

EÖTVÖS LORÁND TUDOMÁNYEGYETEM

Bölcsészettudományi Kar

OTDK dolgozat

Enhancing English language teaching with artificial intelligence

A mesterséges intelligencia használata az angol nyelv tanításában

Témavezető:

Francis Julian Prescott-Pickup
egyetemi adjunktus

Készítette:

Ősze András
angol nyelv és kultúra tanára –
történelemtanár és állampolgári
ismeretek tanára
osztatlan tanári mesterszak

2024

NYILATKOZAT

Kijelentem, hogy a pályamunka elkészítése során, a kutatási téma kapcsolódása miatt, mesterséges intelligencia alkalmazást/programot (pl. képalkotó, szövegalkotó) használtam.

Jelen nyilatkozat aláírásával tudomásul veszem, hogy amennyiben bizonyítható, hogy a dolgozatot nem magam készítettem, a dolgozattal kapcsolatban szerzői jogi jogsértés ténye merül fel, a Szekció megtagadja a dolgozat befogadását.

Dátum: 2024. 06. 12.

Ősze András s.k.

Aláírás

Abstract

This paper aims to investigate the (potential) use of artificial intelligence (AI) in English language teaching (ELT) in the Hungarian context. After an overview of relevant literature, the work discusses Hungarian English as a foreign language (EFL) teachers' attitude towards AI. Furthermore, the writing offers insights into leveraging AI to enhance ELT while also highlighting potential threats and dangers AI may pose on language teaching. The research involves a questionnaire on AI and semi-structured interviews with two teachers and an AI researcher. The study uses mix-methods (both quantitative and qualitative) for data collection. In addition, a small scale pedagogical action research was carried out in a secondary school in Budapest in which materials that incorporate AI in ELT were tested. The reader will find detailed description of activities, reflections and lesson/activity plans (see Appendix 4-6). The research shows that Hungarian EFL teachers' attitude toward AI programs are predominantly positive, although many respondents also raised considerable concerns. Another key finding is that using AI in ELT can foster creativity, boost critical thinking skills and develop digital competence. Due to the novelty of this issue, the study cannot be utterly comprehensive. Nevertheless, it can be concluded that AI has the potential to make a significant positive impact on ELT.

Table of contents

1. Introduction	1
2. The review of literature.....	2
2.1 English language teaching and digital technology	3
2.2 Computer assisted language learning.....	5
2.3 Digital competence	7
2.4 AI terminology	8
2.5 Enhancing language learning with AI	10
2.6 Concerns and threats	13
3. Research methodology.....	16
3.1 Aims and research questions	17
3.2 Participants	17
3.3 Research methods.....	19
3.4 Research instruments and data collection.....	19
3.5 Methods of data analysis	21
4. Results and discussion	22
4.1 Hungarian EFL teachers' attitude towards using AI.....	22
4.2 Enhancing language development with AI.....	26
4.3 The potential dangers and threats of AI on ELT	30
5. Pedagogical implications	31
5.1 AI Gallery walk.....	31
5.2 Reflections: AI Gallery walk.....	33
5.3 Me, myself and AI	34
5.4 Reflections: Me, myself and AI	35
5.5 Creative writing with AI.....	36
5.6 Reflections: Creative writing with AI.....	37
6. Conclusions and limitations	38
References.....	42
Appendices	49

1. Introduction

When I first encountered artificial intelligence (AI), I could hardly dispose of my initial scepticism; I had a firm conviction that a machine cannot be more intelligent than a human being. Little did I know that I was wrong. The unbearable truth is that AI has reached a point where it outperforms humans in various fields ranging from data analysis for medical diagnosis or digital marketing to the production of texts and images within certain styles and genres. This realisation evoked numberless questions in me that I had yet to find answers for. My initial motivation for the research stemmed from the recognition that AI is something novel and potentially subversive. Therefore, I became extremely curious and decided to embark on exploring the impact it can have on my beloved profession, English language teaching (ELT).

In my OTDK paper, I am going to put AI under close scrutiny and provide possible answers and suggestions on how to use AI in ELT context. Due to the novelty of the topic, my research will hopefully contribute to the understanding of how AI programs can be used in language teaching and learning. After briefly introducing relevant literature on AI in ELT research, the main body of the text aims to illustrate Hungarian teachers' attitude towards using AI technologies by analysing a questionnaire conducted among primary, secondary and higher education teachers. Furthermore, I will report the analysis of interviews I have done with an AI researcher and two English teachers to gain insight into the use of AI in the Hungarian education context. Throughout my work I will highlight some viable ways to boost language learning using AI in the classroom, while also pinpointing the possible threats and debated issues concerning its use. Finally, I am going to present some activities incorporating AI that I assembled and tested during my teaching practice as part of a classroom-based action research. Hopefully, at the end of my work, the reader will not only have a better understanding of this topic, but also the fundamental knowledge to start using AI tools for teaching purposes.

The scientific examination of this topic could not be more important nowadays as the presence of AI in various research fields is escalating at breakneck speed. By addressing the

elephant in the room, I would also like to touch upon the human side of AI and emphasise that the impact of technological improvements on our lives to some extent depends on how we shape and utilise them. Therefore, I find it very important to articulate that human connections we experience, throughout the journey of acquiring a foreign language for example, are far the most valuable components of learning.

2. The review of literature

Although AI has become increasingly popular in the last couple of years, only a moderate amount of research aims to scrutinize the impact of AI on language teaching and learning. In this chapter, I would like to give a brief overview of literature concerning digital technology and learning in general, computer-assisted language learning (CALL), and digital competence, which could be relevant to address ELT and AI. Furthermore, I would like to touch upon important concepts and key terminology that need to be understood, as well as reporting research strictly focusing on AI and English language pedagogy. Many research papers deal with AI from a general pedagogical perspective; however, there seems to be little amount of subject specific research done in this field. By introducing some pieces of research from the above mentioned fields of literature, I would like to highlight the complexity and the novelty of this topic which, of course, put young scholars like myself to the test when embarking on research. Thus, this overview cannot aim to be utterly comprehensive.

2.1 English language teaching and digital technology

At the beginning of the 21st century, technological development became extremely fast paced, and technology became embedded in our everyday practices. Very soon, the use of digital devices appeared in schools, thus they became easily available for a broad mass. In this section, I am going to highlight some of the key factors that should be taken into account when integrating technology in English lessons.

According to Ahmadi (2018) teachers can facilitate the language learning process by utilizing computer technology. First of all, the Internet provides unlimited resources to language learners (Bull & Ma, 2001) from authentic material to detailed explanation of grammar, for example. Secondly, using computer-based tasks can improve cooperative skills and lead to cooperative learning (Harmer, 2007). Also, these task can motivate learners more than regular worksheets and drilling. Furthermore, the use of information technology can support learners' autonomy (Simões & Faustino, 2019).

Moreover, digital technology is a useful tool for teachers. As well as enjoying access to an endless amount of online material, according to Becker (2000), teachers can experience the sense of creative freedom when using technology for teaching purposes. Also, teachers can gather online in groups and chatrooms on social media and ask for advice, share ideas or discuss issues. As technology has begun to flourish, English teaching methods have changed considerably over the past decades in order to make learning more effective and meet students' educational needs (Ahmadi, 2018; Pourhossein Gilakjani, 2017; Solanki & Shyamleel, 2012; Susikaran, 2013).

Nowadays, using technology has become quite normal for learners. There is a clear demand for developing digital competence (see Section 2.3) among the walls of school as it is part of the key competences of the Hungarian national curriculum (Nemzeti Alaptanterv, 2020). All in all, we can say that technology enhances teaching and learning; however, it can pose

challenges as well. In the following, I would like to mention some of the difficulties teachers and learners can face when incorporating technology.

First and foremost, solely taking information and communication technology (ICT) gadgets into the classroom does not necessarily increase student engagement and result in more effective learning (Schwarz & Zhu, 2015). Strom (2021) points out that teachers should identify the exact technological tool to use with specific regard to the objectives of the lesson and the desired learning outcomes. Teachers have to mindfully consider what they want achieve, what skills they want to develop before embracing the use of technology. Only after considering this, can they choose the appropriate application of program to augment learning. To conclude, the presence of technology is not the same as the correct integration of it.

Therefore, teachers must be aware of a wide array of ICT programs. Keeping up with newly emerged applications can be extremely challenging for teachers because of overwhelming duties at school. They not only need to acquire some technological skills before they are able to teach their students, but they also ought to develop a certain critical approach and be able to analyse the pedagogical impact of ICT tools on learning (Strom, 2021). Of course this requires professional support and plenty of free time, which, unfortunately, teachers usually lack. Strom (2021) claims that *“in order for educators to alleviate this stress and anxiety, the school districts need to determine which technologies are necessary for student learning and provide them with the professional development courses needed to master it.”* (p. 11). In conclusion, it would be crucial to invest more time and energy in maintaining the continuous professional development of teachers so they could keep up with technology advancements.

Countless other issues can occur with the overuse of technology. Spending too much time on electronic gadgets can lead to severe physical health problems for children such as damaged eyesight, sleeping problems, and poor posture; it can also play havoc with one's mental health by lowering self-esteem and causing stress, anger, anxiety, tension and/or depression

(Mahmoodi et al. 2018; Strom, 2021). Moreover, as most technological devices are connected to the internet these days, learners (as well as other users) can easily be exposed to unhealthy content like viruses, fraud, bias, fake news and so on.

On balance, we could not say the pros outweigh the cons in this case, but we should not turn a blind eye to the above mentioned concerns. In my opinion, teachers should address these issues, even in the English classroom, and teach students how to cope with technology and remain healthy human beings at the same time. Nevertheless, there is clear evidence that our society is extremely dependant on digital technology, thus students need to acquire basic knowledge and skills to utilize it in order to function in today's world (Strom 2021).

2.2 Computer assisted language learning

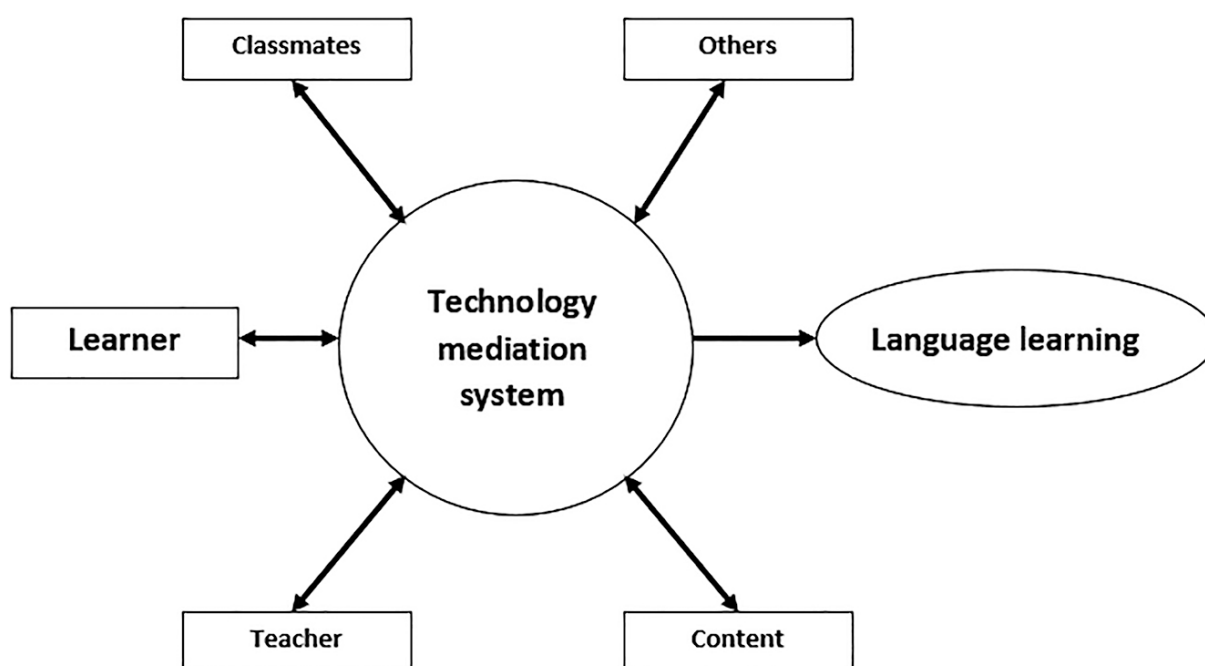
The term computer assisted language learning (CALL) was coined in the early 1980s (Jarvis, 2013) by researchers and practitioners of Teaching English to Speakers of Other Languages (TESOL) whose fundamental aim was to combine language pedagogy and technology. Consequently, a new subdiscipline arose, which Michael Levy (one of the prominent figures of CALL research) defined as “*the search for and study of applications of the computer in language teaching and learning*” (1997, p. 3). Many practical ideas emerged from CALL that deal with exploiting language learning programs and making use of technology in the language classroom. Some scholars even participated in developing language learning software.

In the last four decades, other terms and concepts appeared that slightly altered the original acronym. There was web-enhanced language learning (WELL) and mobile assisted language learning (MALL), for instance. According to a recent study by Hubbard (2023) it would be more appropriate to use “*technology mediation system*” to refer to any kind of device that transmits and receives information. Basically, learners interact with the co-participants

(teacher, classmates etc.) and content from authentic videos and text on the internet or through applications (see *Figure 1.*), which creates a conscious effort towards language learning (Hubbard, 2023). As it was already discussed, the efficiency of learning depends on numerous factors though.

Figure 1.

Technology-mediated language learning model.



Note. This is a revised figure of computer-assisted language learning theory from Hubbard, (2023, p. 241).

In my teaching experience, I have found that we can only consider CALL or technology mediation systems a *blended approach* towards language learning. In ELT blended learning is the term most commonly used to refer to any combination of face-to-face teaching with computer technology (online and offline activities/materials) either in or out of school (Hockly, 2023). Basically, this is how societies live now, among a mix of face-to-face interactions and digital duties. Many AI-driven applications and software can fall into the category of CALL and have the potential to be integrated in order to support and complement students' learning.

However, on balance, digital technology cannot completely substitute the presence of the teacher in the learning process

2.3 Digital competence

Digital competence is one of the key competences for lifelong learning. According to The Council of the European Union (2018), the term can be defined as:

the confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society. It includes information and data literacy, communication and collaboration, media literacy, digital content creation (including programming), safety (including digital well-being and competences related to cybersecurity), intellectual property related questions, problem solving and critical thinking. (p. 3).

Digital competence is a compound of knowledge, skills and attitudes. According to Ferrari (2012) a digitally competent individual can understand media, search and critically evaluate information and communicate through a variety of different means. I strongly believe that AI applications can serve as beneficial tools for developing digital competences such as data literacy and digital content creation. Furthermore, reflecting on current issues regarding AI might strengthen critical thinking, problem solving and communication skills.

Strong digital competence in teachers is a key component for students developing the skills to avail of new technologies. The most effective way to develop digital competence is to provide students with hands-on experience when integrating digital technologies in learning (Howard et al., 2021).

Howard et al. (2021) explain a five-step strategy to effectively enhance digital competence and integrate the use of technology. In fact, I adopted and slightly altered their method that I would like to apply to the integration of AI in the classroom.

The first step includes teachers as role models (Strategy 1: Role Model). Role models provide examples on how to use AI in language learning and are an important motivational factor for students. Also, a teacher should be able to reflect on the potential that AI embodies with special regard to its commonly known concerns (Strategy 2: Reflection). As AI is predominantly new to teachers and learners, providing learning opportunities is a key step (Strategy 3: Learning by doing). This can happen by demonstrating what AI is capable of doing or designing task in which student utilize AI tools, and leading follow-up discussion session in class on the AI phenomenon. The main purpose is to gain hands-on experience and elevate the regular usage of the program. Given the relative unfamiliarity of AI tools, teachers and students often lack confidence, so working in groups (Strategy 4: Collaboration) can mitigate feelings of insecurity (Koh & Chai, 2016). Finally, feedback needs to be formative and progress oriented (Strategy 5: Feedback). It could be provided by the teacher or peers through discussion and observation, for instance. Overall, to successfully implement AI technology, these are factors of utmost importance that should be taken into consideration. With the careful consideration of this step-by-step guide, teachers can stand a good chance of integrating AI technologies into their teaching effectively and effortlessly.

2.4 AI terminology

In the next two sections (Section 2.5; 2.6), I strive to be more insightful about AI. On the one hand, I am going to discuss how it might reap dividends and contribute to enhanced English language learning, but on the other hand, I would like to shed some light on the great

deal of uncertainty and fear revolving around AI. In order to precisely delineate the topic, I wish to define some AI related terminologies in this passage.

The term *artificial intelligence* is an umbrella term covering many different technologies. Artificial intelligence (AI) can be defined as a “*computer-based simulation of human intelligence*” (Ghafar et al., 2023) which means AI can perform tasks (learn from experience, recognise patterns, generate texts and pictures etc.) that we normally associate with humans doing. In the scientific discussion, the term AI has been present since the 1950s when Turing (1950, p. 3) proposed the famous question: “*can machines think?*” in one of his intriguing works on computing machinery and intelligence. However, AI only gained wide public attention in the last couple of years. The topic has accelerated at an astonishing speed; indeed, it was reported that the abbreviation of artificial intelligence (AI) was named Word of the Year for 2023. The term “*has quickly become ubiquitous and embedded in our lives*” (2023, p. 1) – said Collins Dictionary managing director Alex Beecroft.

While humans learn from experience, computers can basically do the same. *Machine learning* is the technique that improves system performance by deriving information from data (Zhuo, 2021). This allows application to enhance their performance overtime. Before, this set of data was provided in the form of codes barely comprehensible for non-professionals, whereas now, AI is capable of *Natural Language Processing* (NLP), which allows AI programs to understand and interpret written or spoken language (Eisenstein, 2019). NLP is used in virtual assistants like *Siri*, and chatbots like *ChatGPT*.

Large language models (LLMs) are a type of AI that are trained on a large amount of textual data, use deep learning, and can generate new text that is similar in style to the original data (Shen et al., 2023). They are used in applications such as language translation, text summarization, and content creation. ChatGPT is an example of a large language model.

However, the information LLMs generate might be untrue. *Hallucinations* are such errors that can occur in AI systems, when they generate content that is not correct, but sounds correct.

The type of artificial intelligence that can create text, pictures or other media by leveraging previously learned patterns and its input training data is called *Generative AI*. Some examples are chatbots like ChatGPT and text-to-image AI systems like DALL-E. In fact, the abbreviation GPT stands for Generative Pre-trained Transformer. To generate texts or pictures, for example, programs require prompts. *Prompt engineering* (also known as *prompt design*) is the process of forming and structuring a text than can be interpreted by a generative AI model (LeCun et al., 2015). It is a natural language text that can serve as a command for the AI model describing the task it should perform.

ChatGPT, which is one of the most frequently used AI chatbots, was ground-breaking because it guaranteed easy access to generative AI for non-experts as well. No sooner had it gained wide publicity than disputes began on the salutary, but at the same time disastrous effects it can exert. In the next section, I am going to confine myself to education, specifically English language teaching, and display what we know so far about AI. I am not only going to argue for judicious use of AI tools in the classroom, but also touch upon fundamental issues of this exciting educational hot potato.

2.5 Enhancing language learning with AI

A wide array of research claims that English language teaching (ELT) and learning can be enhanced by AI (Chen et al., 2023; Ghafar et al., 2023; Joksimovic et al., 2023; Pack, 2023; Pikhart 2020; Steele 2023).

First, Ghafar et al. (2023) highlights that AI systems can help with planning and organizing lessons and choosing suitable content. Thus, AI can function as a teachers' assistant for delegating tasks that involve creation. Furthermore, Chomphooyod et al. (2023) propose

that AI systems are capable of generating English grammar multiple-choice questions (MCQs) by receiving key words and the desired grammar topic from the teacher. When provided with adequate prompts, generative AI programs easily carry out mundane teacher duties like generating evaluation rubrics or writing course descriptions for syllabi. Moreover, a stunning piece of research by Elkins et al., (2024) showed that transformer-based large language models (LLMs) can be beneficial in educational question generation. In fact, when utilizing a controlled prompting strategy, AI (ChatGPT 3.5) was able to generate questions from a given context that correspond with the levels of Bloom's taxonomy (Figure 2) which teachers found useful for creating a quiz (Elkins et al., 2024). Compared to hand-written quizzes, there was no notable loss of quality, relevance and answerability (Elkins et al., 2024). Nevertheless, researchers warn that AI generated products should not be taken at face value (Chomphooyod et al., 2023; Steele 2023). Materials might require modification or some sort of fine-tuning, so it is crucial for teachers to check what the assistant created. Overall, AI proves useful in reducing preparation time and enhancing teachers' productivity.

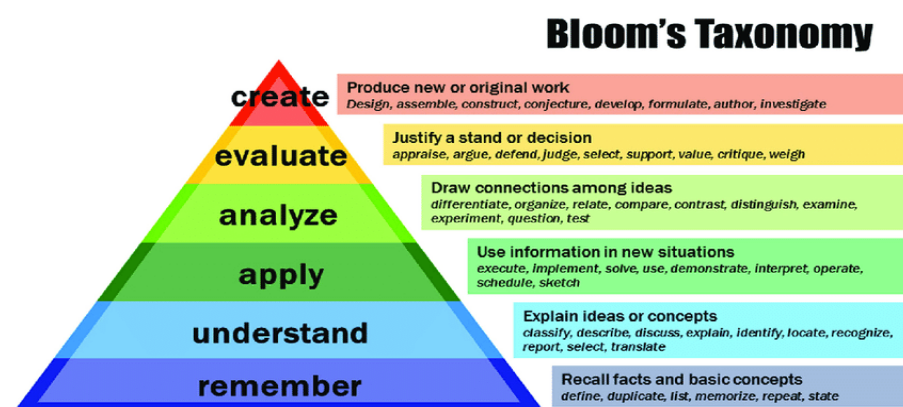
Second, researchers pointed out that AI is embedded in numerous applications that can facilitate language learning (Ghafar et al., 2023). Learning apps, for example Duolingo, NEO, Orai, Gliglish and EAP Talk use AI for various reasons: creating learning paths, analysing data for personalised learning, speech recognition or giving feedback. I do not aim to give a complete analysis of these programs in my current work. However, I would like to note that authors claim these apps are handy for various reasons: they are accessible for learners anytime and place; they can be motivating to use; they can make learning more personalised and foster autonomous learning (Ghafar et al., 2023). As the utilization of mobile apps usually happens out of the classroom, feedback can only be provided by the applications. Pack (2023) claims that *"language learners are more likely to make progress if they are reflecting on their learning experience and are accountable for their learning in some way to the teacher"*, so when both

the teacher and the learner are involved in the feedback process. All in all, language learning application are likely to be more efficacious if they are somehow supplemented by classroom-based learning (Pack, 2023).

Having read articles on how to equip students with knowledge on AI programs and make them develop high order thinking skills at the same time, we can state that language learning with AI can reach its summit when it is thoughtfully integrated in the learning (Chen, 2023; Joksimovic et al., 2023; Steele, 2023). Generative AI can do three tasks that humans usually do slowly: summarizing and interpreting texts, collecting knowledge and presenting information within a certain genre (Steele, 2023). In teaching, we can use ChatGPT not to replicate these tasks but to teach them in an up-to-date way that facilitates critical thinking and creativity. It must be emphasized that critical thinking is vital. According to Steele (2023.) students should critique ChatGPT and be tasked with fact-checking and analysing information. Based on Bloom's taxonomy (depicted in *Figure 2*), which is the hierarchical classification of different levels of thinking, the above mentioned activities elevate learning and develop complex cognitive domain (Krathwohl, 2002).

Figure 2.

Bloom's taxonomy of learning objectives.



Note. The figure illustrates the revised Bloom's taxonomy, the hierarchy of learning objectives (Mualem et al., 2002, p. 4).

As a matter of fact, the same goes for knowledge aggregation. Integrating generative AI in students' knowledge building provides opportunities to develop critical thinking and problem solving (Chen et al., 2023; Joksimovic et al., 2023). ChatGPT, for example, can offer inspiration and generate ideas for a writing assignment. This can be followed by an in-class discussion to share knowledge and deepen understanding. As a result, even more specific questions can be proposed to ChatGPT which also require verification and fact-checking. The point is to make ChatGPT one of many search tools – an accessible program to use to investigate and build a frame around an unwieldy topic (Steele, 2023). Through these exercises, we can immerse learners in the English language while engaging in higher-order thinking task. Eventually, students will be able to reflect on their relationship with AI tools and develop AI literacy as by-product of learning (Chen, 2023). As for the final product of the task, students can dive into the creation process provided with all the necessary input. Along the way, students will practice analysing, evaluating and creating, the three highest ranked cognitive skills according to Bloom's taxonomy.

To conclude, educators cannot close their eyes and pretend that AI tools do not exist (Steele, 2023). Instead, teachers should enrich their teaching repertoire and design effective teaching practices with AI to promote higher order learning, with which students can understand AI – its strengths as well as its limitations (Gašević et al., 2023).

2.6 Concerns and threats

This is not the first time educators have faced a dilemma and questioned the fundamental principles of skills taught in schools due to newly emerged technological tools that can carry out tasks much faster than the human brain. Steele (2023) demonstrates that very similar concerns arose when the hand-held calculator made incursions into the classrooms in the 1980s or when Wikipedia achieved public ubiquity. Nonetheless, while AI is undoubtedly rushing

into our lives, it is vital to explore common mis- and preconceptions of AI and also raise awareness of its possible threats to education and learning.

Generally speaking, the threat AI poses to education is threefold. First of all, its morality is being questioned in education (Holmes et al., 2021). Secondly, the usefulness of some core skills and abilities taught at school, such as reading comprehension and writing skills, are now being debated regarding their future market value. Finally, in connection with skills and abilities, the measurement of knowledge might require reconsideration.

Ethics, bias and fairness are central to discussions of AI's growing influence (Gašević et al., 2023). The acronym FATE, which stands for "*Fairness*", "*Accountability*", "*Transparency*" and "*Ethics*" conceptualises the moral concerns in AI education (Memarian & Doleck, 2023). Fairness or lack of it lies within the bias and imparity of data generative AI systems were trained on. For instance, AI might produce biased texts towards certain minority groups, thus reassuring and vocalizing oppressive ideologies due to its algorithm and decision-making (Memarian & Doleck, 2023). Furthermore, AI might generate false information or claim facts that are simply not true, but seem convincing at first glance. Although issues regarding fairness and bias have emerged, various bias mitigation strategies and fairness literacy approaches have been provided by scholars (Gorur et al., 2020; Prinsloo & Slade, 2017; Tenório et al., 2023) that primarily focus on having learners understand and discern bias, privacy issues, discrimination and social injustice.

As far as accountability is concerned, Pagallo (2017) highlights that it is unclear who should be held responsible for ensuring the safe and just use of AI; it may be either the producer of the AI system, or the supplier of the data.

AI transparency can be defined as "*the ability of the algorithm to explain itself, its inner workings*" and provide sources for information (Memarian & Doleck, 2023, p. 6). According to Memarian & Doleck (2023), international organizations suggest it would be necessary to

develop data transparency by setting ethical codes and obeying international regulations such as the General Data Protection Regulation (GDPR).

Lastly, in the context of AI and education, ethics refer to the just utilization of AI that (1) does not violate human autonomy; (2) benefits learning, and (3) mitigates risks (Memarian & Doleck, 2023). All in all, the concepts covered by the acronym FATE are fundamental when dealing with morality issues regarding AI and can serve as a basis for discussion. In fact, it would prove beneficial to familiarize learners with these key concepts prior to fostering further engagement with AI in the classroom.

With the presence of AI in education, researchers identify major changes of demanded skills and abilities (Steele, 2023), some even question the concept of knowledge itself. If machines can produce content faster and more concisely than students with years of schooling behind them, should we teach writing articles, reports and letters in English classes at all? On the one hand, reskilling can be a solution, teaching those hands-on skills that are necessary to utilize AI, for example nurturing students' reflective practices (critical thinking, evaluating etc.) and teaching them how to develop or fine-tune prompts for ChatGPT (Chen et al., 2023). On the other hand, these changes may not be as subversive as we think. In the future, there will still be a demand for writing skills, but the challenge will be producing texts that are meaningful, creative, engaging and effective in pleasing the reader and the writer (Shidiq, 2023). In order to ensure that students do not have their English homework done by AI, teachers should assign writing tasks in which students have to unleash their creativity, reveal their own feelings and ideas or explain what something means for them. Simply, AI cannot think outside the box because it is the box. Although AI can mimic human thinking and produce human-like creativity, it cannot crawl into our minds and replace our most valuable possession, our genuine thoughts. Overall, some changes may well occur regarding skills and abilities within the near future that can result in the automatization of mundane tasks, but these will be gradual and will

only build on existing trends (Steele, 2023). To conclude, it is important to consider the fundamental skills needed to train savvy and adaptive learners.

Admittedly, among teachers and ELT professionals, the most worrying challenge that AI poses is being able to measure what students truly acquired while learning. In K-12 schools, cheating with AI is mostly attainable in home assignments, while in higher education, Susnjak (2022) claims that online exam integrity is at risk due to ChatGPT. Even though AI-detection software exist, it is not always easy to tell whether AI wrote the homework or not. All in all, teachers should find new ways for measuring students' knowledge of vocabulary and writing skills in the age of AI.

With in-class, offline writing assignment, we can restrict the use of AI (Steele, 2023). As English language exams require offline writing tasks, teachers ought to involve teaching writing in the curriculum. However, we should integrate AI in our teaching in other scenarios. As mentioned above, students can carry out various tasks implementing AI: forming discussion in the English classroom about it within the topic of technology, utilizing AI in knowledge aggregation or applying it as a fact-checker. Given the clear distinction between when to use and when not to use it, I think AI will be less likely to seem as a forbidden fruit. In conclusion, the wise inclusion of AI seems to be the solution rather than a complete ban.

3. Research methodology

In this chapter, I am going to state the main aim of my research again and provide insight into the steps of the research design by describing the participants of the study. Furthermore, I will write about research methods, research instruments and means of data collection, along with a passage about methods of data analysis. By the detailed explanation of these elements, I strive to lay the foundations the discussion section (Section 4.) and ensure that the research is unique and purely academic.

3.1 Aims and research questions

The idea and motivation of the research stems from the genuine realization that AI has gained ubiquitous presence in our lives. Given the increasing popularity, educators have begun to ponder on how to utilize AI for enhancing learning. Embarking on research, my initial aim was to examine EFL (English as a Foreign Language) teachers' attitude towards using artificial intelligence and work out meaningful ways for integrating AI into English language teaching (ELT). By compiling the literature review, I could already familiarise myself with many different techniques and methods which can be used for introducing AI in our classes, as well as some of the possible challenges teachers can face when dealing with AI in the classroom. Prior to this, I formulated my research questions:

- 1. What characterises Hungarian EFL teachers' attitudes towards using artificial intelligence for teaching related purposes?**
- 2. What are some possible ways of enhancing English language learning with AI?**
- 3. What are some possible threats and dangers AI poses for English language teaching?**

The primary aim of my research was to gather information on AI in ELT and use it to create learning materials as tangible outcomes of the research. These materials will be introduced in Chapter 5 accompanying brief reflections on how they worked in class. In the following section, participants and methods of data collection will be presented in order to answer the research questions of this study.

3.2 Participants

In order to gain deeper insight into AI, I conducted an interview with a UK-based machine learning researcher *Anita Verő*, who happened to be my acquaintance and gave verbal permission to share her full name as non-confidential information. Let me briefly introduce her: Anita attended Eötvös Loránd University and majored in Information Technology (IT), having

graduated at ELTE, she enrolled in a PhD program in computational linguistics at Cambridge University. The main scope of her research was multimodal semantics which means the investigation of how AI interprets not just textual, but also visual data such as images, videos or any other kind of structured data. She has been working with large language models (LLMs) for almost ten years.

Anita turned out to be an excellent, highly qualified participant from whom it is worth learning. I opted for a semi-structured interview which gave me the chance to go off the beaten track and delve into more details when interesting yet not anticipated topics emerged. We held the interview on Skype which lasted for about an hour. Despite the fact we share a common mother tongue, we chose to speak English during the interview. With her permission, I recorded our conversation to help me transcribe and analyse it later on.

Furthermore, I conducted two additional interviews with teachers from the school where I had been teaching. I used purposive sampling (Dörnyei, 2007), I interviewed an English teacher named Krisztina, who is actively teaching IT as her other subject. She has over 20 years of experience in teaching English in Hungarian secondary education. Lastly, my other interviewee was another English teacher called Zita who teaches solely English. She finished her MA degree ten years ago and has been working in secondary education ever since. In order to assure anonymity, hereby I have indicated pseudonyms. These interviews were also recorded and transcribed.

Finally, a questionnaire was created for EFL teachers to investigate their attitude towards utilizing AI in the classroom. Snowball sampling was used which involves a chain-reaction when the researcher identifies a few people who meet the criteria of the study and asks participants to identify further appropriate members (Dörnyei, 2007). I could reach out to more than 100 EFL teachers. 87% of the respondents were female English teachers. The majority of the respondents were aged between 40-59 years and were employed in state-funded institutions

on upper-primary or secondary level. Over 10 percent of respondents claimed they teach English privately either as freelance or in language schools. The answers show a great diversity in the location of the teachers surveyed. For further information on the participants of the questionnaire see *Appendix 1*.

3.3 Research methods

According to Dörnyei (2007), qualitative research is an effective way of exploring new, highly complex areas. Therefore, primarily, I aimed to focus on qualitative research instruments such as interviews to shed light on a novel and controversial issue. Additionally, I could derive quantitative data from the questionnaire measuring EFL teachers' attitude towards using AI. Overall, the research can be considered as a mixed method research using quantitative and qualitative methods in a supplementary or complementary form to bring out the best of both paradigms. These were both necessary to unfold the research questions and gain better understanding and by combining qualitative and quantitative data, potentially, the validity of research can be improved (Dörnyei, 2007).

Furthermore, I conducted an exploratory action research in the classes where I teach with the initial motivation to trial my findings. In order to make my teacher as a researcher persona viable and move beyond the passive recipient nature of academical knowledge, I developed and tested my own materials in the classroom.

3.4 Research instruments and data collection

My questionnaire was meant to focus on teachers and its aim was to give an overview of a current phenomenon. Since getting data on a large scale was a primary purpose, I chose to involve EFL teachers from all walks of life. When designing the research, I paid careful attention to the classification of variables by including different types of scale (ordinal, nominal

etc.) in my questionnaire. To strive for a representative illustration, I deliberately aimed to scrutinize teachers from different age groups, types and levels of school and locations. The questions in the survey can be categorised as factual, behavioural and attitudinal. First, factual questions were mostly closed or multiple choice question asking for information about the respondent. Second, behavioural questions (yes/no questions, multiple choice questions and specific open questions) were included to collect data on the frequency and the rationale of using AI. Third, attitudinal questions in the form of scales and open questions were used to inquire about digital technology usage and the future of AI in ELT. At the end of the questionnaire, I left room for further elaboration in order to give leeway to the respondents to aggregate new perspectives. The questionnaire was piloted on ten colleagues which resulted in the modification of some and the addition of one more question inquiring about the regularity of using AI. Afterwards, I asked twenty respondents to take part in the final-piloting. Based on their feedback, I could finalize the number of questions and make sure that the questionnaire does not have any glitches. Having improved it, the questionnaire was ready to be sent out to EFL teachers. Quantitative data was collected over a two-month period online using Google Forms.

