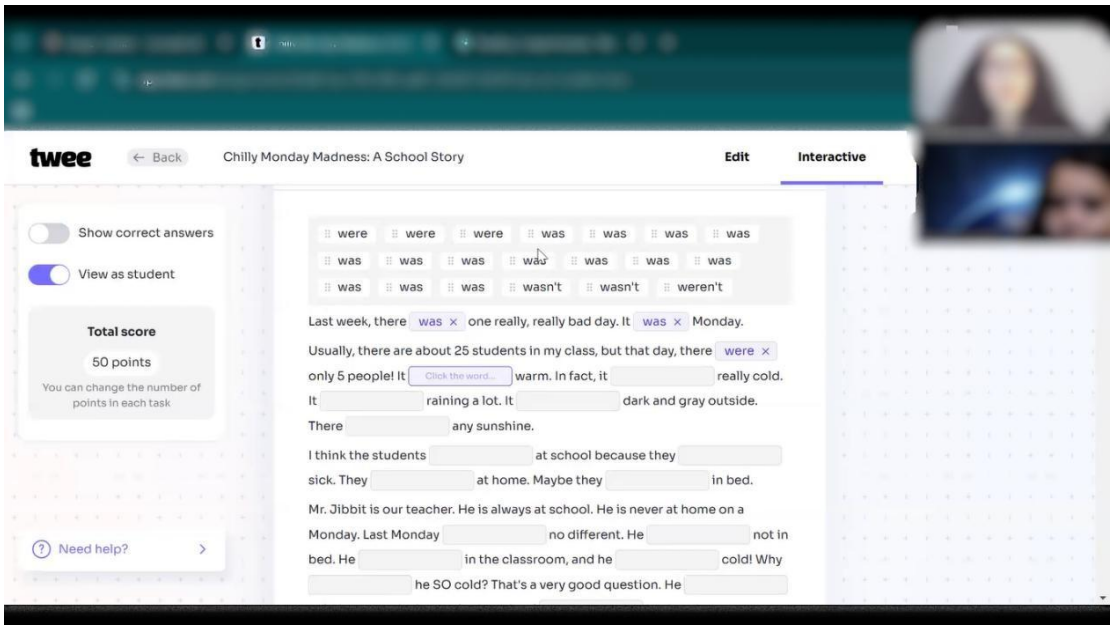
Grammar revision. Findings indicated that two of the focal participants, Şeyma and Canan, integrated AI to conduct grammar revision five times in total. Precisely, they supported students' grammar acquisition and development using an artificial intelligence tool. For instance, the teachers used Twee as one tool in their classes. Using Twee, teachers designed effective activities, particularly for revising grammatical structures in context and providing scaffolded practice.

Canan integrated grammar revision into her lessons by using AI-supported content on complex topics such as prepositions of time. She explained prepositions like *during*, *until*, and *since*. Canan taught her students both clear rules and illustrative examples using Curipod's feature of generating a lesson. This feature provided structured grammar input while enabling the teacher to offer additional clarification based on her students' needs.



Screenshot of Canan's lesson [30.11.2024]

In addition, the data showed that by combining AI-generated exercises with personalized questions, teachers provided meaningful practice for grammar revision for young learners. Şeyma, for instance, employed Twee to present grammatical forms and then supported her teaching practice through a fill-in-the-blanks story activity, moving beyond mechanical drills. With Twee's assistance, she encouraged her young learner to construct her sentences using *there is* and *there are, was* and *were.*



Screenshot of Şeyma's lesson [28.12.2024]

In both Canan's and Şeyma's cases, artificial intelligence was employed to develop practice activities and foster learning environments where grammar could be reinforced naturally during lessons. Rather than treating grammar instruction as a separate component, teachers effectively integrated grammar revision within the broader objectives of lessons.

Vocabulary teaching. AI-supported activities played a significant role in enhancing vocabulary teaching. Except for Hale, three participants actively introduced new words in AI-generated meaningful contexts, such as stories and real-life examples. For instance, Bahar explained vocabulary items that appeared during AI-generated lessons. While discussing the concept of *materials*, she explained that materials are "raw things" rather than end products by connecting vocabulary to familiar concepts such as "doing something from scratch"[06.12.2024]. Similarly, Şeyma, in the context of an AI-generated reading passage, referred to the term *"author"* as a "storyteller," and in the following excerpt, she taught the action verb *"carve"* through a practical and visual explanation, relating it to the activity of carving pumpkins during Halloween, and reinforced understanding with physical demonstrations.

> Excerpt 11:
>
> Şeyma: They put some pumpkins and they carve the pumpkins. What do they do?
>
> S: Carve the pumpkins.
>
> Şeyma: Bravo. They carve. Carve it, Elif. Carve, carve the pumpkin. Carve
>
> (Physical demonstration of carving). They carve the pumpkin and they put a lamp, and they put a lamp inside.
>
> [03.12.2024, class time]
>
> In another lesson, she explained *"sweet treat"* by linking it to students' everyday experiences, like receiving chocolate or candy as a reward for completing homework, as seen in the following Excerpt.
>
> Excerpt 12:
>
> Şeyma: What is a sweet treat? For example, you come home and you have so many homework. And then your mom said, Elif, if you can finish the

homework, you and Umut, so you can have sweet treat. So, what is your sweet treat in the house? What is it? Sweet treat. Is it some chocolate, cake, candies?

S: Candy.

Şeyma: Really? So, what do you say? What does mommy do? Mommy gives…

S: Mommy gives some candy.

Şeyma: Bravo. When? When does she give you candies?

S: I finish homework, mommy gives some candy.

[22.12.2024, class time]

Unlike others, Canan used Curipod to revise and expand vocabulary extensively. In the analysis, it was seen that she relied on artificial intelligence more than other participants in terms of creating a whole lesson. One of her grammar-focused, AI-generated lessons, she not only revised vocabulary items such as prepositions and their nuanced meanings (e.g., *until* meaning "-e kadar", *during* meaning "boyunca") but also enriched the learning experience by integrating cultural and idiomatic expressions (e.g., *hit the books*, meaning “ders çalışmaya başlamak”, and *in the same boat* meaning “aynı durumda olmak”) [30.11.2024, class time]. Different from other participants, she often provided Turkish explanations alongside English ones to ensure full comprehension, particularly for complex or abstract vocabulary. Curipod generated fill-in-the-blanks activities, which were the support that Canan received from AI for the repeated use of prepositions in speaking activities. Fostering active retrieval practice reinforced the student’s learning and confidence in using these words effectively. AI supported the participants in embedding vocabulary into varied, meaningful communicative activities and stories, which fostered a more dynamic classroom environment.

4.2 Theme 2: Factors that shaped Teachers’ AI Integration

The study explored the factors that shaped teachers’ AI integration into their online language classrooms. Findings indicated that even though the participants received training on integrating AI tools, the ways in which they integrated these tools were shaped by two important factors: Teachers’ beliefs and Teachers’ emerging AI literacy. The following theme addresses the second research question:

RQ 2: What are the factors that shape teachers' use of AI?

Table 7 represents the factors that shaped teachers' AI integration, along with the codes and their frequencies that emerged under this theme for each participant.

Table 7: ***Codes that emerged from the second theme***

Theme	**Code**	**Participants**			
		Bahar	Hale	Şeyma	Canan
Factors that shaped Teachers' AI Integration	Teachers' Beliefs	3	1	2	2
	Teachers' Emerging AI Literacy	2	3	3	3

Teachers' beliefs. The participants had different beliefs and expectations about the future of Artificial Intelligence (AI). In other words, the participants held different concerns and feelings about the role of AI in the future of language teaching. They stated that controlling feelings, understanding emotions, and interacting with students, even without words, are indispensable parts of being a teacher. They put forward that even though artificial Intelligence was incapable of understanding human emotions, yet, Canan was quite confident this would change in the future:

> Excerpt 13:
>
> "I know that we think that humans cannot be replaceable because of the emotional intelligence that we have, but I believe that in the future, AI will have emotional intelligence and competency too. So, maybe right now, I know that professors and researchers believe that it will be like assistants for the teachers, but I think that we will be like assistants, and the teachers will be AI. And I'm 100% sure about that. In the future, we'll see that."
>
> [Canan's Interview, 15.01.2025]

Canan's belief in the potential future of AI and its capacity to understand humans' emotions might have served as one source of motivation as she attempted to implement AI in her class as frequently as possible. Besides, she believed that teachers who are skeptical or anxious about AI may avoid using it, and if teachers are passionate about their job, they would like to learn new things, like AI tools.

