ARTIFICIAL INTELLIGENCE REVOLUTIONIZING THE LANGUAGE LEARNING PROCESS

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Summary

The article explores the significance of artificial intelligence (AI) in education, the main attention being paid to increasing influence on foreign language learning. It discusses various AI platforms and tools such as GTPchat, Duolingo, Anki, Speechify, LingQ, Grammarly and many others in respect to foreign languages learning process, and provides practical examples of their applications in language learning. The article highlights the role of AI in preparing students for the future by providing practical experiences and fostering critical thinking and problem-solving skills. The article presents a range of resources available for educators and students to learn in groups or individually. By leveraging these resources, educators can create engaging learning environments that inspire students to explore and pursue careers in emerging fields. The article emphasizes the benefits of incorporating AI resources in education as well as hardships in this field. Suggestions and ideas as to implementation of AI for language learning are also presented in the article.

Key words: AI, Foreign Language, Tools, Classroom learning, Self-study.

1. Introduction

Artificial intelligence (AI) is a method of making a computer or software "think" like the human brain. This is achieved by studying the patterns of the human brain and analyzing cognitive processes. The result of this research is the development of intelligent software and systems *(Gigacloud, 2023)*. Artificial intelligence is essentially the ability of machines to mimic human cognitive functions like learning and problem-solving. It doesn't achieve true consciousness, but rather utilizes complex algorithms to analyze massive amounts of data, identify patterns, and make predictions based on those patterns. This capability is fundamentally changing how we interact with technology and the world around us. As AI technology continues to develop, its applications will undoubtedly reach even further, potentially revolutionizing fields like education and scientific research. It's important to remember that AI is a tool, and like any tool, its impact depends on how we use it.

A few centuries ago, learning a foreign language was a much different experience than it is today. Wealthy people could afford tutoring from native speakers often through scholars. Travel and immersion methods were also important, as traders, diplomats, and explorers would learn languages directly by living in foreign cultures. Additionally, classical education often involved learning Latin and Greek through grammar-translation methods and the study of

classical texts. Over the years, many learners relied on phrasebooks, dictionaries, and handwritten manuscripts. The process was often slow and accessible only to the educated elite.

With the development of AI creating foreign language training programs using AI became possible but turned out to be a difficult task for several reasons: linguistic complexity, problems with emotional and motivational aspects, technological limitations, cultural and ethical aspects, etc. Despite these difficulties, AI already helps in learning languages, and over time the technologies will become more and more effective, in particular, in online methods. On their basis, applications and full-fledged language platforms are developed that provide more opportunities for both students and teachers. Besides, there are ongoing discussions about the ethical considerations surrounding AI bias and the responsible development of this powerful technology

Therefore, the main point of interest of the present paper is to consider AI-applications and tools in transforming language learning. To achieve this purpose, we suggest to consider the following items:
– Brief overview of AI focusing on education.
– The types of AI Tools in education
– Focus of AI on classroom lessons and individual studies
– Benefits and challenges of implementation of these platforms in educational and scientific processes
– Potential of AI Applications in Education

2. AI Tools in Education

AI-powered language learning tools are represented by a number of programs that provide a lot of opportunities for learning languages thanks to adaptive technologies, gamification, AI-Driven Feedback and motivation. The choice of AI tools usually depends on the level of knowledge and the purpose of the lesson where AI can analyze errors and select exercises adjusted for the student's level. For example, *Anki* or *Duolingo* platforms offer dynamic repetition: complex words and grammar are repeated more often, simple ones, less often. *ELSA Speak, Speechify* platforms can analyze speech and correct the interlocutor, give phonetic clues and train the correct pronunciation. *ChatGPT* and *Mondly* can act as virtual interlocutors. AI finds the best partners for conversations e.g. *Tandem, HelloTalk*, etc. Machine learning-based tests determine the level of language proficiency (A1–C2), and help to accurately identify weaknesses and strengths. Moreover, not only the answers are analyzed, but also the speed, complexity of vocabulary (*Duolingo English Test*), etc. There are also AI platforms such as *Google Lens, Reverso Context, DeepL Translator* and others that help to improve translation skills.

Among the wide number of platforms for teaching a foreign language the Ministry of Education and Science of Ukraine suggests the Project named "Instructional and Methodological Recommendations "On the Implementation and Use of Artificial Intelligence Technologies in General Secondary Education Institutions" to be widely used in the New Ukrainian School, taking into account age restrictions on the use of services based on artificial intelligence *(Project, 2025)*.

When it comes to learning and education Artificial intelligence (AI) offers numerous tools capable of changing for the better or even revolutionizing the very process of education. It is possible to implement one of these tools or some of them into the classroom lesson. Let us have a close look at the choice of tools that could be especially useful for learning foreign languages and mainly English in elementary school, high school and university.

First of all, let us discuss what AI tools are preferable for elementary school. The primary purpose of using AI in primary school lessons lies in the creation of a gaming atmosphere with the help of adaptive games as gamification plays a crucial role for the primary schoolchildren who are young enough to play rather than study. With the help of a game teachers can join the hard work of getting knowledge with keeping kids' attention to develop various skills such as logic, memory and attention. Then, with the help of interactive books and tools AI can generate personalized assignments by adapting to each student's learning pace and style. And finally, it is possible to start using virtual assistants. Chatbots can respond to simple questions, assist with homework, and provide additional information on studied topics.

High school differs from primary or secondary schools in the focus of AI applications and the choice of its tools. AI can generate texts, images, and video materials for the development of educational resources. For example, GPT-based tools can assist in creating various types of texts, ranging from simple explanations to more complex essays. AI can help students analyze large volumes of data, which is particularly useful for natural sciences and social disciplines. AI-driven platforms can offer individualized learning plans tailored to each student's needs.

University utilizes AI for scientific data analysis, model creation, and outcome prediction. Advanced AI-powered platforms can offer interactive courses that include video lectures, assignments, and discussion forums. AI can also assist in creating professional presentations by automatically generating slides and selecting relevant visual material.

2.1. Brief Description of Common AI Language Platforms for Classroom and Self-Study

It is important to remember that AI is alive and well in our world, and that in the digital world, it is not always possible to completely abandon these models because they are so easily accessible and many of them are free to access. The difference is in using the value they can provide as tools.It is important to correctly integrate AI into the educational process so that it complements classes, not replaces them. The choice of AI resources is determined by the curriculum, type and topic of the lesson. Based on the development of students' competences (listening, speaking, writing, reading), the Ministry of Education and Science of Ukraine, for example, suggests using certain AI resources. An overview of the commonest AI resources used in modern education is given in Table 1.

Table 1

AI Platforms for Learning Foreign Languages in a Classroom and for Self-Study

AI Platforms	Focus	Classroom	Independent Work
Chat GPT	*Speaking:* all kinds of communication in a foreign language	Dialogue practice, error checking	Essay writing assistance, grammar analysis, exam preparation
Duolingo, Anki	*Dynamic repetition:* gamified language learning, flashcards for memorizing words	Use in study groups, creating common sets of cards	Individual learning of words
Speechify	*Listening:* correct pronunciation, text-to-speech practice.	Reading educational materials aloud	Listening practice
LingQ	*Reading* with automatic translation	Text analysis in the classroom	Self-study of new vocabulary
Grammarly	*Writing:* checking grammar, style of speech	Students editing their work	Improving writing skills

Table 1 (continuance)

Google Lens	Text recognition and transla-tion	Learning new words, working with con-text	Translation from pic-tures and signs
Reverso Context	Translation with examples in context	Analysis of the meanings of words and expressions	Deep understanding of phrases in context
DeepL Trans-lator	Accurate translation, analysis of language nuances	Extended translation with explanations	Help with text trans-lation

The first six AI platforms are aimed at developing the essential learning skills such as speaking, listening, writing and reading while the last three platforms are aimed at improving translating competences of the students.

3. Application Examples of Popular Platforms for Learning a Foreign Language

a. Chat GPT

For the last few years, the use of Chat GPT *(ChatGPT, 2025)* has been discussed in soci-ety, and in all countries without exception. Some authors suggest banning it, blocking access to the platform in schools, while others, on the contrary, see it as almost a replacement for a teacher. Kevin Roose in his article "Don't Ban ChatGPT in Schools. Teach with It" argues that banning this powerful resource is the wrong step. ChatGPT can be used as a tool, in our case, to help in learning a foreign language both in the classroom and independently *(Roose K., 2023)*.

ChatGPT can be used as a tool for classroom work as well as for self-study. ChatGPT is an artificial intelligence that can converse with users with the help of natural language. The ser-vice is powered by deep learning, which teaches it to understand natural language and generate responses to user requests and commands, called prompts.

To get the most out of ChatGPT, you should clearly formulate the question or problem you want to solve, so called prompts. This will ensure a more accurate and understandable answer. To get the most useful information, you should use queries that match the topic you want to study. You can also use phrases or queries to practice grammar, pronunciation, and other aspects of the language. Basic queries for ChatGPT for learning English:

– "Hi, I want to learn English. Help me get started."
– "Show me exercises to learn English grammar."
– "Let's practice speaking in English."
– "Answer a question in English."
– "Show me an example of using a word/phrase in a sentence."

With the help of artificial intelligence, it is possible to develop a list of essential English competencies.

– *Working on grammar.* You can ask for an explanation of a grammar rule or tense: "Please explain when to use the present continuous tense." You can also give the task of show-ing examples of the use of a grammar structure: "Please give me 3 examples of the phrasal verb "look for"". Add to one of the messages, for example, the prompt "Please correct my grammar mistakes if you see them". If the student makes a mistake, ChatGPT will point it out with the next message. If the material is not clear, you can ask for a more detailed explanation. Although prompts can be written in your native language, it is better to do this in English.

– *Improving vocabulary.* Firstly, you can talk to the bot on any topic. A possible prompt: "Please suggest vocabulary for this conversation". Secondly, you can use words for a certain level. For example: "Could you please use the C1 vocabulary".

– *Working on pronunciation.* A great way to do this is to ask the chat to generate sentences or words that you can practice saying out loud. Ask for words or sentences that repeat a certain sound, or have a sequence of two or more sounds (e.g. the "sl" sequence in "slogan" and "slippery"), or words that contrast in only one sound (e.g. "sit" and "seat"). Prompt: "Please suggest words with the same sounds as…". Try to pronounce them correctly. For this, the student must have the sounds set – this should be worked on with the teacher. Do not rely entirely on the chat for correct pronunciation. If you have doubts, use other tools to check.

– *Improving fluency.* A working way to improve your confidence and fluency, as well as convey a clear idea, is to speak and create original thoughts (as opposed to simply reading conversations and scripts out loud). To practice speaking on your own, the neural network can suggest topics for conversation, so you don't have to come up with ideas every day. Prompt: "Can you write a topic to talk about with a doctor." *(Englishprime, 2023)*.

Summing up, the key to working with a GPT chatbot is to ask the right question: the quality of the answers depends on the quality of the questions. The more detailed your request is, the better the chatbot will respond to it.

b. Duolingo

Duolingo was launched in 2012. At that time, it only offered English, but now there are 42 languages on the list. Among them are French, Greek, Romanian, Latin, Hawaiian, and others. You can study through a mobile app or on the website. The service has free and paid versions. The training is conducted in the form of short lessons in a game format. This helps to keep the students' attention. They are praised and awarded for the topic covered, and for success they are added to the list of the most active. With the help of Duolingo, you can master vocabulary and grammar. The application also has exercises for pronunciation and listening *(Duolingo, 2025)*.

In the classroom, Duolingo can be used as a game element, to consolidate material and homework. For classroom work, the following types of work can be offered:

– Warm-up before the lesson. At the beginning of the lesson, students do a 5–10-minute exercise in Duolingo to get into the working rhythm. This helps to quickly get into the language environment, and is also an easy way to review vocabulary and grammar material.

– Topic practice after the lesson. After studying a certain topic (for example, Future Tenses), the teacher can offer to complete the corresponding tasks in Duolingo. One of the obvious advantages is the practical application of knowledge by students. In addition, the AI platform adapts to the level of each student. A special feature of this platform is the multiple repetition of educational material in an easy, playful form.

Duolingo helps to develop a daily language habit and effectively complements other learning methods. The following types of work are actively used as tool for self-stydy:

– Mini-lessons of 10–15 minutes a day. It is enough to devote 5–10 minutes a day to maintain language skills without overload and combine them with other methods (reading, watching movies).

– Developing listening skills. To do this, you can turn on listening exercises in Duolingo and repeat out loud. This will help improve your perception of English speech, as well as practice pronunciation.

– Reinforcing vocabulary with cards. Duolingo offers a "Verbal Practice" section where you can repeat previously learned words. With regular repetition of difficult words, students remember the vocabulary of the topic more easily.

– Using Duolingo Stories. These are short stories with dialogues that help understand the language in context. As a result, students develop an understanding of the language through the plot and can test themselves by answering questions regarding the text they listened to.

c. Anki

In the classroom, Anki can be used for games and tests, and in independent work – to expand vocabulary and prepare for exams *(Anki, 2025)*.

For classroom work: The learning process is easy and relaxed when using a game element – gamification – in the process of learning a foreign language. A striking example is team quizzes. The teacher shows a card with an English word, and the students must name the translation or make a sentence. You can divide the class into teams. Competition makes learning words fun and increases student involvement in the process. Instead of individual words, you can create cards with grammar examples. For example, to the teacher's question "How is Present Perfect Continuous formed?" students answer "Have/has been + V-ing" and give their own examples (e.g., I have been studying for two hours)." This way, it helps to remember complex constructions.

Anki is ideal for learning English on your own thanks to individual repetitions, the ability to add pictures and audio. An interesting approach, in our opinion, is the use of personal cards with new words, idioms and phrasal verbs. It is possible to add 5–10 new words with translation, examples and pictures every day.

One of the advantages is the individual customization of cards. The platform allows adding audio and images for associations. You can create cards for memorizing new idioms, set expressions, lexical chunks. For example, the phrase "Break the ice" can be perfectly supplemented with the definition "To start a conversation in a social situation" followed by the example "He told a joke to break the ice at the party" and a corresponding picture or a short video. Thus, it helps to remember expressions in context. To practice pronunciation, it is advisable to add voiced examples to the cards (for example, from Google Translate).

d. Speechify

Speechify is a text-to-speech application. It helps to develop listening, pronunciation and comprehension skills of the English language *(Speechify, 2025)*. Using Speechify in English lessons helps to improve listening comprehension.

During classroom work, students are offered a text (article, dialogue, essay) for listening without relying on the text. This helps train listening skills. At the same time, the teacher can choose a different speed of text reproduction depending on the level of training of the students. The use of natural voices of native speakers is another undoubted advantage of this platform.

Speechify will help you listen to books and articles in English during self-study. And also prepare for passing exams (IELTS, TOEFL). When passing language exams, one of the most difficult parts for non-native speakers is listening. The platform allows you to download examples of tasks from the "Listening" section and train listening comprehension, use voiced essays to get used to the academic style of speech.

e. LingQ

LingQ is a powerful tool for learning English through reading and listening *(LingQ, 2025)*. It helps to expand the vocabulary, improve listening comprehension and master the language in a natural context. In the classroom, LingQ can be used, for example, for

– Reading texts with automatic translation. In this case, students read the text and click on unfamiliar words to immediately see the translation and add them to their dictionary.

– Developing listening skills. The teacher can turn on the audio version of the text and ask students to listen without reading. Then give the text and ask them to highlight the words they did not understand. After that, listen again and discuss.

When studying on your own, LingQ is typically used for reading books and articles in English, listening to audiobooks and podcasts, and automatic dictionary maintenance.

f. Grammarly

Grammarly is a powerful grammar, spelling, and writing style checker *(Grammarly, 2025)*. It helps students write without errors, improve academic and business texts, and even develop writing skills. Grammarly application in the classroom involves:

– Improving vocabulary. For example, Grammarly suggests replacing simple words with more complex ones (e.g., "good" → "excellent").

– Analyzing common mistakes in class. The teacher asks students to upload their texts to Grammarly and share a list of mistakes. The most common mistakes are then discussed in class, for example: "a/an/the"

– Develop an intuitive understanding of grammar. Instead of mechanically correcting errors, analyze why Grammarly suggests certain changes.

– Improving Business Correspondence and Formal Letters. Students a) write a business letter (e.g. a complaint or request); b) check it in Grammarly to improve the wording and make sure the text sounds professional.

Variants of using Grammarly for self-study a foreign language:

– Proofreading and editing essays and compositions. Students write essays (for example, an argumentative essay for the external examination). Before submitting, they check the text in Grammarly, correct errors and improve the style. The teacher analyzes the corrected and original version to see progress.

– Preparation of resumes and motivational letters. How to use: Check your resume and cover letter in Grammarly. Improve wording, make the text more convincing.

4. Challenges and Limitations

The implementation of artificial intelligence in language education opens up new perspectives for improvement. However, we should not forget the prominent roles of teachers who make this process possible and continue to adjust AI tools into the learning space room. Some practitioners, e.g. Nikitina, Ishchenko express the opinion that AI cannot and should not replace the real teachers in the classroom, despite all modern AI tools and platforms *(Nikitina I, Ishchenko T., 2024)*. A lot of plasticizing teachers keep to the same point of view, e.g. Kozubai emphasizes the key role of human-teachers in the educational process who continues to play a crucial role in keeping the quality of education *(Kozubai I., 2023)*.

AI still has its limitations, which make it unable to completely replace the teacher. Let's name some key limitations of artificial intelligence in teaching foreign languages.

First, the lack of human intuitive understanding: AI operates with data and algorithms, but it does not have the ability to understand context, emotions and intercultural nuances, which can be important when learning a foreign language. The teacher is able to explain difficult points and adjust lessons to the needs of each student.

Secondly, the impossibility of adaptation to individual needs: AI can offer standard lessons and exercises, but it is not able to adapt lessons to the level and needs of a particular student. The teacher can develop an individual approach, taking into account the peculiarities of each student.

Thirdly, limitations in the development of speaking skills: AI can help a student improve comprehension and written language skills, but the development of speaking skills requires practice and feedback that can only be provided by a teacher.

Fourth, limitations in evaluation and motivation: AI can provide evaluations and statistics about progress, but it is not able to motivate and inspire the student in the way that a teacher can do with his example and support.

5. Future Prospects of AI in Language Learning

The continued development of artificial intelligence in education is expected to significantly transform teaching methodologies, learning environments, and administrative processes.

As AI-powered tools advance, adaptive learning systems are anticipated to become more refined, allowing for personalized education that adjusts to individual student needs in real-time. Machine learning algorithms will likely enhance these systems, enabling more accurate assessments of student comprehension and providing tailored resources to address learning gaps. This adaptability improves not only educational outcomes but also encourages student engagement by delivering material at an optimal level of difficulty and relevance. In parallel, AI-driven data analytics are expected to revolutionize educational administration. Predictive analytics can assist institutions in identifying students at risk of underperforming, enabling proactive interventions that may increase retention rates. Moreover, AI could streamline routine administrative tasks, such as grading and scheduling, which allows educators to focus on complex, high-value activities like curriculum development and mentorship.

AI's role in education will likely extend beyond cognitive support to include emotional and social aspects of learning. Through natural language processing and sentiment analysis, AI systems may detect emotional cues, allowing for timely interventions when students exhibit signs of frustration or disengagement.

Furthermore, virtual reality (VR) and augmented reality (AR) interfaces powered by AI could foster immersive, interactive learning experiences, making complex subjects more accessible.

However, the advancements that AI has in educational environments also introduce complex data privacy and security concerns. AI in education often relies on extensive data collection from students, teachers, and institutions, which includes personally identifiable information (PII), academic records, behavioral data, and even biometric data in some cases. As educational institutions adopt AI-driven tools, safeguarding this data against unauthorized access, misuse, and privacy breaches has become a critical challenge.

A primary concern in AI-driven education is data privacy. Student data is often sensitive, covering a wide range of personal and academic information that can be vulnerable to misuse if not adequately protected. Privacy regulations should be imposed on strict guidelines for the collection, storage, and processing of personal data according to national and international legislations.

Security concerns are equally critical, particularly given that educational institutions often lack the robust cybersecurity infrastructure found in other sectors like finance or healthcare. AI systems are susceptible to data breaches, unauthorized access, and hacking, which can expose vast amounts of sensitive data. Additionally, AI systems can be manipulated through adversarial attacks, wherein malicious actors input misleading data to alter AI outputs. Such vulnerabilities can compromise the integrity of educational assessments and personalized recommendations, potentially impacting students' academic outcomes and trust in AI technology. To mitigate these privacy and security risks, it is essential to implement rigorous data governance frameworks, with clear guidelines for data access, anonymization, and encryption. Furthermore, educational institutions must prioritize transparency with stakeholders, providing clarity on how data is collected, used, and protected.

6. Conclusion

Overall, artificial intelligence should neither be demonized nor deified. It is a truly valuable achievement of scientific and technological progress, but it is not enough to use AI alone to achieve significant results. