BENEFITS AND CHALLENGES OF ARTIFICIAL INTELLIGENCE IN ENGLISH LANGUAGE TEACHING

Tatjana Dugošija
Western Serbia Academy of Applied Studies, Serbia, tanja.dugosija@vipos.edu.rs

Abstract: Artificial Intelligence (AI) has the capacity to facilitate and enhance various aspects of human existence such as transportation, healthcare, entertainment, and education. In recent years, AI-powered language learning tools have gained significant attention due to their potential to revolutionize language teaching and learning. The integration of AI in English Language Teaching (ELT) presents a promising yet complex area, containing both advantages and challenges. The benefits encompass a wide range of advantages, including personalized learning experience, adaptive curriculum, and enhanced engagement through interactive AI applications. AI-powered tools offer personalized content delivery, adapting to individual learning styles and pacing, and thereby fostering more efficient and effective learning outcomes. Moreover, these tools often incorporate natural language processing (NLP) algorithms, enabling immersive language practice, automated feedback, and real-time assessment, which significantly improve the learning process. Notwithstanding these advantages, certain ethical issues arise, primarily those concerning the privacy of users' data and algorithm bias. Additionally, an overreliance on AI tools might diminish human interaction, affecting social and communicative aspects of language learning. Furthermore, the accessibility and affordability of such technology remain unequal, posing limitations for learners with restricted access to digital resources. This paper explores the multifaceted nature of AI's role in ELT, delving into the benefits it offers as well as potential challenges arising from AI implementation. It emphasizes the importance of an approach that would, on the one hand, effectively use the advantages of AI, and on the other hand, minimize its downsides in order to maximize its potential in enhancing English language learning experience.
Keywords: artificial intelligence, English language teaching, tools, benefits, challenges.

1. INTRODUCTION

The Fourth Industrial Revolution (4IR or Industry 4.0), which refers to rapid technological advancements in the 21st century focusing on interconnectivity, automation, advanced manufacturing technology, and machine learning has brought numerous technological wonders, prompting society to adapt technologically to perform various activities faster. One of the technological advancements of the 4IR is Artificial Intelligence (AI). In recent years, AI (Artificial Intelligence) has woven itself in almost every aspect of human activity. AI-enabled technologies are used in transportation, healthcare, communication, science, education, finance and banking, entertainment, retail, customer service, and manufacturing, to name a few, demonstrating its huge potential to facilitate human activities and improve many aspects of both personal and professional life.

AI technology is based on the idea of creating machines that can complete tasks which normally require cognitive abilities of human beings by imitating human intelligence and learning from previously made errors, and which are enabled to analyze, process and utilize data in order to gradually enhance their level of performance (Stewart et al., 2020; Wei, 2023), and ultimately perform these tasks with a high degree of efficiency and accuracy (Bartneck et al., 2021). Currently, a wide range of applications such as recommendation systems used on e-commerce platforms, image and facial recognition in security systems, autonomous vehicles, fraud detection in financial institutions, manufacturing robots, social media monitoring, virtual travel booking agents, marketing chatbots and customer service, speech recognition, and language translation, among others, are based on artificial intelligence. Importantly, some of these applications can already be considered a separate discipline as a result of their impressive development and widespread use (Moulieswaran & Prasantha Kumar, 2023, p. 123).

The Fourth Industrial Revolution and the use of AI technologies are altering not only the business and industrial landscapes but also the domain of education, which is undergoing rapid changes and is now referred to as Education 4.0 (Moulieswaran & Prasantha Kumar, 2022, p. 89), a teaching and learning approach which aims to revolutionize education in the future by leveraging cutting-edge technology and automation in its teaching and learning methodologies. Consequently, teachers, researchers, and governments across the globe have become increasingly interested in artificial intelligence and aware of its capacity to transform conventional approaches to teaching and learning (Michalski et al., 2013; Ilkka, 2018).

It is undeniable truth that today's youth, all of them being digital natives, have particular expectations regarding how AI should be incorporated into teaching and learning, particularly in language education. Therefore it is crucial for educational professionals in the contemporary era to acquire deeper understanding of these modern, AI-related pedagogical innovations. However, the rapid expansion of AI technologies and applications poses a challenge for

educational professionals, as they find it increasingly difficult to learn how to use them in order to make innovative learning materials.

2. ARTIFICIAL INTELLIGENCE IN ENGLISH LANGUAGE TEACHING (ELT)

The framework for developing and using AI language learning systems has been provided by Intelligent Computer-Assisted Language Learning (ICALL) (Hassani et al., 2016), which is primarily based on utilizing AI and machine learning algorithms in order to assist with language learning (Pokrivčáková, 2019). In general, on the basis of guidelines provided by ICALL, AI language learning technologies are developed and used with a view to helping people learn foreign languages in an efficient and engaging way (Rebolledo Font de la Vall & González Araya, 2023).

In recent years, AI technologies have been increasingly included into ELT to improve motivation, efficiency and accessibility of teaching and learning. Along with the emergence and growth of Natural Language Processing (NLP), which combines computer science and linguistics, and enables computers to understand and generate human language, both spoken and written (Kumar Attar & Komal, 2022, p. 285), more advanced language learning software, able to communicate with language learners in a manner that greatly resembles human communication, has been developed and put into use as a result of developments in AI. This implementation most commonly refers to the usage of personalized learning programs, chatbots, virtual tutors and language learning games.

Numerous AI-powered applications, platforms and assistants have been incorporated into the teaching and learning of languages, such as Duolingo, Coursera, Babbel, ChatGPT, Roseta Stone, Busuu, Linguist, Grammarly or Google Assistant. They offer customized learning content and immediate feedback to students (Luckin et al., 2016), and help them learn at their own convenience as well as more independently and efficiently. By analyzing students' performance data, AI can offer personalized learning programs and language exercises adapted to different students' needs, proficiency levels and learning styles, and provide immediate personalized feedback on students' vocabulary, grammar and pronunciation, which not only makes language learning more interactive but also helps students achieve better results. This also contributes to increased learner autonomy in developing their English language proficiency (Rukiati et al., 2023, p. 33).

3. BENEFITS OF USING AI IN ENGLISH LANGUAGE TEACHING

AI technologies provide a variety of learning materials and methods for both learning and teaching languages, especially for EFL (English as a Foreign Language) and ESL (English as a Second Language). The utilization of AI technologies, both inside and outside the classroom, can support students in achieving their learning objectives by assisting with different learning challenges and enhancing students' achievements.

Numerous authors recognize the role of AI in personalizing learning experience as one of its major contributions to English language teaching (Chen, Zou, Xie, & Cheng, 2021; Luckin et al., 2016; Rebolledo Font de la Vall & González Araya, 2023). Many AI-powered tools use algorithms to track users' progress. By analyzing students' performance data, these language learning tools can identify areas requiring additional practice and improvement, and recommend future lessons and learning material adapted to students' specific needs and abilities as well as their learning styles and pace, which is hardly a realistic scenario in traditional in-person classes. Therefore it can be said that "AI has revolutionized autonomous English learning" (Rukiati et al., 2023, p. 33).

Closely related to personalized learning that AI tools offer is the ability of AI language learning tools to increase effectiveness and speed at which students learn. They save students valuable time not only by automating specific tasks based on their needs and progress but also by providing immediate feedback on the use of vocabulary, grammar, pronunciation, and writing. This helps students recognize areas that require additional practice, and improve their language skills faster (Rebolledo Font de la Vall & González Araya, 2023; Xie, Chu, Hwang & Wang, 2019).

Accessibility is another advantage of AI in English language learning and teaching. AI-powered tools are frequently available online or as mobile applications, ensuring accessibility across devices with internet access. This enables students to study whenever they find it convenient and from any place. Moreover, conventional language learning in language schools or with the help of a tutor undoubtedly entails a greater financial burden than learning supported by AI tools, many of which are inexpensive or even free to use.

Importantly, AI-supported language learning tools provide enjoyable and stimulating learning, which is not always the case with traditional classrooms, especially if languages are studied in large groups. They provide interesting educational activities to enhance overall language proficiency (Divekar et al., 2021), while keeping students enthusiastic and motivated (Wei, 2023).

Finally, with the aid of AI language learning tools, students can experience diverse cultures. By offering interactive lessons and real-life situations, these tools can familiarize students with customs, social norms, practices and

traditions of different cultures and nations, which contributes to their cultural awareness (Rebolledo Font de la Vall & González Araya, 2023).

AI-powered applications and platforms offer an abundance of opportunities for teachers to enhance their productivity and efficiency, and design more creative and engaging lessons (Hassani et al., 2016; Haspari & Wu, 2022; Sharples, 2022; Rukiati et al., 2023; Wei, 2023). Using AI-driven analytics, teachers can obtain valuable insights into each student's performance. Based on this data, AI can instantly adapt language learning materials, which enables teachers to offer individualized instruction by adapting to strengths, weaknesses and learning pace of each student. AI education tools such as Curipod, Eduaide.Ai, OpenAI, Quizizz, Slidesgo, Canva Magic Write, and many others, enable teachers to, within minutes and simply by providing short prompts with keywords, generate a vast range of educational resources such as lesson plans, instructional materials, visually engaging presentations, and customized interactive lessons containing text, images and various activities adapted to specific students' needs.

AI tools can also help teachers automate and streamline certain time consuming tasks such as grading assessments, generating exercises, and providing feedback. These features are highly important for teachers, as they now have more time available to devote to other aspects of teaching such as lesson design and planning how to better engage students in class activities (Rukiati et al., 2023).

Using AI in listening and speaking practice in ELT

AI-powered platforms and applications are particularly useful for enhancing students' listening and speaking skills. They provide an engaging learning environment which imitates real-life situations by using natural language processing (NLP) to analyze and respond to students' utterances (Hapsari & Wu, 2022), and have the ability to create listening and speaking exercises adapted to interests and level of proficiency of each individual student (Zhou, 2020). There is an abundance of AI tools that can help students enhance these skills in an interactive and personalized manner, such as Tutor AI, Conversly, Speak, Talkio AI, Lingostar, Duolingo, ELSA Speak, HelloTalk, and Speechling, among others. They act as tutors by providing personalized instruction, targeted exercises, and authentic practice scenarios with virtual assistants, and assess students' spoken language by comparing their pronunciation and intonation to those of native speakers, and providing real-time feedback and suggestions for improvement. Some of AI tools are specifically designed for certain types of communicative situations, such as Job Interview AI and TalkBerry, which simulate job interviews and offer an opportunity to improve spoken English and job interview skills in a safe environment.

However, AI tools lack the ability to replicate and conduct a real-life spoken interaction with all its subtle elements and feedback as when communicating face-to-face with a person (Rukiati et al., 2023). Therefore they should not be a substitute for practicing listening and speaking in real-life situations with native English speakers or in in-person classes with peers, English teachers or tutors, but should only be used to complement these more traditional methods for conversation practice.

Using AI in writing

Despite a heated debate over using AI-powered tools to assist students with their writing tasks, some authors support this practice (Fitria, 2021; Gayed et al., 2022). AI-supported writing assistants, such as Grammarly and LanguageTool, generally analyze produced texts and offer recommendations as to how these could be improved in terms of spelling, punctuation, grammar, and style. This can free up more time for students to concentrate on more creative aspects, and help them produce more polished and professional writing. Another increasingly popular platform is ChatGPT, a natural language processing (NLP) tool powered by AI, which can assist students in creating texts. Its features include generating ideas, offering immediate feedback and suggestions, and assisting with vocabulary and grammar. However, due to its ability to generate texts in a fraction of time and only prompted by keywords or phrases, it is likely to pave the way toward unprecedented levels of academic misconduct.

Using AI in reading comprehension practice in ELT

Students' reading skills can also be improved by relying on numerous functions offered by AI-supported tools (Lestari et al., 2022). More specifically, they can improve students' reading comprehension and vocabulary range. By the use of adaptive learning algorithms, these tools provide personalized instruction on the basis of each student's needs, interests, and English proficiency level. In this way, AI tools provide targeted reading exercises, which may include gap-fill exercises, comprehension quizzes, flashcards creation, and interactive reading games, and have the ability to automate grading and provide feedback and suggestions for improvement. They can also help students expand their vocabulary range by offering definitions for words or phrases and drawing their attention to unfamiliar vocabulary items (Huang et al., 2023). By utilizing these features of AI tools, students can identify their strengths and weaknesses and enhance their overall reading skills in a time-efficient manner.

Similar to speaking, listening, and writing practice, AI tools providing reading practice, such as Readlang, ReadWorks or Newsela, among others, should only be a valuable addition to more traditional reading practice to

help students develop their reading comprehension in a variety of situations and not only in those of their greatest interest.

4. CHALLENGES OF USING AI IN ENGLISH LANGUAGE TEACHING

Despite numerous advantages and benefits for both students and teachers, there are some serious challenges and downsides of using AI-powered tools in English language teaching and learning that should not be ignored or overlooked (Huang et al., 2023; Godwin-Jones, 2022; Rebolledo Font de la Vall & González Araya, 2023; Rukiati et al., 2023).

One of the major challenges is increasing overreliance on technology, which may result in reduced human interaction and affect social and communicative aspects of language learning in a negative manner. As Khanzode and Sarode (2020) point out, this is the primary downside of AI-supported tools. Although certain AI tools provide live conversation practice, either with language tutors or native English speakers, vast majority of these tools offer self-guided learning experience that does not involve human interaction.

Closely related to this issue is a difficulty in understanding and replicating language peculiarities such as idiomatic and colloquial expressions, or regional accents (Rebolledo Font de la Vall & González Araya, 2023), which may result in errors or awkward phrasing, as well as a limited ability of AI tools to identify errors and provide explanations as accurately as human teachers would, which may result in students repeating errors or developing bad language learning habits.

In addition, with an ever-increasing number of AI-supported language learning tools available, English language teachers are facing the challenge of keeping up with the latest trends and technologies and learning how to use them to produce innovative and engaging learning materials. Institutional support may be the key solution to this problem. Education institutions should provide professional development opportunities, such as workshops, seminars, or training courses for English teachers as well as teachers of other languages, to learn about various AI language learning tools available and the ways to integrate them effectively into their teaching. Pedro et al. (2019) also highlight the importance of mentorship, where less experienced teachers would work closely with those more experienced in using and integrating AI-powered tools into teaching. This practice can provide a valuable opportunity for support and learning, and help teachers respond to and overcome challenges.

Besides these challenges, there are also certain ethical considerations to keep in mind when using AI tools in English language teaching and learning. One of them is a privacy issue. AI tools collect information about students' and teachers' interaction with platforms, and there is a possibility that this information might be misused. Therefore it is essential to ensure privacy protection so that personal information is protected and safe, and not shared without users' consent. Accessibility is another issue, as the internet and up-to-date technology are not equally accessible to all students. For this reason, if AI language learning tools are integrated into language teaching, it is crucial to ensure that they are easily accessible to both teachers and all students.

One of the major challenges and issues of concern currently facing not only English language teachers but education professionals in general is growing use of Transformer AI programs such as ChatGPT for writing assignments. Students use them to generate essays in a fraction of time, plagiarism software is hardly likely to detect whether these essays have been produced by Transformer AI programs as the text is generated and not copied, while teachers are faced with grading essays produced by ChatGTP (Sharples, 2022, pp. 1121-1122). Besides this practice being a serious academic misconduct, it can also be detrimental to students' learning and the knowledge acquired through this AI tool, as Transformer AI programs may invent information, such as references and research studies or provide information that is not wholly truthful. Moreover, they have no ability to think critically as humans do, or to reflect on the text they have produced and determine whether it is accurate. Another downside of these tools is lack of creativity, and therefore reflexive or argumentative essays, which are often assigned to English language students, are frequently failed when produced by these tools (p. 1122). At the moment, a way to cope with this problem is to restrict writing assignments to supervised in-class exams, which is a rather time consuming activity.

This points to the fact that while AI-powered language learning tools can, on the one hand, help language teachers generate a vast range of educational resources and customized interactive lessons adapted to students' needs and language proficiency levels, and save their time by automating time consuming activities such as grading assessments and providing feedback, on the other hand, there are also challenges of using these tools, such as dehumanization of language learning and a threat of academic misconduct, that should be considered.

5. CONCLUSION

The integration of AI in English Language Teaching (ELT) presents an array of benefits alongside significant challenges. The advancements in AI technology offer personalized learning experience, adaptive real-time feedback, and enhanced language acquisition opportunities for students. These innovations enable teachers to adapt their

teaching to diverse learning styles and individual needs of students, fostering a more effective and engaging learning environment. Additionally, AI-powered tools facilitate various activities performed by teachers, such as preparation of learning resources, grading assessments and providing feedback, and can improve language practice, comprehension, fluency, and overall language proficiency by supplementing traditional teaching methods with interactive AI applications through interactive applications.

However, the implementation of AI in ELT entails certain obstacles and difficulties. The most obvious challenges encompass ethical considerations, such as data privacy, accessibility of AI-powered tools for all students, and the utilization of AI tools in writing assignments. Furthermore, the potential overreliance on technology might diminish human interaction and the nuanced aspects of language learning, like cultural context, empathy, and social dynamics.

Therefore, to achieve the full potential of AI in English language teaching while reducing any possible risks and challenges, a balanced approach is crucial. Language teachers should embrace AI as a complementary tool rather than a substitute for human instruction and interaction, and combine the benefits of AI technology with their own experience and expertise. Additionally, continued research, collaboration, and continuous professional development are imperative in order to cope with difficulties and optimize the integration of AI in ELT for an effective language learning experience.

REFERENCES

Bartneck, C., Lütge, C., Wagner, A., & Welsh, S. (2021). What Is AI? *An Introduction to Ethics in Robotics and AI* (pp. 5-16). https://doi.org/10.1007/978-3-030-51110-4_2

Chen, X., Zou, D., Xie, H., & Cheng, G. (2021). Twenty years of personalized language learning. *Educational Technology & Society*, *24*(1), 205-222.

Divekar, R. R., Drozdal, J., Chabot, S., Zhou, Y., Su, H., Chen, Y., Zhu, H., Hendler, J. A., & Braasch, J. (2021). Foreign language acquisition via artificial intelligence and extended reality: Design and evaluation. *Computer Assisted Language Learning*, *35*, 2332-2360. https://doi.org/10.1080/09588221.2021.1879162

Fitria, T. N. (2021). Grammarly as AI-powered English writing assistant: Students' alternative for writing English. *Metathesis: Journal of English Language, Literature, and Teaching*, *1*(5), 65-78. https://doi.org/10.31002/metathesis.v5i1.3519

Gayed, J. M., Carlon, M. K. J., Oriola, A. M., & Cross, J. S. (2022). Exploring an AI-based writing assistant's impact on English language learners. *Computers and Education: Artificial Intelligence*, *3*, 100055. https://doi.org/10.1016/j.caeai.2022.100055

Godwin-Jones, R. (2022). Partnering with AI: Intelligent writing assistance and instructed language learning. *Language Learning & Technology*, *26*(2), 5-24. https://doi.org/http://doi.org/10125/73474

Hassani, K., Nahvi, A., & Ahmadi, A. (2016). Design and implementation of an intelligent virtual environment for improving speaking and listening skills. *Interactive Learning Environments*, *24*(1), 252-271.

Hapsari, I. P., & Wu, TT. (2022). AI chatbots learning model in English speaking skill: Alleviating speaking anxiety, boosting enjoyment, and fostering critical thinking. *Lecture Notes in Computer Science*, *13449*, 444-453. https://doi.org/10.1007/978-3-031-15273-3_49

Huang, X., Zou, D., Cheng, G., Chen, X., & Xie, H. (2023). Trends, research issues and applications of artificial intelligence in language education. *Educational Technology and Society*, *26*(1), 112-131. https://doi.org/10.30191/ETS.202301_26(1).0009

Ilkka, T. (2018). *The impact of artificial intelligence on learning, teaching, and education*. Maastricht: European Union.

Khanzode, K. C. A., & Sarode, R. D. (2020). Advantages and disadvantages of artificial intelligence and machine learning: A literature review. *International Journal of Library & Information Science (IJLIS)*, *9*(1), 30-36.

Kumar Attar, R., & Komal (2022). The emergence of natural language processing (NLP) techniques in healthcare AI. In S. A. Parah, M. Rashid & V. Varadarajan (Eds.), *Artificial Intelligence for Innovative Healthcare Informatics* (pp. 285-307). Springer, Cham. https://doi.org/10.1007/978-3-030-96569-3_14

Lestari, S., Usadiati, W., & Misrita, M. (2022). The correlation between students' artificial intelligence and their English reading skills achievement. *Bahasa: Jurnal Keilmuan Pendidikan Bahasa Dan Sastra Indonesia*, *3*(2), 103–111. https://doi.org/10.26499/bahasa.v3i2.110

Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). *Intelligence unleashed: An argument for AI in education.* London: Pearson.

Michalski, R. S., Carbonell, J. G., & Mitchell, T. M. (2013). *Machine learning: An artificial intelligence approach*. Berlin: Springer Science & Business Media.

Moulieswaran, N., & Prasantha Kumar, N. S. (2023). Google Assistant Assisted Language Learning (GAALL): ESL learners' perception and problem towards AI-powered Google Assistant-Assisted English language learning. *Studies in Media and Communication, 11*(4), 122-130.

Moulieswaran, N., & Prasantha Kumar, N. S. (2022). Education 4.0 – An artificial intelligence technology driven second language learning and teaching. In J. Karthikeyan & N. Y. Jin (Eds.), *Neophytes of ELT Research*. Royal Book Publishing.

Pedro, F., Subosa, M., Rivas, A., & Valverde, P. (2019). *Artificial intelligence in education: Challenges and opportunities for sustainable development*. UNESCO. Retrieved from https://www.academia.edu/68859749/Artificial_intelligence_in_education_challenges_and_opportunities_for_sustainable_development

Pokrivčáková, S. (2019). Preparing teachers for the application of AI-powered technologies in foreign language education. *Journal of Language and Cultural Education*, *7*(3), 135-153. https://doi.org/10.2478/jolace-2019-0025

Rebolledo Font de la Vall, R., & González Araya, F. (2023). Exploring the benefits and challenges of AI-language learning tools. *International Journal of Social Sciences and Humanities Invention*, *10*(1), 7569–7576. https://doi.org/10.18535/ijsshi/v10i01.02

Rukiati, E., Wicaksono, J. A., Taufan, G. T. ., & Suharsono, D. D. (2023). AI on learning English: Application, benefit, and threat. *Journal of Language, Communication, and Tourism*, *1*(2), 32–40. https://doi.org/10.25047/jlct.v1i2.3967

Sharples, M. (2022). Automated essay writing: An AIED opinion. International Journal of Artificial Intelligence in Education, 32, 1119-1126. https://doi.org/10.1007/s40593-022-00300-7

Stewart, J. C., Davis, G. A., & Igoche, D. A. (2020). Ai, Iot, and Aiot: Definitions and impacts on the artificial intelligence curriculum. *Issues In Information Systems*, *21*(4), 135-142. https://doi.org/10.48009/4_iis_2020_135-142

Wei, L. (2023). Artificial intelligence in language instruction: Impact on English learning achievement, L2 motivation, and self-regulated learning. *Frontiers in Psychology*, *14*, 1261955, 1-14. https://doi.org/10.3389/fpsyg.2023.1261955

Xie, H., Chu, H. C., Hwang, G. J., & Wang, C. C. (2019). Trends and development in technology-enhanced adaptive/personalized learning: A systematic review of journal publications from 2007 to 2017. *Computers & Education, 140*, 103599.

Zhou, J. (2020). Design of AI-based self-learning platform for college English listening. *Proceedings of 2020 2nd International Conference on Machine Learning, Big Data and Business Intelligence (MLBDBI)*. https://doi.org/10.1109/MLBDBI51377.2020.00114