Excerpt 14:

"There are some teachers that are curious about and they want to learn and improve themselves. I have many colleagues like that. I have many friends, and we are in the same field. But I know that also there are lots of teachers who work with the government in public schools, and they don't even know how to speak English because they just get their salary and they get into their lessons, and they are not even passionate about their job. How can they be passionate about new technological tools and new ideas? So, of course, there are people like us, but also there are people who are not like us."

[Canan's Interview, 15.01.2025]

However, with barely 4 years of experience in teaching English to young learners, Şeyma was pessimistic about the future of AI replacing humans. She stated that "Actually, for young learners, I don't think that it can replace [teachers] ever." [Şeyma's Interview, 13.01.2025].

Şeyma questioned the need for AI tools in language teaching as she thought teachers already knew about their students' needs and interests best and could design the lessons accordingly. In other words, she was wondering if AI can be better than human teachers:

Excerpt 15:

"In the first phase, of course, I need some planning, deep planning on the students. But after weeks, I remember, I was just trying to be flexible in the class. Because you have so many different students. They have different needs and backgrounds. And that's why you have to be flexible. So I was questioning myself. Do teachers need AI or not? Do we need it? I'm not sure about this. Of course, it has some facilities. But I don't know. Still, I'm questioning."

[Şeyma's Interview, 13.01.2025]

Bahar shared her opinions on the change and use of AI, discussing the roles of teachers in being flexible and addressing the learner differences. In this respect, she did not

consider AI use as one core component in teaching and reflected on how she questioned the need for AI in teaching. As she found the AI tools that bear educational aims, like Curipod and Twee, effective, she questioned the capacities of the other AI tools (Leonardo and Suno). Even though teachers make use of these AI tools to some extent, she believes there is a need for an educational upgrade for these AI tools.

> Excerpt 16:
>
> "Maybe to Leonardo, they can add some more educational features, not just generate images."
>
> "...maybe they can create more educational AI tools."
>
> [Bahar's Interview, 09.01.2025]

In short, the findings highlight that educators who hold constructivist teaching beliefs and are eager for professional development are more likely to embrace AI in education. Therefore, addressing the need to take teachers' attitudes and motivations into account is crucial for successful and ethical AI use in education.

Teachers' Emerging AI Literacy. The findings indicated that participants' AI literacy levels varied considerably, but all teachers demonstrated growth in their understanding and use of AI tools after participating in the training. The demographic information questionnaire shows that before the training, two focal participants had limited or surface-level familiarity with AI applications in education, primarily relying on widely known tools like ChatGPT. However, with the help of the researcher's tutoring and through hands-on experience with tools such as Curipod, Suno, Twee, Parlay, and Leonardo AI, participants expanded their technical skills and abilities.

Teachers initially reported using AI tools in basic ways, mostly for idea generation or creating lesson materials. All participants shared that before the researcher's tutoring, their engagement with AI was limited to using ChatGPT for brainstorming lesson or activity ideas appropriate for their students' level. Further, Şeyma relied almost exclusively on ChatGPT, describing it as her "everything" for the past three years:

Excerpt 17:

> “Okay, so actually, I've been using the ChatGPT open AI tool. And it's like my everything, actually, if I'm so in the urge to make lesson plans, in the very beginning of the term, when we are working in the K12 schools, so the department is expecting to prepare lesson plans first. So ChatGPT was my helper, actually, and has been my helper for, let me say, like three years.”
>
> [Interview, 13.01.2025]

Teachers were knowledgeable about AI, including understanding and using applications in the classroom. Further, they could select and adapt the AI tools according to students’ levels and interests, and showed a development in their AI literacy. Hale pointed out this criterion:

Excerpt 18:

> “Suno, which converts lessons into songs, offers creative possibilities, but it wasn't appropriate for my students, because you know they are adult students. This reminded me that different age groups have different needs and learning styles. That is why I think it is better to use such AI tools for elementary school students.”
>
> [Interview, 08.01.2025]

Şeyma also evaluated AI tools, and for Parlay Genie, she thought that it generates complex questions and is unsuitable for young learners. She complained that although she used the question generation section for young learners, the questions were still at a high level for her student.

Excerpt 19:

> “When I used Parlay, you were saying that you can put a video, and then it gives you the question. Then I realized that I could not use it because it was for higher levels. It had a section and it was written for higher levels. It was an option for me to put some questions for young learners. And the questions were still so complex. That's why I couldn't use it. I couldn't use Parlay.”
>
> [Interview, 13.01.2025]

In the AI tools tutoring session, the researcher provided some examples of integrating the AI tools in online English lessons. The intended goal was for teachers to creatively

adapt and integrate these tools into their own lessons according to their students' needs. The results indicated that students could adapt the tools to teach specific things. When the participants' emerging AI literacy was combined with their creativity and competence, they could integrate AI tools into their lessons in their own ways. Even though the teachers were informed about using Suno for teaching speaking and listening skills, Bahar used the tool to help her student develop her writing skills. She planned a listen and write activity using Suno. Her lesson plan is given in the following excerpt.

Lesson Plan

Skills to be worked on in this lesson: listening, speaking
First, the student will be shown the lyrics to fill in the gap, then they will listen to the song and be asked to fill in the gaps. Then, they will be asked to make a song with suno ai and we will do a speaking activity about what kind of words are used in the lyrics of that song.
The song:
https://suno.com/song/df782e5e-f99e-4994-8a12-f8b25ad9c119

Instruction:

Look at the sentences on the sheet. You'll see that some words are missing. Your job is to fill in the missing words with the correct ones while listening to the song.

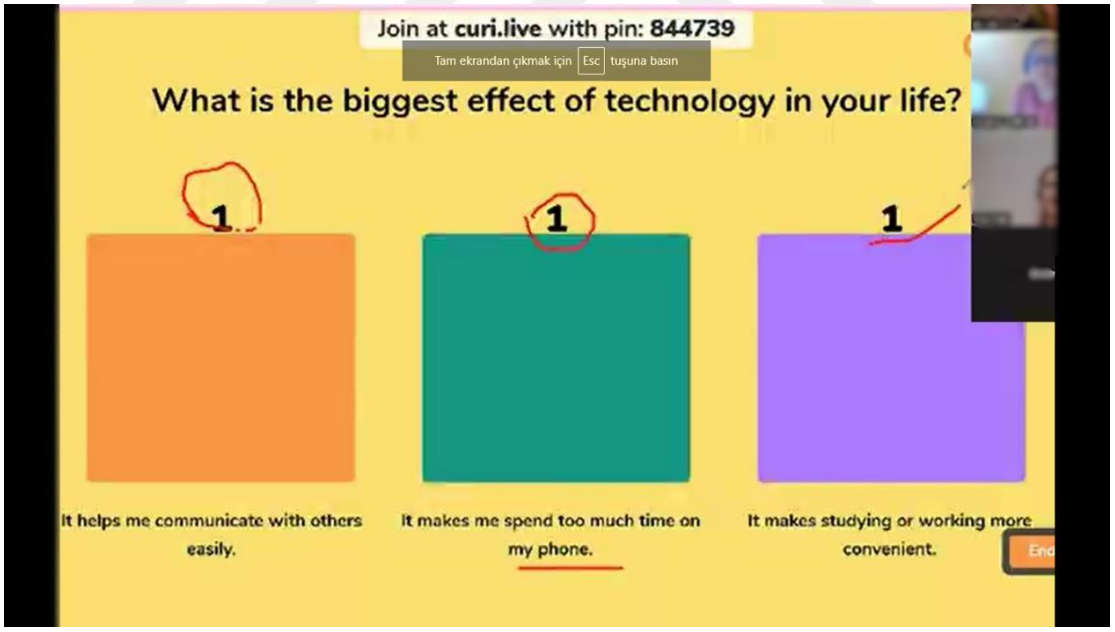
Lesson plan of Bahar [20.12.2024]

In the interview, Bahar explains her adaptations for Suno in this way:

> Excerpt 20:
>
> "Well you only showed me to use [Suno] as a listening and speaking activity, but I also used it as a fill-in-the-gap activity and made it more like a writing activity so I was able to use many of the skills, three of the skills and that was the reason I choose Suno for example."
>
> [Interview, 09.01.2025]

A similar case occurred with Hale as well. The researcher demonstrated the use of Curipod for teaching vocabulary however, Hale expanded the application of this AI tool. She explained:

> Excerpt 21:
>
> "My general English course is mainly about listening and speaking skills. That is why I changed it a little bit. For example, I didn't use it for vocabulary studies, and I used it for polls and writing activities. For my B1 level students, I use a resource named Cambridge Unlock, especially on listening, speaking, and critical thinking skills, but in our textbook, the writing part is a little bit insufficient. That is why I needed to find out about any other AI tools, websites, or apps. That is why a Curipod was beneficial for writing activities…. For example, I didn't use it for vocabulary studies, and I used it for polls and writing activities."
>
> [Interview, 08.01.2025]



Screenshot of Hale's lesson [07.01.2025]

The screenshot above is a demonstration of Hale's AI integration, which she explained during the interview. As Hale and Şeyma stated, teachers show emerging AI literacy, and that is why they avoid using some tools with certain age groups or levels.

Addressing the question "What are the factors that shape teachers' use of AI?", the findings stress teachers' beliefs and emerging AI literacy.

4.3 Theme 3: Teachers' Evaluation of AI Tools

One of the purposes of the researcher conducting interviews with the participants was to ask questions and gather their opinions regarding the use of AI tools inonline English language teaching along with the evaluation of these tools. The third and final theme emerged from these interviews, as well as from teacher and student reactions and evaluations in the lesson recordings. Two significant codes that shaped this theme were the appreciative comments on AI and the negative critique of AI. The theme aimed to answer the following research questions:

RQ 3: What are the EFL teachers' opinions on integrating AI into their teaching?

Table 8 represents teachers' evaluation of AI tools, along with the codes and their frequencies that emerged under this theme for each participant.

Table 8: ***Codes that emerged from the third theme***

Themes	**Codes**	**Participants**			
		Bahar	Hale	Şeyma	Canan
Teachers' Evaluation of AI Tools	Appreciative Comments on AI	9	8	11	8
	Negative Critique of AI	11	4	8	1

Appreciative Comments on AI. Across all tools, both students and teachers commented that AI tools made lessons fun and engaging. Teachers appreciated the AI assistance, highlighting their practicality, creativity, user-friendliness, and ability to

boost learner engagement. The students remarked that they were eager to use these tools in the future. To exemplify, Bahar created a fun and engaging lesson using Suno, and her student thought that it made a realistic voice; therefore, Bahar reported in the interview:

Excerpt 22:

"She liked that, and maybe she can learn more words by making songs in that AI in her free time. Maybe she can also practice her listening skills using that and she said, I will do it and I think it will be helpful for her."

[Interview, 09.01.2025]

Focal participants were also impressed by the vividness and aesthetic quality of the AI-produced images. Teacher Şeyma commented as she "loved" the visuals and described them as "so alive," while students often reacted with enthusiasm or admiration. These positive responses highlighted AI's potential to add richness and imagination to visual learning tasks and storytelling activities. Teachers' appreciative comments centered on the practicality of two tools, Curipod and Twee. More specifically, using AI tools enables to creation of more than one activity and boosts the learners' engagement. Curipod's one of the features is creating lessons or activities from given prompts, and it emerged as another well-regarded tool, particularly for writing instruction. Teachers, Şeyma, Hale, and Canan, described it as "very helpful," "interactive," and "gamified," which increased student motivation and improved creative writing skills. Canan used Curipod as the only AI tool as she found it sufficient. Further, she mentioned that students who previously struggled with or disliked writing had become more engaged and productive after using the platform. It was also recognized for its corrective feedback and support for developing spelling and grammar in younger learners. Canan praised Curipod and the general elements of artificial intelligence, like giving immediate solutions:

Excerpt 23:

"It gives direct feedback to the student. This is the best aspect of artificial intelligence. In other words, a person has to think when they see it directly. I thought and explained it, but it doesn't need to think."

[Interview, 15.01.2025]

Similarly, Twee was highly valued for its wide range of activity types. Teacher Şeyma commented that AI made planning and preparing activities easy and emphasized Twee's practical benefits, like generating multiple-choice questions, dialogues, and gap-fill exercises. Twee was appreciated as comprehensive, learner-appropriate, and suitable for young learners.

The studies on the use of AI to practice language skills in language teaching are mostly surrounded by face-to-face classrooms, and the literature lacks online setting studies (Widiati et al., 2023; Woo et al., 2023; Jeon, 2022). Indeed, participants had different beliefs about handling AI tools in an online setting and compared online education with face-to-face classrooms. Moreover, they highlighted the advantages of online learning. For Canan, flexibility was a key benefit:

> Excerpt 24:
>
> "I think online, it's more advantageous because I can share the link, I can copy the link and send it from the chatbox, etc. He or she can use it from his or her own laptop, computer, or tablet, whatever it is. And if he or she is capable of using technology, it's more practical and it's easier than face-to-face. Almost all of my private lessons are online. I quit giving private lessons face-to-face like two years ago because it's time-consuming. I guess I can say that like I like comfort and my students love comfort too. So, it's easier for us in that way. And I think it's more practical to use those AI tools in a technological environment in an online setting."
> [Interview, 15.01.2025]

Across all AI tools, both teachers and students noted that AI made learning more enjoyable, accessible, and engaging. Further, as it offers immediate feedback and generates materials, AI was also described as a support system. The findings suggest that AI tools can enhance language learning classrooms by assisting teachers, combining personalization, interactivity, and practicality when effectively selected and applied.

Negative Critiques of AI. While teachers showed a generally positive attitude toward the pedagogical potential of AI tools, they also faced some technical issues, including adaptation issues. The findings revealed some negative critiques of AI centered on issues of content quality, complexity, and appropriateness for learner levels. For the

content quality, participants complained about one specific artificial intelligence tool, Parlay Genie, as they did not find it effective. Besides being ineffective, the participants also evaluated Parlay Genie as low in content. Teacher Bahar noted that it is more suitable for group lessons than one-on-one teaching contexts, as it generates limited discussion questions. Şeyma mentioned that Parlay Genie generated complex questions and was unsuitable for young learners. She complained that although she used the question generation section for young learners, the questions were still at a high level for her student.

The complexity of the AI tools varied among participants; for example, Canan diversified her practice, integrating Curipod to create engaging and interactive lessons. Despite initial technical difficulties, she recognized its practicality. Then she could self-direct exploration and apply it across different teaching contexts. However, Şeyma found Curipod "too complex" to navigate:

> Excerpt 25:
>
> "I didn't use the Curipod, why? Because honestly, I couldn't use it. I tried once, and then I think it gave me a prompt on the screen. Your right was being misused, like your right to use is over. I don't know. It looks so complex to me. That's why I eliminated the Curipod…. Actually, the vibe of the website was so suitable for young learners. But that's my mistake. I tried two times and then I said, 'Let it go.'"
>
> [Interview, 13.01.2025]

Teacher Hale was also frustrated with tool interfaces. Hale expressed her preference for ChatGPT's cleaner, simpler layout over Parlay's more complex interface. The findings showed that AI tools' design deficiency leads to no further use, especially for teachers less confident with technology.

AI-generated content was also critiqued for inconsistencies and visual errors, especially in tools like Leonardo AI. Teachers mentioned common issues such as generating irrelevant or erroneous images, delayed rendering times, and unrealistic visual transformations. Teacher Bahar mentioned frequent image-related glitches, suggesting that adding too much detail confused the AI and compromised image quality. These are the data points from one of Bahar's lessons:

Excerpt 26:

“Well, it's produced with AI, so AI sometimes makes these kinds of mistakes.”

“I wasn't expecting this. The cat becomes the snowman.”

[Class time, 29.11.2024]

In addition to technical and content-related issues, one participant noted that classroom energy or mood was lost when using AI tools online. Teacher Şeyma commented that while Suno was fun in theory, it failed to recreate the live classroom atmosphere in virtual environments.

Excerpt 27:

> “I didn't know how to use it in the online class. I mean, when you are teaching face-to-face, it's so amusing. You know, like for two minutes and three minutes, you can like create a vibe in the class with the students. But as online, the feeling was weird. Because yes, we create a song, la-la-la, yay. Like I couldn't give the vibe, actually. It was amazing, but I couldn't use it, I think. I couldn't feel comfortable using it.” [Interview, 13.01.2025]

To conclude, even though teachers like and appreciate the AI tools, they also highlighted several critical drawbacks. The negative critiques revolved around these codes: limited content depth, visual and functional glitches, complex interfaces, robotic tone, and an emotional gap in online settings. These findings suggest a need for more customizable, age-appropriate, and user-friendly AI tools that align with the diverse instructional realities of language classrooms.

4.4 Conclusion

This chapter has presented the findings that emerged from the data analysis. The recurring themes are demonstrated along with the research questions. The themes are Pedagogical Roles of AI, Factors that shaped Teachers’ AI Integration, and Teachers’ Evaluation of AI Tools. Chapter 5 (Discussion and Conclusion) will provide a discussion of the findings in relation to existing literature. First, the discussion will highlight the link between key themes that emerged from the analysis of collected data

and the literature review. Second, the conclusion, along with pedagogical implications, limitations, and future directions, will be presented.

CHAPTER 5

DISCUSSION & CONCLUSION

This chapter is divided into six sections, as follows: 1) Aim of the study and research questions; 2) Summary of findings; 3) Discussion of findings in relation to existing literature; 4) Pedagogical Implications; 5) Limitations; and 6) Future directions.

5.1 Aim of the Study and Research Questions

This situated qualitative case study relied on the assumption that integrating AI tools into teacher training curricula is essential, as AI assures change in how foreign languages are taught and learned; therefore, teachers must be able to use cutting-edge AI in novel ways (Bohara & Rana, 2024; Taşçı & Tunaz, 2024). Thus, the study aimed to examine the use and effects of artificial intelligence in online EFL settings. To address this purpose, this study asked the following research questions:

1. What are some of the pedagogical outcomes of AI use in online language teaching?
2. What are the factors that shape teachers' use of AI?
3. What are the EFL teachers' opinions on integrating AI into their teaching?

5.2 Summary of Findings

This study examined how English language teachers integrated Artificial Intelligence (AI) into online language teaching, revealing three central themes: the pedagogical roles of AI, the factors influencing teachers' AI integration, and teachers' evaluations of AI tools. The study showed that there is a recurrence of the advantages of AI in language teaching, and the participants practiced teaching the four skills (writing, reading, listening, and speaking) with the help of artificial intelligence. Participants highlighted that AI promotes the language learning process in multiple ways, such as offering vocabulary practices, grammar exercises, discussion questions, and polls. In addition, they noted that they were able to do more with interactive teaching as AI tools save a lot of time in preparation for tailor-made materials. Furthermore, teachers highly benefited from the capacity to provide individualized language-learning

experiences of AI as they created exercises enhancing engagement and fostering a deeper understanding of language nuances.

EFL teachers' beliefs on AI and their AI literacy are the two factors that shape the participants' use of AI. The participants' beliefs about the AI future impacted on their personal views as well as their adaptation of it into their lessons. For one participant, Şeyma, AI was perceived as an assistant for language teachers rather than a replacement; however, three participants believed in the AI replacement of teachers. Şeyma finds artificial intelligence dangerous, and as a young learner teacher, she doesn't prefer using artificial intelligence in her lessons.

From what the participants have experienced, the response to the third research question appeared as two opinions on integrating AI into their teaching: appreciative comments and critical drawbacks. Further, the participants noted that they found the training effective; therefore, they could adapt the AI tools in their own ways.

5.3 Discussion of Findings in Relation to Existing Literature

The study's findings promoted the growing interest in artificial intelligence in English language education, particularly in online EFL settings. The use of AI and teachers' perceptions, critiques, and appreciations of AI are consistent with previous studies. Further, the study showcases the dynamic between AI literacy, pedagogical beliefs, and contextual factors.

Existing research on the use of artificial intelligence in English language education has documented face-to-face classroom settings at various levels, from primary to higher education and teacher education. Scholars have examined AI in professional development programs (Ding et. al., 2024), in K-12 education (Aguilar-Cruz & Salas-Pilco, 2025; Ayanwale et. al., 2022; Hsiao & Chang, 2023). These studies consisted of face-to-face classrooms, and whether AI-trained teachers were involved or not. In contrast, in this study, the participants were first trained to integrate the chosen AI tools, and the research setting was online. These differences affected the overall research findings.

The study revealed that EFL teachers used AI tools, in this case, which are Leonardo, Suno, Parlay Genie, Curipod, and Twee, not only with enthusiasm but also with pedagogical caution. Much like existing literature suggests, EFL teachers primarily used AI tools to assist with lesson planning, language activity creation, and student engagement (Aguilar-Cruz & Salas-Pilco, 2025; Essel et al., 2022; Todino et al., 2022). All of the four focal participants created materials like polls, matching exercises, fill-in-the-blank activities, visuals, interactive content, and comprehension questions using artificial intelligence in their lessons. They thought that the impactful use of artificial intelligence supported learning; however, it appeared that they experienced a lack of clear guidance on how to pedagogically integrate these tools. This finding is consistent with the AI literacy gap, which has been emphasized in the literature. In alignment with Chakravarti (2023), the participants highlighted that there is a need for specialized professional development to possess specific digital and critical skills in order to use AI not only as a tool but also as a pedagogical strategy. Jauhiainen and Garagorry Guerra (2024) suggested a significant rise in adoption across educational settings, from primary and secondary schools to higher education institutions such as universities. The present research study has aligned with their suggestion, as the participants have various language levels of students, from young learners to adults.

In alignment with Chen and Hsieh (2020), the study examined teachers' perceptions of AI, revealing a general optimism but also concerns about data privacy, changing teacher roles, and the need for professional development. The results of our research supported the findings of previous studies (Chiu et al., 2022; Zhang et al., 2022), in which the participants reported that the training enhanced their interest in AI and perceived relevance of AI to their lives. However, one participant, Şeyma, finds artificial intelligence dangerous, and as a young learner teacher, she stated in the interview that she doesn't and won't prefer using artificial intelligence in her lessons.

The findings revealed positive effects on the overall quality of the AI feedback. More specifically, it examined the impact of AI tools like Curipod and Twee to provide feedback on EFL students. To exemplify, in one of her lessons, Şeyma dismisses a student's correct answer as incorrect and gives her version of the answer. However,

when she later received Twee's feedback, she learned that it was her student who gave the correct answer and apologizes to her. This case demonstrates the educational potential of artificial intelligence in providing feedback, and this result aligns in general with the positive research findings on the use of AI while giving feedback (Gutiérrez et al., 2022; Su et. al., 2023; Ningsih, 2023; Wang et al., 2021). In addition, this finding can diverge from existing studies as it reflects the power of distributed feedback; when the teacher is not the sole feedback provider, the possibility of giving wrong feedback is reduced. To add onto this, when the feedback provider is another source, such as an AI tool, that can lead to a decrease in the power dynamics and lead to the emergence of a more student-centered and stress-free environment.

Further, I observed that the participants benefited from these AI tools more than assistance; one teacher, Canan, only relied on Curipod and generated her whole lessons. The findings from Canan's case are similar to those reported by Karpouzis (2024), which demonstrate the revolutionary role of AI in transforming the generation of educational content. Also, it corresponds with the results of Hazzan-Bishara et al. (2025)'s study, which highlights that teachers' intrinsic motivation and beliefs on the benefits of AI are found to have a positive relationship with their integration into their teaching practices. On the contrary, Şeyma's concerns about artificial intelligence may result in difficulty in adapting to it, matching with Bechabe, and Perido, (2024) findings. They found that regarding the ease of use, teachers have a negative acceptability level of AI utilization in teaching, as they disagree on being able to be skillful in using it in the context of teaching.

Mostly, the findings of the drawbacks of AI use in the language classroom align with the previous research. However, findings in this study differ in one drawback: The emotional gap in online settings. One participant observed that when using an AI tool online, the tool fails to recreate the live classroom atmosphere and boost the mood of the students. While the study conducted by Altwijri, and Alghizzi (2024) suggested that AI integration in EFL education positively impacts learners' emotional aspects, both in traditional classrooms and online learning environments, the results of the present study point towards a much opposite case.

The participants' use of AI while giving feedback also differs from previous research, which revealed that one participant, Canan, over-relied on an AI tool while giving feedback. However, previous research, such as Burner et. al. (2025) and Asadi et. al. (2025), have emphasized that AI should complement, rather than replace, human feedback—and have called for professional development to help teachers navigate AI tools effectively. Canan's case does not fit with previous research, as it demonstrates that EFL teachers may over-rely on AI tools when giving feedback and hold positive beliefs about AI potentially replacing human teachers in the future. Canan's comments on the future of artificial intelligence also align with her reliance on AI tools, like "I think that we will be like assistants, and the teachers will be AI. And I'm 100% sure about that."

5.4 Pedagogical Implications

The results contribute insights with regard to teaching English using artificial intelligence. One could easily imply that the obvious practical implication of this study is that it proposes various activities and tools to integrate AI into their lessons. Regarding the literature, in this study, participants were first trained on the use of the selected AI tools. Then they integrate these tools into their lessons on their way. This study contributes to EFL teachers' professional development by highlighting the effective strategies, benefits, and challenges. Further, participants' comments on the AI use and their AI literacy demonstrate insights for administrators and policymakers regarding AI literacy and curriculum development. For scholars and further research, the findings provide a foundation through the diverse participant profiles and educational contexts.

There is a need for AI-targeted professional development programs, as many teachers do not feel adequately prepared to integrate AI into their practice (Chakravarti, 2023). Considering this need, this study presents pedagogical implications for educational institutions, developing training programs to empower EFL teachers' skill development and foster reflective practices that enable them to critically assess the capabilities and limitations of AI. However, the findings of this study emphasize the importance of EFL teachers' motivation, different from the previously presented AI-targeted teacher education programs such as Mehranirad (2025), Kaya (2024), and

Zulianti et. al. (2024). In the interview, Canan shared her views that EFL teachers in Türkiye, especially those working in public schools, lack intrinsic motivation and passion, and therefore are not open to technological developments and do not have the capacity to integrate artificial intelligence into their lessons. Hence, seminars can be given to EFL teachers by teachers who use artificial intelligence and integrate it into their lessons, and the activities and lessons that the participants in this study produced with the presented artificial intelligence tools can be shown as examples. Educational institutions can offer teachers the opportunity to use paid versions of artificial intelligence tools, stay in touch with the representatives of those AI tools, and ensure that their teachers are motivated to use these tools. Teachers' intrinsic motivation also depends on supporting students to succeed and meet their needs (Kamanzi et. al., 2025). Therefore, having students fill out satisfaction surveys for courses where these AI tools are used can increase teachers' intrinsic motivation.

Other than supporting EFL teachers' motivation and passion to use AI in their lessons, the training programs should cover various aspects of AI integration. Development of materials using AI tools, potential applications of AI tools in EFL classrooms, and most importantly, reflective practices during which teachers display their AI-integrated lesson plans and activities. In this way, the program ensures confidence and competence for EFL teachers in integrating AI tools into their teaching with practical and theoretical knowledge. In this study, the training was found informative and enjoyable by the participants. The effectiveness appears to have been influenced by the stress-free environment of the training, yet it is also limited, as it aims to introduce the AI tools. However, it can be an ideal starting point for educational institutions and administrators. The extended version, along with the requirements outlined above, can be offered to EFL teachers. As Kaya (2024) proposed, EFL teachers might gain a positive perspective and integrate AI into their teaching, whether a mix of practical and theoretical training programs is designed.

5.5 Limitations

The study has some limitations, especially regarding methodology. First, the participants were selected according to their convenient accessibility regarding the selection criteria, being an online EFL tutor. Selecting specimens from a larger

population for a detailed analysis is needed for a case study (Patnaik & Pandey, 2019). However, in this study, the sample size and scope were limited, and focal participants were from similar ecosystems; therefore, the study's findings cannot be generalized to practices.

Second, though the codes emerged from the data, the pre-existing research questions affected and limited the researcher's lens. If the research questions had not been employed before the analysis, the results of the study might have been different.

A third and final limitation of the present study results from the outcome measurement. The data come from short-term observations, one-month-long online lessons, and this limits insights into long-term effects on language development, motivation, or teaching practices. Unlike some past research in artificial intelligence in language education (e.g., Nguyen, H. A., 2024; Tajik, A., 2025), this research project did not provide a review of AI integration over time. There is no doubt that the need for large-scale analysis of the AI tools' long-term impacts on language productivity and how such tools can guide maintenance and motivation.

5.6 Future Directions

Although there is a growing body of research in the field of artificial intelligence in EFL, the majority of these studies have focused largely on either the application of AI tools to support language skills in EFL classrooms or the effects of AI tools on students' engagement and motivation. On this point, as Gao et al.'s (2025) call for research, I also highlight the need for further research with extended artificial intelligence training for teachers and with a larger sample to enhance the generalizability of the findings. Further, this study presents important implications for both online and face-to-face EFL teachers. Considering the benefits and challenges highlighted by the participants, integrating AI tools into teacher training curricula is essential. The training should be in a balance between maintaining AI assistance and promoting communicative and language skills in the classrooms, stressing that over-reliance on AI may hinder the development of essential language skills. Finally, considering the concerns about biases and data privacy, educators and policymakers

should establish clear ethical policies for AI use in classrooms, looking from teachers' point of view.

REFERENCES

Dimari, A., Tyagi, N., Davanageri, M., Kukreti, R., Yadav, R., & Dimari, H. (2024). AI-based automated grading systems for open-book examination systems: Implications for assessment in higher education. In 2024 International Conference on Knowledge Engineering and Communication Systems (ICKECS). (pp.1–7). IEEE.

Alam, A. (2021). Should robots replace teachers? Mobilisation of AI and learning analytics in education. In 2021 International Conference on Advances in Computing, Communication, and Control (ICAC3) (pp. 1–12). IEEE.

Alshewiter, K.M., Mohammad, A., Shawaqfeh, A.T., Khasawneh, A.J., Alqudah, H., Khasawneh, Y., Khasawneh, A.M. (2024). Improving the Learning of Language Proficiency at Tertiary Education Level Through AI-Driven Assessment Models and Automated Feedback Systems. *Migration Letters*, *21*(2), 712-726

Altwijri, L., & Alghizzi, T. (2024). Investigating the integration of artificial intelligence in English as a foreign language classes for enhancing learners' affective factors: A systematic review. *Heliyon, 10, e31053.* https://doi.org/10.1016/j.heliyon.2024.e31053

Asadi, M., Ebadi, S., & Mohammadi, L. (2025). The impact of integrating ChatGPT with teachers' feedback on EFL writing skills. *Thinking Skills and Creativity*, *56*, 101766.

Athanassopoulos, S., Manoli, P., Gouvi, M., Lavidas, K., & Komis, V. (2023). The use of ChatGPT as a learning tool to improve foreign language writing in a multilingual and multicultural classroom. *Advances in Mobile Learning Educational Research, 3*(2), 818–824.

Ayanwale, K., Sanusi, I., Adelana, O., Aruleba, K., & Oyelere, S. (2022). Teachers' readiness and intention to teach artificial intelligence in schools. Computers and Education: Artificial Intelligence, 3, 100099. https://doi.org/10.1016/j.caeai.2022.100099

Baker, R. S., Ocumpaugh, J., Gowda, S. M., Heffernan, N. T., & Heffernan, C. L. (2019). The impact of using off-the-shelf, grade-appropriate language and domain models on understanding and retention. *International Journal of Artificial Intelligence in Education, 29*(3), 346–370.

Bassyouni, Z., & Elhajj, I. H. (2021). Augmented reality meets artificial intelligence in robotics: A systematic review. *Frontiers in Robotics and AI*, *8*, 724798.

Bechabe, J. M., & Perido, L. D. (2024). Teacher's perspective on the use of artificial intelligence on learning processes: An evaluation of embracing high technological dependence of curriculum. *Psychology and Education: A Multidisciplinary Journal, 28*(9), 995–1006.

Bohara, D. K., & Rana, K. (2024). Unmasking teachers' proficiency in harnessing artificial intelligence (AI) for transformative education. SN Social Sciences, 4, 203. https://doi.org/10.1007/s43545-024-01003-7

Burner, T., Lindvig, Y., & Wærness, J. I. (2025). "We Should Not Be Like a Dinosaur"—Using AI Technologies to Provide Formative Feedback to Students. *Education Sciences*, *15*(1), 58. https://doi.org/10.3390/educsci15010058

Chakravarti, S. (2023). *Innovations in teacher development, personalized learning, and upskilling the workforce*. IGI Global.

Chen, L., Chen, P., & Lin, Z. (2020). Artificial intelligence in education: A review. *IEEE Access, 8*, 75264–75278.

Chen, T. S., & Hsieh, Y. H. (2020). Factors affecting the adoption of artificial intelligence in English learning: A preliminary study. *Smart Learning Environments, 7*(1), 1–13.

Chen, Y., Liu, Y., & Zhang, Y. (2020). Exploring the potential of AI in language learning: A meta-analysis of empirical studies. *Educational Technology Research and Development, 68*(4), 1795–1812.

Chen, Y., Liu, Y., & Zhang, Y. (2022). Exploring the effects of artificial intelligence-driven personalized learning on language learners' performance. *Educational Technology Research and Development, 70*(1), 213–230.

Chiu, T. K. F., & Ching, Y. H. (2018). The effectiveness of AI-driven feedback in language learning: A systematic review. *Computer Assisted Language Learning, 31*(5–6), 486–508.

Chiu, T. K. F., Meng, H., Chai, C.-S., King, I., Wong, S., & Yam, Y. (2022). Creation and evaluation of a pretertiary artificial intelligence (AI) curriculum. IEEE Transactions on Education, *65*(1), 30–39. https://doi.org/10.1109/TE.2021.3085878

Chounta, I. A., Bardone, E., Raudsep, A., & Pedaste, M. (2021). Exploring Teachers' Perceptions of Artificial Intelligence as a Tool to Support their Practice in Estonian K-12 Education. *International Journal of Artificial Intelligence in Education, 32*(3), 725–755.

Dornyei Z. (2007). *Research methods in applied linguistics*. Oxford: Oxford University Press.

Fang, T., Yang, S., Lan, K., Wong, D. F., Hu, J., Chao, L. S., et al. (2023). Is ChatGPT a highly fluent grammatical error correction system? A comprehensive evaluation. *Unpublished manuscript.*

Fındıklı, S., & Saygın, E. P. (2023). Nitel araştırmalarda araştırmacının rolü ve araştırmacı günlükleri. *Turkish Journal of Marketing*, *8*(2), 64-74.

Fırat, M. (2023). Integrating AI applications into learning management systems to enhance e-learning. *Instructional Technology and Lifelong Learning, 4*(1), 1–14.

Gao, M., Zhang, H., Dong, Y., & Li, J. (2025). Embracing generative AI in education: an experiential study on preservice teachers' acceptance and attitudes. Educational Studies, 1–20. https://doi.org/10.1080/03055698.2025.2483831

García-Peñalvo, F. J., Corell, A., Abella-García, V., Grande, M., & Morales, E. (2020). Artificial intelligence in the classroom: A scoping review of AI-driven language learning tools. *Educational Technology & Society, 23*(3), 161–175.

Giray, L. (2024). "Don't let Grammarly overwrite your style and voice:" Writers' advice on using Grammarly in writing. *Internet Reference Services Quarterly, 28*(3), 1–11.

Goodfellow, I. J., Pouget-Abadie, J., Mirza, M., Xu, B., Warde-Farley, D., Ozair, S., ... & Bengio, Y. (2014). Generative adversarial nets. Advances in neural information processing systems, 27.

Haenlein, M., & Kaplan, A. (2019). A brief history of artificial intelligence: On the past, present, and future of artificial intelligence. *California Management Review, 61*(4), 5-14.

Hazzan-Bishara, A., Kol, O., & Levy, S. (2025). The factors affecting teachers' adoption of AI technologies: A unified model of external and internal determinants. *Education and Information Technologies, 30,* 15043–15069. https://doi.org/10.1007/s10639-025-13393-z

He, R., Cao, J., & Tan, T. (2025). Generative artificial intelligence: A historical perspective. *National Science Review*, *12*(5). https://doi.org/10.1093/nsr/nwaf050

Hochstein, A., & Green, J. (2018). Using AI to improve language learning. *Memrise Blog*. https://blog.memrise.com/using-ai-to-improve-language-learning/

Huang, J., & Tan, M. (2023). The role of ChatGPT in scientific communication: Writing better scientific review articles. *American Journal of Cancer Research, 13*, 1148–1154.

Hsiao, J. C., & Chang, J. S. (2023). Enhancing EFL reading and writing through AI-powered tools: design, implementation, and evaluation of an online course. *Interactive Learning Environments*, 1-16.

Jauhiainen, J. S., & Garagorry Guerra, A. (2024). Generative AI and education: dynamic personalization of pupils' school learning material with ChatGPT. *In Frontiers in Education, 9*, https://doi.org/10.3389/feduc.2024.1288723

Jeon, J. (2022). Exploring AI chatbot affordances in the EFL classroom: Young learners' experiences and perspectives. *Computer Assisted Language Learning, 37*(1–2), 1–26. doi:10.1080/09588221.2021.2021241

Jia, K., Wang, P., Li, Y., Chen, Z., Jiang, X., Lin, C., … & Chin, T. (2022). Research landscape of artificial intelligence and e-learning: A bibliometric research. *Frontiers in Psychology, 13*, 1–18.

Jia, J. (2003). CSIEC (Computer Simulator in Educational Communication): An Intelligent Web-Based Teaching System for Foreign Language Learning. *ArXiv*. https://arxiv.org/abs/cs/0312030

Kahn, K., & Winters, N. (2021). Constructionism and AI: A history and possible futures. *British Journal of Educational Technology, 52*(3), 1130-1142.

Kamanzi, P. C., Tardif, M., & Lessard, C. (2021). Canadian teachers and their profession: Why are some satisfied and others dissatisfied? Annals of Social Sciences & Management Studies, 6(4), 555695. https://doi.org/10.19080/ASM.2021.06.555695

Karpouzis, K., Pantazatos, D., Taouki, J., & Meli, K. (2024, May). Tailoring education with GenAI: a new horizon in lesson planning. In 2024 IEEE Global Engineering Education Conference (EDUCON) (pp. 1-10). IEEE.

Kasımi, Y., & Fidan, Ş. (2023). An investigation into artificial intelligence (AI) in the English as a foreign language (EFL) context. *International Journal of Educational Spectrum, 5*(2), 269–280. https://doi.org/10.54875/ijes.1344370

Kaya, M. H. (2024). A professional training to make English language instructors AI-ready. *ELT Journal, 78*(4), 466-477.

Keegan, S. (2019). Busuu language app: Full review and tips for using. *The Mimic Method*. https://www.mimicmethod.com/busuu-language-app-review/

Kılınç, H. K., & Keçecioğlu, Ö. F. (2024). Generative Artificial intelligence: a historical and future perspective. Academic Platform Journal of Engineering and Smart Systems, 12(2), 47-58.

Kim, J., Park, S., & Lee, H. (2020). An experimental study on the effectiveness of AI-driven feedback in language learning. *Language Learning & Technology, 24*(1), 120–136.

Kim, N. J., & Kim, M. K. (2022). Teacher's Perceptions of Using an Artificial Intelligence-Based Educational Tool for Scientific Writing. Frontiers in Education, 7. 1-13

Kristiawan, D., Bashar, K., & Pradana, D. A. (2024). Artificial intelligence in English language learning: A systematic review of AI tools, applications, and pedagogical outcomes. *The Art of Teaching English as a Foreign Language (TATEFL), 5*(2), 207–218.

Kurilovas, E., Zilinskiene, I., & Dagiene, V. (2015). Recommending suitable learning paths according to learners' preferences: Experimental research results. *Computers in Human Behavior, 51*, 945–951.

Kong, S.-C., Cheung, W. M.-Y., & Tsang, O. (2023). Evaluating an artificial intelligence literacy programme for empowering and developing concepts, literacy and ethical awareness in senior secondary students. Education and Information Technologies, 28, 4703-4724. doi: 10.1007/s10639-022-11408-7

Langreo, L. (2023, September 20). What AI Training Do Teachers Need Most? Here's What They Say. Education Week. https://www.edweek.org/technology/what-ai-training-do-teachers-need-most-heres-what-they-say/2023/09

Laupichler, M. C., Aster, A., Schirch, J., & Raupach, T. (2022). Artificial intelligence literacy in higher and adult education: A scoping literature review. *Computers and Education: Artificial Intelligence, 3*, 100101.

Lee, J., & Lee, S. (2021). Exploring the role of adaptive learning systems in AI-mediated language education. *Computer Assisted Language Learning, 34*(5), 524–538.

Li, M., & Su, Y. (2020). Evaluation of online teaching quality of basic education based on artificial intelligence. *International Journal of Emerging Technologies in Learning (iJET), 15*(16), 147–161.

Liakina, N., & Liakin, D. (2023). Speech technologies and pronunciation training: What is the potential for efficient corrective feedback. In U. K. Alves & J. I. A. Albuquerque (Eds.) *Second language pronunciation: Different approaches to teaching and training* (pp. 287–312).

Lin, C. C., Huang, A. Y. Q., & Lu, O. H. T. (2023). Artificial intelligence in intelligent tutoring systems toward sustainable education: A systematic review. Smart Learning Environments, 10, 41. https://doi.org/10.1186/s40561-023-00260-y

Long, D., Blunt, T., & Magerko, B. (2021). Co-designing AI literacy exhibits for informal learning spaces. *Proceedings of the ACM on Human-Computer Interaction, 5*(CSCW2), 1–35.

Long, D., & Magerko, B. (2020, April). What is AI literacy? Competencies and design considerations. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1–16).

Luckin, R., & Cukurova, M. (2019). Designing educational technologies in the age of AI: A learning sciences-driven approach. *British Journal of Educational Technology, 50*(6), 2824–2838.

Mananay, J. A. (2024). Integrating artificial intelligence (AI) in language teaching: Effectiveness, challenges, and strategies. *International Journal of Learning, Teaching and Educational Research, 23*(9), 361–382.

Marrahí-Gómez, V., & Belda-Medina, J. (2022). The application of augmented reality (AR) to language learning and its impact on student motivation. *International*

Journal of Linguistics Studies, 2(2), 07–14. https://doi.org/10.32996/ijls.2022.2.2.2

Marzuki, Widiati, U., Rusdin, D., Darwin, & Indrawati, I. (2023). The impact of AI writing tools on the content and organization of students' writing: EFL teachers' perspective. *Cogent Education, 10*(2), 2236469.

Mehlhorn, K., Pötzl, C., Lehner, M., & Pfeiffer, V. (2020). Language learning in the digital age: A systematic literature review of technology in the classroom. *Computers & Education, 157*, 103956.

Mehranirad, M. (2025). Exploring the Impact of an AI-oriented Teacher Education Program on EFL Teachers' Professional Development. *Technology Assisted Language Education*, *3*(1), 1-23.

Minsky, M. (1968). *Semantic Information Processing.* MIT Press.

Mohammad Ali, A. (2023). An Intervention Study on the Use of Artificial Intelligence in the ESL Classroom: English Teacher Perspectives on the Effectiveness of ChatGPT for Personalized Language Learning. (Dissertation).

Moursund, D. G. (2006). *Brief introduction to educational implications of Artificial Intelligence.*D. Moursund. https://hdl.handle.net/1794/3114

Naz, N., Gulab, F., & Aslam, M. (2022). Development of qualitative semi-structured interview guide for case study research. Competitive Social Science Research Journal, 3(2), 42-52.

Ng, D. T. K., Leung, J. K. L., Chu, S. K. W., & Qiao, M. S. (2021). Conceptualizing AI literacy: An exploratory review. *Computers and Education: Artificial Intelligence, 2*, 100041.

Nguyen, H. A. (2024). Harnessing AI-based tools for enhancing English speaking proficiency: Impacts, challenges, and long-term engagement. *International Journal of AI in Language Education, 1*(2), 18-29.

Ningsih, F. (2023). Classtime.com as an AI-based testing platform: Analysing ESP students' performances and feedback. *Journal of Languages and Language Teaching, 11*(3), 390–404.

Özer-Altınkaya, Z., & Yetkin, R. (2025). Exploring pre-service English language teachers' readiness for AI-integrated language instruction. *Pedagogies: An International Journal*, 1-17. https://doi.org/10.1080/1554480X.2025.2451299

Aguilar-Cruz, P. J., & Salas-Pilco, S. Z. (2025). Teachers' perceptions of artificial intelligence in Colombia: AI technological access, AI teacher professional development and AI ethical awareness. Technology, Pedagogy and Education, 34(2), 219–238. https://doi.org/10.1080/1475939X.2025.2451865

Park, S., & Lee, H. (2021). Exploring AI-mediated language learning practices in diverse educational contexts. *Language Teaching Research, 25*(1), 29–47.

Patton, M. Q. (2002). Qualitative research & evaluation methods. Sage.

Petrescu, S. H., Lazar, A., Cioban, C., & Doroftei, I. (2017). Semi-structured interview. In O.R. Ilovan & I. Doroftei (Eds.), Qualitative Research in Regional Geography: A Methodological Approach, 37-50.

Poushter, J., & Masci, D. (2021). New apps and platforms are increasingly popular for learning language. *Pew Research Center*. https://www.pewresearch.org/fact-tank/2021/06/25/new-apps-and-platforms-are-increasingly-popular-for-learning-language/

Prasetya, Y. Y., Reba, Y. A., Muttaqin, M. Z., Susongko, P., Hartinah, S., Sudibyo, H., & Mataputun, Y. (2024). Teachers' Perception of Artificial Intelligence Integration in Learning: A Cross-Sectional Online Questionnaire Survey. In 2024 10th International Conference on Education and Technology (ICET) (pp. 179-185). IEEE.

Reimers, N., & Gurevych, I. (2020). Neural machine translation: A survey. *IEEE Transactions on Pattern Analysis and Machine Intelligence, 42*(9), 2262–2286.

Russell, S. J., & Norvig, P. (2010). *Artificial intelligence: A modern approach* (3rd ed.). Prentice Hall.

Rütti-Joy, O., Winder, G., & Biedermann, H. (2024). Teacher Educator Professionalism in the Age of AI: Navigating the New Landscape of Quality Education. In S. Kadry (Eds.), Artificial Intelligence and Education - Shaping the Future of Learning. IntechOpen.

https://doi.org/10.5772/intechopen.1005030

Sari, E., & Han, T. (2024). The impact of automated writing evaluation on English as a foreign language learners' writing self-efficacy, self-regulation, anxiety, and performance. Journal of Computer Assisted Learning, 40(5), 2065–2080. https://doi.org/10.1111/jcal.13004

Selwyn, N. (2019). *Should robots replace teachers?: AI and the future of education*. John Wiley & Sons.

Sırakaya, M. and Çakmak, E. (2018). Effects of augmented reality on student achievement and self-efficacy in vocational education and training. *International Journal for Research in Vocational Education and Training, 5*(1), 1-18. https://doi.org/10.13152/ijrvet.5.1.1

Sheikh, H., Prins, C., Schrijvers, E. (2023). *Artificial Intelligence: Definition and*

Background. In: Mission AI. Research for Policy. Springer. https://doi.org/10.1007/978-3-031-21448-6_2

Sperling, K., Stenberg, C. J., McGrath, C., Åkerfeldt, A., Heintz, F., & Stenliden, L. (2024). In search of artificial intelligence (AI) literacy in teacher education: A scoping review. *Computers and Education Open, 6, 100169* https://doi.org/10.1016/j.caeo.2024.100169

Su, J., Ng, D. T. K., & Chu, S. K. W. (2023). Artificial intelligence (AI) literacy in early childhood education: The challenges and opportunities. *Computers and Education: Artificial Intelligence, 4*, 100124.

Su, Y., Lin, Y., & Lai, C. (2023). Collaborating with ChatGPT in argumentative writing classrooms. *Assessing Writing*, *57*, 100752.

Sumakul, D. T. Y., Hamied, F. A., & Sukyadi, D. (2022). Artificial Intelligence in EFL Classrooms: Friend or Foe? *LEARN Journal: Language Education and Acquisition Research Network, 15*(1), 232-256.

Sun, Z., Anbarasan, M., & Praveen Kumar, D. J. C. I. (2021). Design of online intelligent English teaching platform based on artificial intelligence techniques. *Computational Intelligence, 37*(3), 1166–1180.

Tajik, A. (2025). *Exploring the role of AI-driven dynamic writing platforms in improving EFL learners' writing skills and fostering their motivation* (Version 1) [Preprint]. Research Square. https://doi.org/10.21203/rs.3.rs-5788599/v1

Tan, X., Cheng, G., & Ling, M. H. (2025). Artificial intelligence in teaching and teacher professional development: A systematic review. *Computers and Education: Artificial Intelligence*, *8*, 100355.

Taşçı, S., & Tunaz, M. (2024). Opportunities and challenges in AI-assisted language teaching: Perceptions of pre-service EFL teachers. *Araştırma ve Deneyim Dergisi*, *9*(2), 74–83. https://doi.org/10.47214/adeder.1575897

Terry, G., Hayfield, N., Clarke, V., & Braun, V. (2017). Thematic analysis. In C. Willig & W. S. Rogers (Eds.), The SAGE handbook of qualitative research in psychology (pp. 17–36). SAGE Publications Ltd. https://doi.org/10.4135/9781526405555.n2

von Ahn, L. (2013). Duolingo: Learn a language for free while helping to translate the web. *Communications of the ACM*, *56*(11), 1–2.

Wang, F., & Wang, S. (2012). A comparative study on the influence of automated evaluation system and teacher grading on students' English writing. *Procedia Engineering, 29*, 993-997.

Wang, L., & Wen, H. (2019). The effectiveness of AI-driven language learning platforms: A meta-analysis. *Educational Technology & Society, 22*(4), 159–172.

Wang, Y. J., Shang, H. F., & Briody, P. (2012). Exploring the impact of using automated writing evaluation in English as a foreign language university students' writing. Computer Assisted Language Learning, 26(3), 234–257. doi:10.1080/09588221.2012.655300

Wang, Y., Zhang, T., Yao, L., & Seedhouse, P. (2025). A scoping review of empirical studies on generative artificial intelligence in language education. *Innovation in Language Learning and Teaching*, 1-28.

Wei, L. (2023). Artificial intelligence in language instruction: Impact on English learning achievement, L2 motivation, and self-regulated learning. *Frontiers in Psychology, 14*, 1261955.

Weng, Z., & Fu, Y. (2025). Generative AI in language education: Bridging divide and fostering inclusivity. International Journal of Technology in Education, 8(2), 395-420.

Woo, D. J., Susanto, H., & Guo, K. (2023). EFL Students' Attitudes and Contradictions in a Machine-in-the-loop Activity System. *ArXiv*. https://doi.org/10.48550/arXiv.2307.13699

Yang, H., Kim, H., Lee, J. H., & Shin, D. (2022). Implementation of an AI chatbot as an English conversation partner in EFL speaking classes. *ReCALL, 34*(3), 327–343. doi:10.1017/S0958344022000039

Yin, R. K. (2018). Case Study Research and Applications: Designs and Methods (6th ed.). SAGE.

Yu, H., & Guo, Y. (2023). Generative artificial intelligence empowers educational reform: Current status, issues, and prospects. *Frontiers in Education*, *8*, 1183162. https://doi.org/10.3389/feduc.2023.1183162

Zaugg, T. (2024). Embracing innovation in education: Investigating the use and impact of artificial intelligence assistants among preservice teachers. [Unpublished doctoral dissertation] University of Central Florida

Zawacki-Richter, O., Marín, V., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education – Where are the educators? *International Journal of Educational Technology in Higher Education, 16*(1), 1–27.

Zhang, H., Lee, I., Ali, S., DiPaola, D., Cheng, Y., & Breazeal, C. (2022). Integrating ethics and career futures with technical learning to promote AI literacy for middle school students: An exploratory study. *International Journal of Artificial Intelligence in Education*. Advance online publication. https://doi.org/10.1007/s40593-022-00293-3

Zhang, R., & Zou, D. (2020). Types, purposes, and effectiveness of state-of-the-art technologies for second and foreign language learning. *Computer Assisted Language Learning, 35*, 696–742.

Zhao, L., Wu, X., & Luo, H. (2022). Developing AI Literacy for Primary and Middle School Teachers in China: Based on a Structural Equation Modeling Analysis. *Sustainability, 14*(21), 14549. https://doi.org/10.3390/su142114549

Zhou, C., & Hou, F. (2025). How Do EFL Teachers Utilize AI Tools in Their Language Teaching?. Theory & Practice in Language Studies, 15(2), 403-413. https://doi.org/10.17507/tpls.1502.10

Zulianti, H., Hastuti, H., Nurchurifiani, E., Hastomo, T., Maximilian, A., & Ajeng, G. D. (2025). Enhancing novice EFL teachers' competency in AI-powered tools through a TPACK-based professional development program. *World Journal of English Language, 15*(3), 117–131. https://doi.org/10.5430/wjel.v15n3p117

APPENDICES

APPENDIX A

Demographic Information Questionnaire

(Adapted from Burhan, 2020)

Dear Participants,

You are kindly invited to answer a questionnaire designed to gather information about your demographic profiles. Your responses will be kept confidential and will only be released in this study under a pseudonym. Thank you very much for your cooperation and contribution.

Researcher
Dilara Nur Ergenç

TED University

1) Name:

_____

2) Gender: a) Female b) Male

3) Age: _____

4) Country of Origin:

_____

5) Current Degree and Program:

_____

6) At what age did you start learning English? If you started learning at school, please mention the grade in which you first received English instruction

_____

7) Did you attend any English-medium schools during your primary and secondary education? If so, where, for how long, and for what purpose?

_____

8) University and department where you received your undergraduate degree:

_____

9) Year of graduation:

_____

10) Years of work experience:

a) Less than a year

b) 1-2 years;

c) 3-5 years;

d) 5-10 years;

e) More than 10 years

11) Please write down the name of the companies or institutions you have worked for since graduation starting from past to present.

_____

12) Have you received any other Master's or Ph.D. degrees?

a) Yes b) No

If yes, please write the name of the University and the program you were enrolled in.

_____

13) When and for what purposes did you start online tutoring?

_____

14) How long have you taught English (or any other classes) online?

a) 1-2 years; b) 3-5 years; c) 5-10 years; d) more than 10 years

15) Have you taken any courses or training on the use and integration of technology into your classes?

a) Yes b) No

If you say yes, please write down the name of the class/course/training and briefly explain why you took it.

_____

APPENDIX B

Semi-structured Interview Questions

These are potential interview questions. There might be more questions added according to the focal participants' AI integration experiences. The number of interview questions will not exceed 10.

1. How much did you know about using AI tools in language teaching? Have you used or incorporated AI tools into your lessons before? If so, how did you integrate them?
2. Did you find the informative session beneficial? How?
3. How did you decide to choose the appropriate AI tools to use in your lessons?
4. What were your main reasons for choosing this [the name of the tool] AI tool?
5. How did you adapt the tool use in your own way? For example, the tool I taught is mainly used in vocabulary teaching, but you used it to teach writing? What was the motivation for this change?
6. Did you experience any struggles while incorporating AI tools into your lessons?
7. Are you planning to reuse some of these tools in the future? If so, why? If not, why not?
8. Do you think the tool you used contributed to your lesson or created a change in your students' learning processes?
9. How were your students' reactions to your use of AI tools if you used some of the tools presented in the informative session?
10. If you were to make a change in the future of the AI tools, what would you change in them?

APPENDIX C

Course Video Recording Dates and Durations

Num#	Date	Participant	Course Duration	AI Use Duration
1	16.12.2024	Bahar	26 minutes 34 seconds	26 minutes
2	18.12.1024	Bahar	26 minutes 5 seconds	25 minutes
3	20.12.2024	Bahar	31 minutes 31 seconds	
4	22.12.2024	Bahar	31 minutes 21 seconds	21 minutes
1	04.12.2024	Hale	40 minutes	24 minutes
2	04.12.2024	Hale	40 minutes	-
3	18.12.2024	Hale	40 minutes	10 minutes
4	07.01.2025	Hale	40 minutes	6 minutes
1	24.11.2024	Şeyma	34 minutes 33 seconds	15 minutes
2	03.12.2024	Şeyma	32 minutes 11 seconds	13 minutes
3	22.12.2024	Şeyma	31 minutes 35 seconds	27 minutes
4	28.12.2024	Şeyma	31 minutes 15 seconds	27 minutes
1	19.11.2024	Canan	1 hour 1 minute	-
2	30.11.2024	Canan	1 hour 15 minutes	1 hour 15 minutes
3	06.12.2024	Canan	1 hour	46 minutes
Total Duration			9 hours	5 hours 26 minutes

TED ÜNİVERSİTESİ
İNSAN ARAŞTIRMALARI ETİK KURULU
ETİK KURUL KARARLARI
Sayı: 2024-39 Tarih: 01/11/2024

Toplantı Sayısı: 2024-39
Toplantı **Tarihi** ve Saati: 01 Kasım 2024 Saat: 11.00
Toplantı Yeri: Zoom üzerinden yapılmıştır.

Katılanlar: Dr. Öğr. Üyesi Kıymet Duygu ERDAŞ — Başkan
Dr. Öğr. Üyesi Duygu Onay Çoker - Raporıör
Dr. öğr. Üyesi Burcu ALTIN - Üye
Dr. öğr. Üyesi Çağla Öneren ŞENDİL - Üye
Dr. Öğr. Üyesi Şule AKDOĞAN KILINÇ- Üye
Doç. Dr. Beril Türkoğlu DEMİREL — Üye
Doç Dr Elçın Emre AKDOĞAN — Üye
Öğr. Gör. Sırma KARAKAYA- Üye

Raportör: Dr. Öğr. Üyesi Duygu Onay Çoker

GÖRÜŞME MADDELERİ

G.08 : TED Üniversitesi, Yabancı Diller Eğitimi Bölümü İngiliz Dili Eğitimi Anabilim Dalı Dr. Öğr. Üyesi Elin“ Burhan Horasanlı nın “Çevrimıçı Yabancı Dil Dersi Oturumlarında Yapay Zeka Araçlarının Kullanımı ve Etkileri /The Use and Effects ofAI Tools in Online EFL Tutoring Sessions” başlıklı çalışrnasının araştırma etiğine uygunluğu görüşüldü.

Karar **2024-39/08** : TED Üniversitesi, Yabancı Diller Eğitimi Bölümü İngiliz Dili Eğitimi Anabilim Dalı Dr. Oğr. Üyesi Elin‘ Burhan Horasanlı nın “Çevrimiçi Yabancı Dil Dersi Oturumlarında Yapay Zeka Araçlarının Kullanımı ve Etkileri /The Use and Effects ofAI Tools in Online EFL Tutoring Sessıons” başlıklı çalışmasına,

ONAY KARARI VERİLDİ.

Toplantı saat 15.00 sona erdi.