Having completed the literature review, I gained satisfactory knowledge on AI education research. Thus, I was able to start to compile interview question for further investigation. I prepared a semi-structured interview for Anita by jotting down a set of pre-written questions and came up with the order of them. As new themes emerged, however, I asked probes or probing questions to increase the richness of the responses. Prior to conducting the interviews, the questions were piloted by conducting test interviews with university fellows to ensure their validity and reliability, as well as to determine whether they were clear and understandable. The interviews with the teachers (Krisztina and Zita) were also semi-structured, with questions ranging from close-ended to open-ended; follow-up and clarification questions

were also asked when necessary. All the interviews were conducted in English. During the interviews, the researcher's role was to facilitate the process of the interview and to keep the participants focused and engaged. Overall, the interviews were deemed successful in collecting relevant data. The participants were able to provide detailed and insightful responses to the questions asked, and the interviewer was able to establish rapport with the participants and create a comfortable environment for discussion.

3.5 Methods of data analysis

As stated before, data for this study were collected over a two-month period using multiple instruments. Interview data were successfully collected, and audio recordings were transformed into textual form for analysis. The transcripts were read multiple times to identify emerging themes and patterns that address the research question. According to Dörnyei (2007), qualitative coding is beneficial for simplifying data while highlighting special features of data segments and it helps with linking them to a broader concept. Therefore, I used coding for qualitative data analysis. After reading and re-reading the data and noting down my thoughts I searched for reoccurring patterns of information. I used colours to make coding more visible and set up five categories within the interview data. Having completed the coding with all three interviews, I compared the interviews and used second-level coding to identify similarities and closely related categories. Second-level coding was crucial to go beyond the surface level and helped assure the validity of the code as well.

Furthermore, graphs and diagrams were made from the questionnaire responses not only to make data more visible but also to facilitate analysis. The requirement of triangulation was met by cross-validating the information gathered through various methods. I analysed and interpreted the questionnaire and the interviews separately. Questionnaire responses, interview questions, diagrams and graphs are included in the appendices section of this work (see

Appendix 1—3). In the next section, where I shall present my findings, I am going to illustrate my claims with verbatim direct quotations from the interviews and data derived from the questionnaire.

4. Results and discussion

In the following chapter, the results of the analysis of data collection will be presented. Results are organized according to the examined research questions listed in Section 3.1. In order to better illustrate the results, I have added direct quotations from the answers given in the research instrument. As the interviews and questionnaire were conducted in English, I use word-by-word quotations without altering the original textual data. The results and discussion will be presented in combined sections under thematic headings.

4.1 Hungarian EFL teachers' attitude towards using AI

According to EFL (English as a Foreign Language) teachers, AI can be best described as a “*double-edged*” sword, a tool that can have both positive and negative impacts on education. Data derived from the questionnaire proves that AI has become ubiquitous among Hungarian EFL teachers as well: 84.2% of the respondents have already used AI (Appendix 1), generative AI to be precise, for teaching related purposes. The vast majority of them experimented with generating text (articles, stories etc.) and items such as example sentences, gap fill sentences and multiple choice questions. Additionally, nearly half of the teachers have also turned to ChatGPT to assist them with lesson planning. Furthermore, some teachers reported to have used AI chatbots such as Gliglish in class. A wide variety of alternative uses appeared in the responses, for example, compiling vocabulary sets, helping with giving feedback, creating syllabi and design of filler activities in which students could ask interesting questions to ChatGPT. This suggests that AI technologies are being increasingly integrated into

the teaching practices of Hungarian EFL teachers, and they find AI an innovative way to enhance teaching and learning.

On the other hand, a relatively low percentage (30%) assigned tasks to students in which they had to exploit AI programs either in or out of the classroom. This correlates with Holmes et al. (2021) who claim that there appears to be a moral dilemma revolving around the usage of AI in the classroom. Numerous teachers raised similar concerns when elaborating on further ideas in my questionnaire. Some of my respondents were unsure “*how to prevent learners from cheating with AI*” and expressed that it is “*a shame that students use AI to do their home assignment*” and claimed that teachers “*have to detect what was written by AI*”. The interviews I conducted with fellow EFL colleagues bear out the aforementioned threats. During the interview they both claimed that cheating is one of the most worrying concerns regarding AI at the moment. Krisztina pointed out that:

I am afraid that AI can lead to an increase in the instances of students cheating and handing in texts they have not created themselves. It is becoming more and more difficult to spot whether a text has been written by a person or AI. If this is the case, students might become less inclined to work hard, as achieving a high level of knowledge will not be necessary in order to get a good grade. Another issue I worry about is that assigning tasks for which students need to use AI increases their engagement with gadgets and devices that they overuse anyway. Students who are accustomed to using the newest technology available will probably find it difficult to pay attention to traditional teaching and, for example, take notes by hand, which is a pity. (Interview with Krisztina)

Krisztina’s fears completely correspond to the problems of integrity of home assignments and exams (Susnjak, 2022). In addition to cheating, Krisztina highlighted the

anticipated overuse of digital technology which, in her opinion, could lead to behavioural changes like decreased attention span and misbehaviour. To conclude, similar concerns were under scrutiny in the literature review part (Madmoodi et al. 2018; Strom, 2021), so it is proven that EFL teachers have fears and doubts regarding AI in terms of cheating. This idea was also backed by Anita (the AI researcher participant) who agreed that. *“AI will have a subversive impact on education”* She claimed that *“it suddenly became a challenge to assess students, especially when it comes to essays.”* All in all, teachers today face an immediate problem and must change their assessment methods to value human creativity, instead of the excruciating endeavour to detect traces of AI in pieces of writing.

Evidently, there was a clear consensus between English teachers that it is important to keep up with newly emerging digital technologies and implement the use of up-to-date technological advancements into ELT. Approximately 80% of teachers expressed a positive attitude toward using AI in education; however, the majority of respondents did not consider themselves regular users. The lack of or very little amount of professional support seems to be one of the underlying reasons for this phenomenon. According to the survey responses, attending workshops and gaining hands-on experience with AI could be a key motivational factor in encouraging teachers to use AI more regularly. Clearly, there appears to be a demand for specialised AI courses among Hungarian EFL teachers. Overall, the data suggests that teachers require professional guidance in this field which should include the help and support teachers need to use AI effectively. Furthermore, addressing their concerns about the potential negative effects of AI would be crucial.

In general, I encountered various positive responses in the interviews to using AI in the English classroom, teachers claimed that *“ChatGPT is great tool for summarizing texts, planning or creating gap fill exercises”*. Since teachers are usually overwhelmed with several duties, my respondents highlighted that *“AI can definitely make the job [ELT] easier”* and

teachers could use AI as a “*personal assistant*”. However, even among the optimistic comments, the worrying problems of irrelevance and trustworthiness arose. Several teachers advised to “*double-check the answers one gets for their queries, and teach students to use AI with a critical mindset*”. All in all, the findings reinforces the double-edged nature of EFL teachers’ attitudes towards using AI for ELT.

EFL teachers genuine positivity regarding AI can be backed up by the interviews: Zita perceives that some of her colleagues are quite enthusiastic about digital technology and AI:

Although I am a lot more enthusiastic about developing my students' social skills, cognitive skills and speaking skills for which I do not need AI (at the moment). We are different. I think it is great that some teachers are into AI, that is how students get a fuller picture of the world around them. (Interview with Zita)

The favourable attitudes towards AI technology foster a positive outlook on the future. These views usually echo that “*AI programs, LLMs [Large Language Models] in particular, have huge potential for optimizing and democratizing education*”, as Anita noted. It seems that teachers are aware of the fact that AI can benefit teaching and learning, so they strive to utilize it in a useful way.

First of all, teachers feel the need to empower learners for the age of AI, which means they make conscious efforts to incorporate it in the learning process. Krisztina pointed out that:

AI is very important in these modern days, we can see traces of it in education now, but no doubt it will find its way to every classroom sooner or later. This is the future, so we better use it every day to help our students. (Interview with Krisztina)

In conclusion, teachers believe that AI knowledge will prove beneficial for students in the future.

Second, teachers believe that AI can enhance language teaching and learning by creating and optimizing learning material. Anita claimed that *“with AI people can have a personal tutor in the future, or maybe a type of assistant they could never have in any other way.”* The idea of delegating tasks to a robot assistant is not a new phenomenon, it appeared in the comment section of my questionnaire and my interviewees also mentioned it. This attitude implies human superiority and control over AI models which can be backed by evidence from the questionnaire as the phrases *“check”*, *“double-check”*, *“control”* and *“take critically”* appeared in several responses. Overall, teachers assume that AI can facilitate both teaching and learning English.

Finally, EFL teachers think that generative AI is beneficial for developing language skills by incorporating it into the knowledge aggregation part of a project and fostering creative ideas for writing or enhancing speaking skills by reflecting on AI in the classroom. Krisztina claimed that in these scenarios *“we look at English as a tool for operating ChatGPT and developing our ideas to create a final product, for example”*. Naturally, language development happens throughout this process by fostering complex cognitive domains. On balance, this approach tends to enhance learning the most because it provides students with the opportunity to actively engage in the language with AI (Chen, 2023; Joksimovic et al., 2023; Steele, 2023); moreover, it fosters collaboration and teamwork, which are essential 21st century skills.

4.2 Enhancing English language development with AI

Another primary focus of my investigation revolves around how AI can enhance English language teaching and learning. The answer to this research question is threefold. First of all, the enhancement could lie within the fact that AI is capable of personalising learning material for students. Second, AI can boost language learning when it is integrated into the learning

process. Thirdly, second language (L2) development can happen during reflective activities when students do not use but reflect on AI programs. In the following, I am going to discuss these components separately.

Despite the fact that learning takes place in communities or groups in Hungarian K12 schools, the personalisation of learning aims to customise learning for each students' strength, needs and interest. AI can foster personalised learning and is able to tailor the learning process according to students' progress. According to Anita, *"AI algorithms work on behavioural data and are able to fine tune [learning] content like social media platforms do."* Anita also pointed out that *"setting good objectives and suitable measurement tools"* which serves as an input objective for the algorithm to reach, learning something that one has not known the day before, for instance, could result in the optimization of possible ways to reaching a learning objective. In other words, AI can optimise the curriculum, set up individual learning paths and structure L2 learning, if provided with enough user data. In their own right, English coursebooks are pre-structured learning materials that set standardized requirements and learning objectives for learners. Considering AI program's capability of personalising content, in theory, AI can be an alternative to books for a more engaging, more personalised, thus more efficient way of learning. *"Given that learning materials can be found online in an unstructured way, AI can actually guide learners as a personal tutor"* – Anita concluded.

Both Krisztina and Zita expressed a worrying concern that, in their opinion, AI will be able to replace teachers in the future. It is true that AI may be able substitute teachers in some of their teaching related tasks, such as structuring learning as we have seen above. Anita, however, claimed that *"AI is not likely to replace teachers because learning something is not just about the material, it comes down to the motivation of students, which is a personal matter."* When asked about motivation Krisztina explained that she views motivation as of utmost importance. She said that *"one of the most important tasks of teachers [is] to be not just*

an educator but a mentor and somehow maintain or ignite the motivation in students, which depends a lot on your persona". Furthermore, Zita in the interview highlighted that *"motivation is indeed a personal, sometimes an interpersonal factor in learning"*. To conclude, we can state that AI could reap dividends for personalising English language learning; however, for the moment, it is unlikely to intervene in the classic student–teacher relationship because motivation is one of the main determinants of second language learning (Dörnyei, 1994).

On the other hand, AI can boost language learning if it is integrated successfully. Anita claimed that *"AI can enhance your work in some ways that it is not different from using Google or books, but there is a fine line between what is your own effort and what is not."* Firstly, language development can happen during formulating prompts which is crucial for generating the desired output from an AI program. Prompt engineering can be described as a fundamental skill for operating generative AI programs in which students have to utilise particular language functions such as explanation, description, request and so forth. Furthermore, language development occurs during the comprehension of AI output. In these instances, we must look at the English language as an essential tool for operating a machine. Anita also pointed out that:

[...] with large language models, data scarcity is a problem, which means they perform well on large amount of data, but for languages such as Hungarian, there is way less data than for English and many other such languages around the world, therefore, if your mother tongue does not happen to be one of these large languages, then it is actually more difficult for you to use these programs.

(Interview with Anita)

When asked about the practical implications of AI in the English language classroom, Krisztina mentioned that *"using AI for creation can be fun and engaging for students, and it makes in-class projects so much easier"*. However, she highlighted that the access to AI platforms

can be problematic in certain age groups, so *“preferably students borrowing the teacher’s personal computer is a better way to experiment with AI at first.”* Nevertheless, Zita described a sense of uncertainty in using AI for enhancing English language learning: *“I don’t believe that using AI will necessarily improve teaching in any way, it is only one of many tools.”* She illustrated her ideas with a thought-provoking analogy; she said *“using Google Maps or any satellite navigation when going to somewhere new will not necessarily make you remember the route... so teachers should really ensure that AI does not actually hinder learning.”* To summarise, AI may prove beneficial for enhancing some parts of language acquisition. Prompting, for example, can easily become an essential skill in the future, but as long as languages are primarily for communication and the main objective of learning languages is to communicate with other people, AI will not deprive people of the joy of human connections.

Furthermore, teachers suggest that students should be educated about AI in school in order to prepare them for the judicious use of these tools in the future. Krisztina stated that *“just like when the internet came around, people got exposed to tons of unhealthy content like internet fraud, virus emails and so on, I believe it is vital to provide students with knowledge on how AI works”*. Digital competence is part of the national core curriculum in Hungary which can and should be developed during EFL classes as well. Educating students on navigating fragmented and complex digital sources is part of digital literacy (Tinmaz et al., 2022). Moreover, Tinmaz et al., (2022) claim that digital literacy also has a set of non-technical elements which correspond to digital competence. One of the important non-technical skills should be the ability to apply critical thinking to AI generated content.

Zita claimed that *“developing a critical mindset towards AI is an urgent issue”*. Anita encapsulated the reasons behind being critical towards AI in the term interpretability which means that *“the current models cannot really explain how they come to that conclusion and why they provide a particular response.”* She added that *“anyone who uses these models should*

be aware that they [AI programs] were optimized for pleasing the user essentially, and not for giving truthful answers.” Thus, I have come to the conclusion that digital competence and L2 learning must be enhanced simultaneously by developing reflective tasks in which students analyse and evaluate AI. Krisztina mentioned that *“just by asking students opinion on AI after an activity or when learning about the topic of technology can help”*. During reflective activities students use language to express their ideas and beliefs, they can also interact with their peers in fruitful discussion and develop digital competence.

Overall, research evidence suggests that AI can enhance English language learning by personalising learning and its usage can develop not only useful language skills, but also important competences. All in all, AI has the potential to revolutionize English language learning by making it more personalized, engaging, and effective. As AI technology continues to develop, we can expect to see even more innovative and effective ways to use AI to teach English.

4.3 The potential dangers and threats of AI on ELT

While AI offers innovative tools for better learning experiences, there are several potential threats and dangers that educators and learners should be mindful of. Findings show that there is the risk of over-reliance on AI-driven tools. Currently, EFL teachers experience that their learners often experiment with AI on their own. With regard to home writing assignments, some students have them partially or completely done by AI. Zita is concerned that *“there is little we could do to prevent [students] using AI and skipping important steps of writing practice.”* In the following I am going to highlight some reoccurring key words and phrases from the interviews and the questionnaire for a better illustration.

Many respondents view AI as an *“efficient tool and the future of learning”*, claims it is *“time-saving”* and *“makes our lives easier”*. They highlight the *“critical approach”* and

consider it “*inevitable*” to use in ELT. Whereas respondents also described attitudes that range from aims to “*detect and ban AI*” to concerns about the “*loss of human capabilities*” and even “*job displacement of teachers*”. In general, AI research shows that complex, cognitive, non-routine lines of work like teaching are unlikely to be replaced by AI (Gašević et al., 2023). Although there might be a shift towards technical and soft skills in the workforce, generative AI is expected to augment cognitively demanding jobs by automatizing some mundane tasks. Therefore, I find it crucial to integrate it in (EFL) learning despite the potential dangers and initial challenges in order to empower our learners for the age of AI. Overall, there does not seem to be a clear consensus between EFL teachers, thus it is crucial to address the potential threats of AI and work out mitigation strategies to ensure that AI is used ethically, responsibly, and inclusively in language education, prioritizing equity, privacy, and the importance of interactive language learning experiences.

5. Pedagogical implications

In the following section, I am going to present three AI-related activities. I compiled and tried all of these in my classroom as part of a small-scale action research. As regards the ownership, I claim that the materials belong to my intellectual property and shall not be used without reference to its owner. Brief descriptions of the activities will be presented followed by reflections. Furthermore, students’ evaluative feedback gathered at the end of each activity will be quoted to shed light on the learning outcomes and the success of English language development.

5.1 AI Gallery walk

Getting started with AI can be very challenging as we might have a range of mis- and preconceptions heavily influenced by unspecific nuggets of information we hear from

colleagues or read in the online media (Bewersdorff et al., 2023). Nevertheless, the educational use of AI is gaining popularity among teachers; therefore, one does not want to lag behind one's peers. To teachers who feel the irresistible urge to get started with AI in the classroom, I would like to recommend the following activity. This one will prove beneficial for familiarizing oneself with AI, basic prompting and an effective yet safe integration of ChatGPT in the lesson. Note that with slight modifications this task could work for almost every subject not just EFL. In the following, I would like to describe the lesson in detail accompanied with a lesson plan in the appendices (see Appendix 4).

Information on the group: this was an upper-intermediate secondary grammar school class with sixteen 15-16-year-old students. The vocabulary topic was environmental issues and global warming, and new grammar items were the future continuous and future perfect tenses. To describe the learning outcomes, I wanted my students to acquire basic knowledge on the omnipresent environmental issues in the world, and learn B2-C1 vocabulary regarding pollution, global warming and recycling. Regarding the future tenses, I wanted to enable learners to explain the worrying concerns of global warming in the future. Also, it was my goal to make them develop ideas and arguments for a more environmentally conscious way of living.

As we discussed prompt engineering (see Section 2.4), the very first step was that I started asking ChatGPT the same question I would ask my students at the end of the thematic unit to sum up newly learnt material right before writing a test. These questions were both open-ended and close-ended, they served for recalling information, explaining concepts or developing arguments. I even generated a futuristic picture with DALL-E that evokes ideas on the solution of climate change. The basic aim was to see what we can churn out of ChatGPT because this is the same as our learners would do if they are stuck and feel they only have generative AI to turn to. Here are some examples of my questions: Looking at this picture, could you list the consequences of global warming?; What are some ways to make our

households more environmentally friendly?; Could you collect arguments for and against veganism being the only eco-friendly diet?

Having generated some answers to my questions, I organised the lesson around the summarising question with a *gallery walk* exercise. Putting the questions (and the picture) up on the wall in different corners of the room, I organized students in pairs giving them Post-it papers to write on. Going around clockwise in the room, students visited eight stations where they encountered one question on a piece of paper. Their task was to give relatively short answers, one or two key words or concepts, and post them underneath the question. They had two to three minutes to discuss and provide answers. As students were revolving around in the room, the pairs could see some of their peers' answers when they arrived to the stations. These were only to give ideas to build on, it was mandatory to provide another meaningful answer. When arriving to the final station, I gave the pairs enough time to synthesise the answers they could see on the paper and their task was to present a concise summary to the group in two minutes. Thus, the group could recap what we compiled in the gallery walk activity.

However, on the flipside of every paper, I printed the answer given by ChatGPT to the same questions. Having read the generated answers, students engaged in an evaluative exercise regarding AI through an opinion-line activity, allowing them to articulate their perceptions of ChatGPT's utility, accuracy, and reliability. I encouraged students to share their opinions with the group and give reasons why they think ChatGPT was right or wrong.

5.2 Reflections: AI Gallery walk

By comparing human and non-human responses, students were able to reflect on the nature of AI and develop their critical thinking. This is reinforced by the fact that, while AI can provide useful and accurate information, it is also prone to generating fallacious content. As a result, students could come to the realization that AI does not possess unlimited power. By the

end of the lesson, students could gain deeper understanding of how AI works and embark on using ChatGPT with a critical mindset. I believe that this task has the potential to be a valuable tool for educators seeking to introduce AI in the classroom. In addition, it is important to teach students about the ethical implications of AI and to encourage them to think critically about the potential uses and misuses of this technology. Overall, it is of utmost importance that students are aware of AI's limitations and learn to reflect on machine generated content instead of using it in a careless manner.

On the scale of 1 to 5, students had to evaluate this exercise on a feedback sheet (see Appendix 7) in terms of usefulness, engagement and inclusivity. In total, AI Gallery walk scored 4.625 for usefulness, 4.375 for engagement and 4.875 for inclusivity. Students showed high levels of willingness to exchange ideas and share opinions in an appropriate manner. The lesson involved a lot of movement, which, in my opinion, maintained motivation. Students claimed that the lesson was *“fun and active”*. Furthermore, one of my students expressed the need for more AI education: *“we should do more of these activities because we all tried AI, but we rarely learn about it in school”*. The results suggest that the activity was productive for revising vocabulary and grammar; moreover, AI was integrated effectively and proved beneficial developing digital competence and digital literacy. According to my findings, AI Gallery walk can be a salutary exercise for an initial experimentation with AI. Overall, I found that students are extremely curious and motivated to learn about AI as it is of particular relevance to their future.

5.3 Me, myself and AI

This simple yet engaging exercise lays the foundation of prompt engineering through image generator software such as DALL-E. I tried it in my previously mentioned upper-intermediate secondary grammar school group in which I have sixteen 15-16-year-old students

(for the activity plan, see Appendix 6). In the pre-activity phase, the learners are put in pairs and asked to describe their partner's appearance and style in speaking and jot down key words of description such as *brown oval eyes*, *middle-length curly hair* and so forth. This should help them collect vocabulary and engage in the task at first. Afterwards students are introduced to a picture generator program and asked to develop their prompts in order to generate a profile picture similar to themselves. For this exercise, learners can use their phones if school regulations allow using mobiles during lessons or the teacher's computer if not. Students work together, write and adjust the prompt while the teacher goes around the classroom to assist those in need. Having successfully generated the pictures, we ask students to compare their AI equivalent to themselves and spot differences and similarities. As a follow-up activity, the class comes together and students share the results with each other by showing the picture and highlighting some similarities and differences.

Throughout the activity, students can utilise vocabulary on body parts, appearance, personality traits, and style. Language functions such as describing and comparing and contrasting will be developed along with digital literacy. By the process of creation, learners immerse themselves in the language. Furthermore, successful student performance results in a tangible final product. The activity can be modified in various ways to suit learners. For example, the teacher can ask the students to imagine and create their future selves ten or twenty years from now. The teacher must consider the access to devices, at least one for each pair, to provide equal opportunities for learning. All in all, *Me, myself and AI* is a lively activity that can enhance English language learning while incorporating the usage of AI in the classroom.

5.4 Reflections: Me, myself and AI

The activity engaged students extremely well; it maximised student talking time. The classroom was vivid, full of energy and excitement, thus classroom management became a bit

more challenging than usual. During the activity, I was present as a facilitator and walked around observing students carefully. Fortunately, we did not have major technical difficulties; therefore, the task could flow neatly. Again, students had to complete an evaluation and give scores on the scale of 1 to 5. According to students' evaluation sheets, the task scored 4.375 for usefulness, 4.8125 for inclusivity and a very impressive 4.875 for engagement. Results suggest that students found the activity intriguing and were motivated to cooperate. Student comments show that they think "*it is interesting what AI can do within seconds*". Moreover, some of them highlighted that "*it was hard to come up with prompts to make it work*". In conclusion, it is clear that this exercise was an overwhelming success. Students were not only captivated by the content, but they were also challenged in a variety of ways. This led to a significant increase in their language development. Students used a variety of vocabulary, applied critical thinking, and collaborated with each other. As a result, we can confidently state that this exercise was a valuable learning experience for all involved.

5.5 Creative writing with AI

A common pre- or misconception about AI is that it does all the work for the students, particularly in writing. The following activity aims to demonstrate that AI can enhance writing skills in an ELT context (for the activity plan see Appendix 6). The teacher prepares some thought-provoking story titles and some pillars that guide students along the way of writing. Students are divided into small groups, ideally of 4–5 students each and are given a title for a fictional short story. I had all in all three groups of 5 students, who were upper-intermediate learners. Based on a titles such as *Love Behind the Curtains* or *Robbery on Kiribati Island*, students discuss the story they think would match with the title and start contemplating the plot, the characters, and the setting. Having agreed on the basics, students use ChatGPT and provide prompts for it to start writing their story. During the writing process the teacher distributes the

aforementioned pillars, key components which have to be built in the story. For Love Behind the Curtains, the evil character of William Baxter; for Robbery on Kiribati Island, the mansion of Mr Slughworth. Students can create these characters and places with AI, generate pictures in DALL-E, and gradually build up an interesting tale as the teacher provides all in all four cornerstones. The last part of the activity is writing the ending of the plot without ChatGPT and compiling a booklet that can be presented and exchanged in class as an end product. As for a reflective follow-up exercise students read each other's work and leave comments on creativity, cohesion, and content. Furthermore, the teacher reads all the short stories and provides feedback.

Throughout the activity, language development occurs within the groupwork. Students utilise language for expressing and discussing ideas. Moreover, reaching consensus and decision making is an important element of this exercise. Creative writing happens when students develop their prompts. In order to make a story well-structured, the prompt has to be very detailed and precisely formulated. An important rule of thumb needs to be acknowledged here: the more specific the prompt is, the better the output it is going to produce. Most of the time, it will take students more than one attempt to get the story rolling. Also, pictures of characters and places can be fine-tuned in order to create visually appealing artefacts. Overall, this creative activity fosters language learning by immersing students in the language, encapsulating important language functions as well as developing interpersonal skills.

5.6 Reflections: Creative writing with AI

Initially, deploying AI in creative writing was challenging because of its complexity and novelty. Essentially, creative writing requires higher-order thinking skills. In this activity, AI augmented and inspired creativity, thus it enhanced the process of creation. Managing the classroom was demanding because groups had plenty of questions as they were progressing. I

had to be on the constant lookout for my students in case they got stuck due to technological issues. As my students have never done creative writing with AI before, the task was quite new and unusual for them. However, I believe I could successfully implement the task. All of the groups could complete their short stories and compile the final product which also show that the objectives were met.

As for the students' reflections, they were working hard during the lesson, but they found the exercises a little bit complicated. One of my students highlighted that *"it was very hard to focus on the task and to help others in the group at the same time."* Despite the above mentioned challenges, students enjoyed the task and were astonished by the final product as they *"never knew ChatGPT can get so creative and write stories like real writers"*. Overall, the activity scored 4.25 for usefulness, 3.81 for inclusivity and 4.56 for engagement. The results indicate that not everyone could do their fair share in the groupwork which suggest the wise reconsideration of this activity. Nevertheless, the aim of using AI for creative writing was met and the activity had moderate success among the students. In conclusion, fostering creativity with AI proved to be effective as students were able to engage in a complex creative process with ease with learning being augmented by AI.

6. Conclusions and limitations

Taking all the results of the questionnaire and the interviews into account, it can be concluded that Hungarian EFL teachers' attitudes toward AI seems positive, on balance. Although a positive approach was more prevalent in the responses and we can state that the majority of participants were remarkably optimistic and considered AI a benevolent tool for enhancing learning, serious concerns also appeared regarding the fair and ethical usage of AI in education. Based on my results, the more familiar teachers get with AI, the more interested they become. Also, according to my personal perceptions, AI is predominant in regular

teacher's room conversations, which suggests that teachers do not want to turn a blind eye to this issue. Overall, the double-edged nature of AI appears to be prevailing among Hungarian EFL teachers.

Based on my findings, teachers could be encouraged to start utilising AI regularly if they received more professional support, more practical knowledge, and first-hand experience. Consequently, to answer the first research question (What characterises Hungarian EFL teachers' attitudes towards using artificial intelligence for teaching related purposes?), it can be concluded that teachers participating in the study were all well-informed about the AI phenomenon, and the majority of them have experimented with AI either in- or outside the English classroom. However, more than half of them did not consider themselves a regular and confident user. The findings suggest that EFL teachers are very adaptive and open to newly emerged technologies and they find it important to keep their teaching repertoire up-to-date. All in all, to support quality English teaching professional guidance and continuous professional development (CPD) is vital to cope with AI, in regard to its positive and negative aspects as well.

Based on the data derived from the interviews, it can be deduced that the answer to the second research question (What are some possible ways of enhancing English language learning with AI?) is that there are numerous means to exploit AI in an advantageous and salutary manner. Data yielded in the research shows that ELT can avail of AI by its potential to personalise teaching and learning. Furthermore, the thoughtful implementation of AI can foster creativity, critical thinking skills and digital competence while enhancing English language learning at the same time. These findings are supported by the material presented in the pedagogical implications of this work (see Section 5). Designing these tasks and lessons helped me delve deeper into my research topic and apply what I learnt about this subject in a real classroom environment. Thus, as the research progressed, I eventually became even more keen

on my topic, which definitely helped with maintaining my initial motivation. My trials with AI were well-received by my students and colleagues for which I cannot be more grateful. In conclusion, I would be eager to continue research on the use of AI in ELT and find out more about my subject, my learners, and myself as well.

The third research question (What are some possible threats and dangers AI poses for English language teaching?) was not intended to be scrutinized in the early stages of the investigation due to the initial scope of the research. However, it became essential to include as data shed light on the concerns of AI in the Hungarian ELT context. Based on my findings, the most tormenting issue lies within the measurement of knowledge. Teachers face new forms of cheating as students have their homework partially or fully done by ChatGPT. Thus, many teachers aim to detect or ban the usage of AI. However, results suggest that teachers have to reconsider their evaluation systems accordingly instead of embarking on an “*arms race*” between students’ artifice and themselves. Furthermore, other possible dangers could be job security and the loss of human capabilities. On the one hand, these threats are definitely important, but seem to be future challenges; therefore, it is needless to dive into vague predictions at the moment. Overall, it can be concluded that the most worrying issue targets the integrity of tests and home assignments, hence doubts are raised concerning the ethical use of AI in language learning.

Ultimately, it can be concluded that AI education research has various limitations due to the novelty of the topic. I encountered a lack of pedagogical and methodological research in AI education, especially within the ELT field. As the development of AI has skyrocketing in the last couple of years, no wonder research relatively lags behind. However, there seems to be a noticeable growth in the number of ELT conference speakers who aim to approach AI from different angles. Furthermore, it is important to note that limitations occurred concerning the number of participants. In order to examine the use of AI in ELT, it would be crucial to reach

out to a wide range of teachers and students. Collecting more qualitative and quantitative data and conducting classroom-based research can give researchers detailed insight into this intriguing topic. In conclusion, the ubiquity of AI demands extensive scientific scrutiny, which purpose my OTDK paper aimed to partially fulfil.

Having completed the research, I believe I developed a lot both professionally and personally. Finishing this arduous yet exciting journey not only made me a better teacher but also a more experienced researcher. Firstly, I could hone my skills in doing pedagogical research by conducting and analysing interviews and questionnaires. I am grateful to my supervisor for his constant professional guidance during this process. Additionally, I could elevate my ELT methods by preparing and testing my own materials that incorporate AI. During the in-class activities, I could observe my students from new perspectives, which made me reflect on my work as a teacher as well. I firmly believe that my passion for teaching has grown, and I am reassured that teaching has the power to shape our future by educating the upcoming generations. I suggest that research in AI education should continue by examining the impact of AI on learning objectives and assessment tools. Delving into the topic also made me formulate further questions and develop new ideas. Personally, I aim to foster my curiosity by contributing to ELT research in the future. Furthermore, I strive to cultivate a growth mindset as a teacher and researcher when dealing with emerging issues at my vocation. As my work draws to a close, all I can conclude is that the process of conducting the research and writing up my findings has contributed greatly to my professional persona and made me more conscious of myself as well.

References

- Ahmadi, M. R. (2018). The use of Technology in English language learning: A literature review. *International Journal of Research in English Education*, 3(2), 115–125.
<https://doi.org/10.29252/ijree.3.2.115>
- Becker, H. J. (2000). Findings from the teaching, learning, and computing survey: Is Larry Cuban right? *Education Policy Analysis Archives*, 8(51), 2—32.
<http://dx.doi.org/10.14507/epaa.v8n51.2000>
- Bewersdorff, A., Zhai, X., Roberts, J., & Nerdel, C. (2023). Myths, mis- and preconceptions of Artificial Intelligence: A review of the literature. *Computers and Education: Artificial Intelligence*, 4, Article 100143. <https://doi.org/10.1016/j.caeai.2023.100143>
- Bull, S., & Ma, Y. (2001) Raising learner awareness of language learning strategies in situations of limited recourses. *Interactive Learning Environments*, 9(2), 171-200.
- Chen, B., Zhu, X., & Díaz del Castillo H., F. (2023). Integrating generative AI in knowledge building. *Computers and Education: Artificial Intelligence*, 5, Article 100184.
<https://doi.org/10.1016/j.caeai.2023.100184>
- Chomphooyod, P., Suchato, A., Tuaycharoen, N., & Punyabukkana, P. (2023). English grammar multiple-choice question generation using text-to-text transfer transformer. *Computers and Education: Artificial Intelligence*, 5, Article 100158.
<https://doi.org/10.1016/j.caeai.2023.100158>
- Dörnyei, Z. (1994). Motivation and motivating in the Foreign Language Classroom. *The Modern Language Journal*, 78(3), 273–284.
<https://doi.org/10.1111/j.1540-4781.1994.tb02042.x>

- Dörnyei, Z. (2007). *Research methods in applied linguistics*. Oxford University Press.
- Eisenstein, J. (2019). *Introduction to natural language processing*. The MIT Press.
- Elkins, S., Kochmar, E., Cheung, J. C., & Serban, I. (2024). How teachers can use large language models and bloom's taxonomy to create educational quizzes. *Proceedings of the AAAI Conference on Artificial Intelligence*, 38(21), 23084–23091. <https://doi.org/10.1609/aaai.v38i21.30353>
- Ferrari, A. (2012). *Digital competence in practice: An analysis of frameworks*. Publications Office of the European Union. <http://www.ifap.ru/library/book522.pdf>
- Gašević, D., Siemens, G., & Sadiq, S. (2023). Empowering learners for the age of Artificial Intelligence. *Computers and Education: Artificial Intelligence*, 4, Article 100130. <https://doi.org/10.1016/j.caeai.2023.100130>
- Ghafar, Z. N., Rahim, R. I., Arf, S. F., Farxha, S. S., Abdulrahim, M. A., & Salh, H. F. (2023). The role of Artificial Intelligence Technology on English language learning: A literature review. *Canadian Journal of Language and Literature Studies*, 3(2). 750—757. <https://doi.org/10.53103/cjlls.v3i2.87>
- Gorur, R., Hoon, L., & Kowal, E. (2020). Computer Science Ethics Education in Australia – a work in progress. *Proceedings of 2020 IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE)*. 945—947. <https://doi.org/10.1109/tale48869.2020.9368375>
- Harmer, J. (2007). *The practice of English language teaching*. Pearson.

- Hockly, N. (2023). Artificial Intelligence in English language teaching: The good, the bad and the ugly. *RELC Journal*, 54(2), 445–451. <https://doi.org/10.1177/00336882231168504>
- Holmes, W., Porayska-Pomsta, K., Holstein, K., Sutherland, E., Baker, T., Shum, S. B., Santos, O. C., Rodrigo, M. T., Cukurova, M., Bittencourt, I. I., & Koedinger, K. R. (2021). Ethics of AI in education: Towards a community-wide framework. *International Journal of Artificial Intelligence in Education*, 32(3), 504–526. <https://doi.org/10.1007/s40593-021-00239-1>
- Howard, S. K., Tondeur, J., Ma, J., & Yang, J. (2021). What to teach? strategies for developing digital competency in Preservice teacher training. *Computers & Education*, 165, 104–149. <https://doi.org/10.1016/j.compedu.2021.104149>
- Hubbard, P. (2023). Emerging technologies and language learning: Mining the past to transform the future. *Journal of China Computer-Assisted Language Learning*, 3(2), 239–257. <https://doi.org/10.1515/jccall-2023-0003>
- Jarvis, H. (2013). From computer assisted language learning (CALL) to mobile assisted language use (MALU). *The Electronic Journal of English as a Second Language*, 16(4), 1–18.
- Joksimovic, S., Ifenthaler, D., Marrone, R., De Laat, M., & Siemens, G. (2023). Opportunities of artificial intelligence for supporting complex problem-solving: Findings from a scoping review. *Computers and Education: Artificial Intelligence*, 4, Article 100138. <https://doi.org/10.1016/j.caeai.2023.100138>

- Koh, J. H., & Chai, C. S. (2016). Seven design frames that teachers use when considering technological pedagogical content knowledge (TPACK). *Computers & Education*, 102, 244–257. <https://doi.org/10.1016/j.compedu.2016.09.003>
- Krathwohl, D. R. (2002). A revision of Bloom's Taxonomy: An Overview. *Theory Into Practice*, 41(4), 212–218. https://doi.org/10.1207/s15430421tip4104_2
- LeCun, Y., Bengio, Y., & Hinton, G. (2015). Deep learning. *Nature*, 521(7553), 436–444.
- Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization*. Oxford University Press.
- Nemzeti Alaptanterv, (2020). *A nemzeti alaptanterv kiadásáról, bevezetéséről és alkalmazásáról szóló 110/2012. (VI. 4.) Korm. rendelet módosításáról*. Magyar Közlöny No. 17
- Mahmoodi, H., Nadrian, H., Shaghghi, A., Jafarabadi, M. A., Ahmadi, A., & Saqzezi, G. S. (2018). Factors associated with mental health among high school students in iran: does mobile phone overuse associate with poor mental health? *Journal of Child and Adolescent Psychiatric Nursing*, 31(1), 6–13. <https://doi.org/10.1111/jcap.12202>
- Memarian, B., & Doleck, T. (2023). Fairness, accountability, transparency, and ethics (fate) in Artificial Intelligence (AI) and Higher Education: A systematic review. *Computers and Education: Artificial Intelligence*, 5, 100152. <https://doi.org/10.1016/j.caeai.2023.100152>
- Mouriquand, D. (2023, November 1). 'AI' named word of the year by Collins Dictionary. *Euronews*. <https://www.euronews.com/culture/2023/11/01/ai-named-word-of-the-year-by-collins-dictionary>

- Mualem, R., Leisman, G., Zbedat, Y., Ganem, S., Mualem, O., Amaria, M., Kozle, A., Khayat-Moughrabi, S., & Ornai, A. (2018). The effect of movement on cognitive performance. *Frontiers in Public Health*, 6, Article 100. <https://doi.org/10.3389/fpubh.2018.00100>
- Pack, A. (2023). A Review of the AI Feedback Generating Website “EAP Talk”. *Computer-assisted Language Learning Electronic Journal*, 24(3), 252—258.
- Pagallo, U. (2017). From automation to Autonomous Systems: A legal phenomenology with problems of Accountability. *Proceedings of the Twenty-Sixth International Joint Conference on Artificial Intelligence*. 17—23. <https://doi.org/10.24963/ijcai.2017/3>
- Pikhart, M. (2020). Intelligent Information Processing for language education: The use of Artificial Intelligence in language learning apps. *Procedia Computer Science*, 176, 1412—1419. <https://doi.org/10.1016/j.procs.2020.09.151>
- Pourhossein Gilakjani, A. (2017). A review of the literature on the integration of technology into the learning and teaching of English language skills. *International Journal of English Linguistics*, 7(5), 95-106. <https://doi.org/10.5539/ijel.v7n5p95>
- Prinsloo, P., & Slade, S. (2017). An elephant in the learning analytics room. *Proceedings of the Seventh International Learning Analytics & Knowledge Conference*. 46—55. <https://doi.org/10.1145/3027385.3027406>
- Schwarz, C., & Zhu, Z. (2015). The impact of student expectations in using instructional tools on student engagement: A look through the expectation disconfirmation theory lens. *Journal of Information Systems Education*, 26(1), 47—58.

- Shen, Y., Heacock, L., Elias, J., Hentel, K. D., Reig, B., Shih, G., & Moy, L. (2023). ChatGPT and other large language models are double-edged swords. *Radiology*, 307(2). Article e230163. <https://doi.org/10.1148/radiol.230163>
- Shidiq, M. (2023). The use of artificial intelligence-based chat-gpt and its challenges for the world of education; from the viewpoint of the development of creative writing skills. *Proceedings of the International Conference on Education, Society and Humanity*. 1(1), 353—357.
- Solanki, D., & Shyamlee1, M. P. (2012). Use of technology in English language teaching and learning: An analysis. *International Conference on Language, Medias and Culture* 33(2012), 150-156.
- Steele, J. L. (2023). To GPT or not GPT? Empowering our students to learn with AI. *Computers and Education: Artificial Intelligence*, 5, Article 100160. <https://doi.org/10.1016/j.caeai.2023.100160>
- Strom, A. (2021). The negative effects of technology for students and educators [Unpublished MA thesis]. Northwestern College, Iowa.
- Susikaran, R. S. A. (2013). The use of multimedia in English language teaching. *Journal of Technology for ELT*, 3(2) 1—15.
- Susnjak, T. (2022, December 19). *ChatGPT: The end of online exam integrity?*. arXiv. <https://arxiv.org/abs/2212.09292>

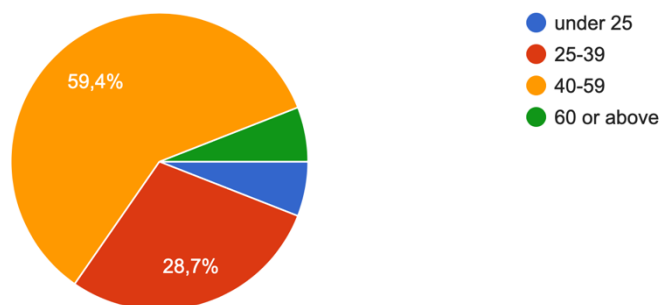
- Tenório, K., Olari, V., Chikobava, M., & Romeike, R. (2023). Artificial Intelligence Literacy Research Field: A Bibliometric analysis from 1989 to 2021. *Proceedings of the 54th ACM Technical Symposium on Computer Science Education V. 1.* 1083—1089.
<https://doi.org/10.1145/3545945.3569874>
- The Council of European Union, (2018). Key competences for lifelong learning, Publications Office. <https://data.europa.eu/doi/10.2766/569540>
- Tinmaz, H., Lee, Y.-T., Fanea-Ivanovici, M., & Baber, H. (2022). A systematic review on Digital Literacy. *Smart Learning Environments*, 9(1). Article 21.
<https://doi.org/10.1186/s40561-022-00204-y>
- Turing, A. M. (1950). Computing Machinery and Intelligence *Mind*, 59(236). 433—460.
- Zhuo, Z.-H. (2021). *Machine learning*. Springer.

Appendices

1. Visualised data on the participants of the questionnaire

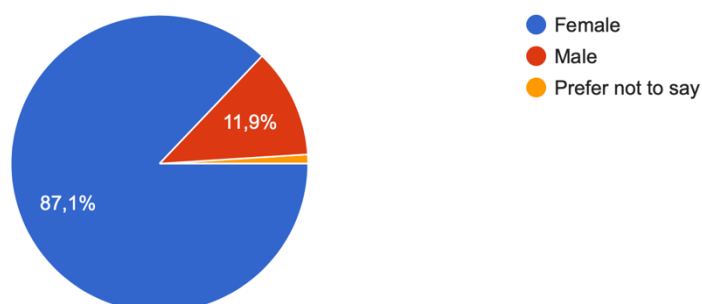
Age

101 válasz



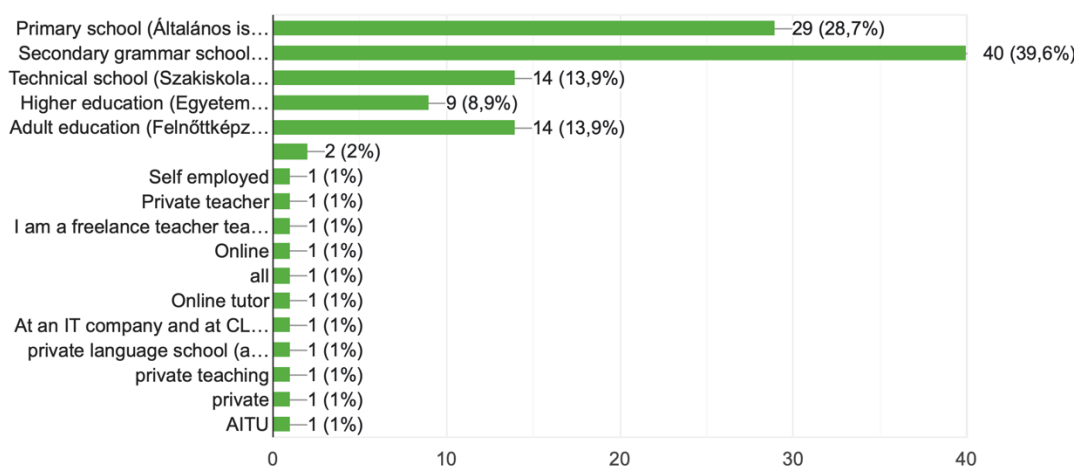
Personal information Gender

101 válasz



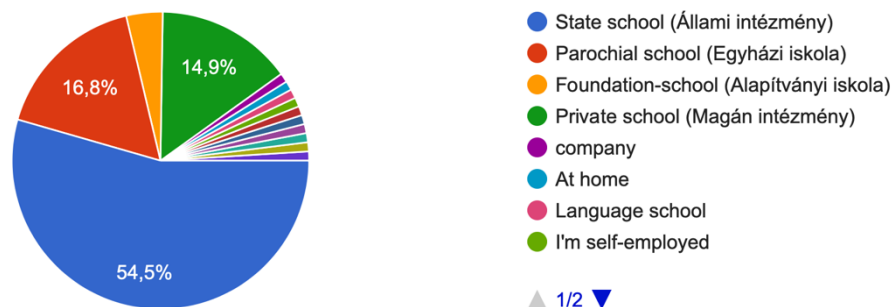
Where do you teach? School level

101 válasz



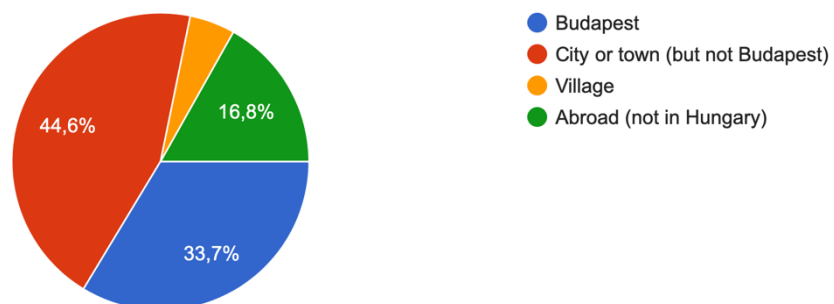
Type of institution

101 válasz



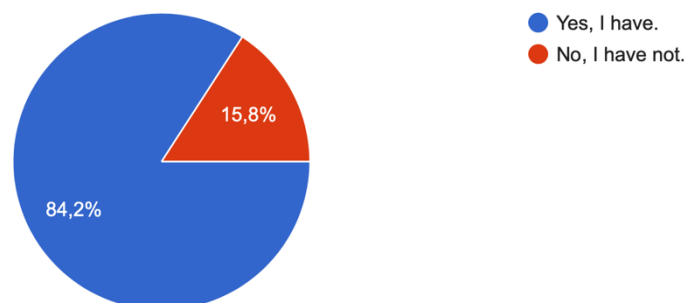
Location

101 válasz



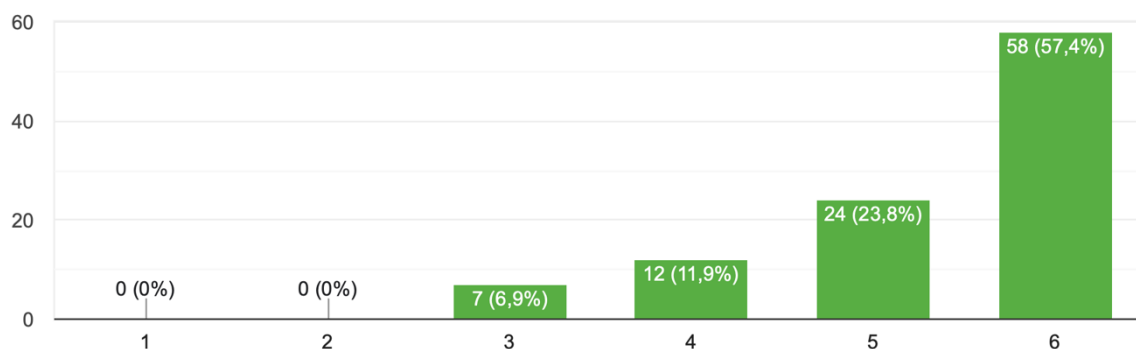
Have you ever used AI for any kind of teaching related purpose?

101 válasz



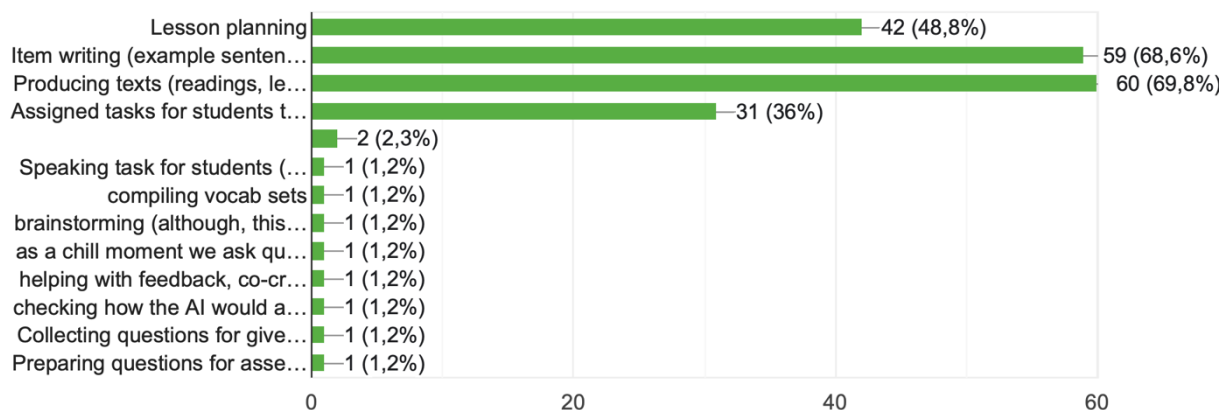
Do you find it important to experiment with newly emerged technologies and implement the use of up-to-date technological advancements into your teaching?

101 válasz



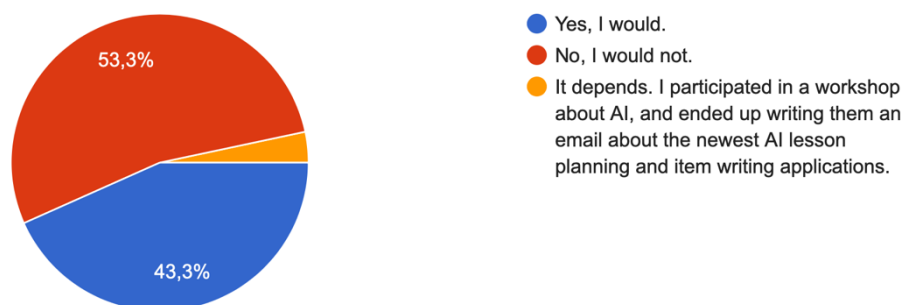
If yes, what did you use it for?

86 válasz



Would you consider yourself a regular user of AI?

30 válasz



2. Interview questions: Interview with the AI researcher (Anita Veró)

1. Could you tell me your important milestones in your career as an AI researcher? What inspired you to become an AI researcher?
2. Do you think artificial intelligence has or will have a subversive impact on education?
3. How could teachers use AI for the automatization of mundane tasks? Can AI become our personal assistant?
4. How could AI algorithms help with personalising learning material?
5. Can learning apps replace books or even the teacher? How can we find the human side of AI in this sense?
6. Many teachers complain about students having their home assignments done by AI. How difficult is it to spot this form of cheating with AI in your opinion? What is an ethical use of AI for assignments?
7. What would be some key topics to touch upon when teaching AI in any classroom? As digital competence is part of the national core curriculum, ideally, what knowledge, skills and abilities should a high school graduate possess regarding AI?
8. Some, usually non-IT-expert, people have radical views and claim that AI can cause worrying problems in the future. Where are we right now in the development of AI? What are the things you foresee? How can we mitigate the risks AI poses to humanity?
9. How can teachers implement AI in their everyday practices? What needs to be done to educate teachers on how to use AI? How can one become a regular user of AI?
10. Can you recommend any scholars, organizations or research groups that are worth to follow in AI research?

3. Interview questions: Interviews with teachers (Krisztina & Zita)

1. Could you tell me something about your teaching experience? How long have you been teaching? What are your subjects? Where have you taught so far?
2. Can you describe your general attitude towards using digital technology for learning?
3. Digital competence is one of the key competence in the Hungarian national curriculum. How can EFL teachers develop students' digital competence during English classes?
4. Do you remember the first time you have come across AI? How much do you know about AI?
5. Have you ever used AI for teaching related purposes? If yes, what for? If no, why not?
6. Have you ever encounter your students using AI? If yes, what did you do?
7. Is it important to educate learners on how to use AI? Please elaborate on your answer.
8. What could be the benefits of using AI in ELT?
 - a. What is the connection between AI and L2 learning motivation?
 - b. Can AI foster students' creativity in your opinion?
 - c. Can AI help teachers in the preparation of tests, lessons etc?
9. What could be the dangers of using AI in ELT?
 - a. In your opinion, is it easier to cheat on exam now that students have access to ChatGPT for example?
 - b. Should AI be banned in schools in your opinion?
 - c. How can the attitude towards knowledge change if AI has tasks done for students?
10. With AI's presence in education, do you foresee any changes in the way we will teach and learn?

4. Lesson plan: AI Gallery walk

Time: 11:05-11:50

Date: 14.02.2024

Level/ age: Upper-intermediate, 15/16-year-old students

Number of students: 16

Coursebook: English File Upper-intermediate

Main objective of the lesson: Practice vocabulary, develop speaking skills and digital competence

Assumed knowledge: Students know and are familiar with a wide array of vocabulary items, but it's crucial to put them into practice. As part of the active vocabulary, it will be easy to recall them in any situation.

Anticipated difficulties: Lack of motivation to talk. Indiscipline

Activity & Timing	Aims of Activity	Brief Description of Activity (process, procedure, etc)	Methodology/ Pedagogical rationale	Comments
0-10 min Fly swatter warmer	To practice vocabulary together, to recall words and phrases in connection with the work topic To make students to be able to define the words and phrases	1. The T places word cards on a desk, Ss stand in a circle around the table. 2. Two contestants play the game, they have the fly swatter in hand. 3. The rest of the group or the T will give out definitions, the players task is to swat on the right word when they hear the definition. 4. Ss collect the swatted cards, who have more cards wins the game. 5. Ss should change position to make everyone involved in the game in different ways.	Recalling words from the previous lessons is important for learning. With this activity, the whole class can practice together by more or less active involvement.	Does anyone know how we call this in English? (The T holds the fly swatter up)
10-34 min Gallery walk exercise	To foster a discussion the ideas mentioned in the text, to give student the opportunity to express their feeling and ideas about this topic	1. The T puts 8 questions regarding the topic <i>Global warming</i> in 8 different places of the classroom on the wall. 2. Ss receive post-it notes and in small groups they rotate and visit every station. 3. At the stations, they have to write their answers or ideas on the post-it notes and leave it there stuck on the wall. They can use multiple post-its. 4. At the last station students are asked to summarise the answer for the question according to the post-it notes they can see and present it to the class in 1-2 min.	Revising the topic.	8 questions are placed in 8 places, Post-its!
34-45 min Reflections: Opinion line	To foster critical thinking skills	1. Ss turn the page over and find the answers ChatGPT gave for the same questions. 2. The asks Ss to compare the results. 3. In an opinion line activity Ss reflect on AI and its punctuality.	Developing digital competence and digital literacy	Pre-prepared questions

5. Activity plan: Me, myself and AI

Time: 11:05-11:50

Date: 19.03.2024

Level/ age: Upper-intermediate, 15/16-year-old students

Number of students: 16

Main objective of the activity: Practice vocabulary: body parts, appearance and style; practice language functions such as describing people, comparing and contrasting.

Activity	Aims of Activity	Brief Description of Activity (process, procedure, etc)	Methodology/ Pedagogical rationale	Comments
Pre-activity stage	Get Ss engaged and produce useful language for the main activity	1. Ss are put into pairs, their task is to describe each other's appearance and style in speaking. 2. While one of them is talking, the other S jots down the key words and phrases (such as chestnut brown eyes)	Recalling previously learnt vocabulary and practicing describing people	
Main activity	Familiarise with AI image generator software, learn the basics of prompting	1. Ss develop a prompt in pairs for image generation, their goal is to create a life-like image of themselves. They can use their mobile phones or the T's computer. 2. The T helps with the software and assists learners during the activity if needed. 3. Having generated the picture we ask the Ss to compare the result to themselves. 4. Ss upload their generated image to a Google Drive	Developing digital literacy, fostering collaboration and practicing describing	DALL-E for image generation
Follow-up activity	Reflection	1. The class comes together, Ss present their result and we reflect on the generated images. 2. Ss share their prompts with each other, for which adjustments can be suggested. 3. Ss spot differences and similarities within the pictures and reflect on the effectivity of their work.	Developing analytic skills	The T can share the images with the projector

6. Activity plan: Creative writing with AI

Time: 10:10-10:55

Date: 26.03.2024

Level/ age: Upper-intermediate, 15/16-year-old students

Number of students: 16

Main objective of the activity: Writing practice, developing cooperative skills in groupwork, advancing prompting skills

Activity	Aims of Activity	Brief Description of Activity (process, procedure, etc)	Methodology/ Pedagogical rationale	Comments
Pre- activity stage	Get Ss engaged and produce useful language for the main activity	1. Ss are put into small groups, they receive a short story title 2. Their task is to brainstorm ideas on what kind of story this may be (genre, plot, twists etc.)	Brainstorming	ChatGPT for text, DALL-E for image generation
Main activity	Get Ss creative and practice advance level prompting with generative AI	1. Ss start writing the story in cooperation with ChatGPT, Ss develop prompts on the agreed genre, characters, location etc. 2. Ss receive some guidance as the teacher reveals some elements of the story. Ss have to work those in by generating the image of the location or the characters, for example. 3. The T mingles in the classroom and facilitates the process. 4. Finally, Ss have to write the ending of the story without ChatGPT. 5. Ss put together a booklet which can be presented in class.	Developing digital literacy, fostering cooperation and practicing writing	
Follow-up activity	Reflection	1. The class comes together, Ss present their work. Ss can reflect on the stories by leaving written comments. 2. The T provides feedback on the stories for every group	Developing giving reflections in writing	

7. Students' evaluation sheet.

Please evaluate the exercise on the scale of 1 to 5 (*5 being the best*) by circling **only one** number in every line.

Engagement (How fun was the exercise? How active were you/your group? Did time pass quickly or slowly?)	1 2 3 4 5
Inclusivity (How well could everyone take part in the activity? Was there enough room for participation? Could you access the technology easily?)	1 2 3 4 5
Usefulness (How useful was the exercise for learning English? Did you learn something new? Can you use what you learnt outside of school?)	1 2 3 4 5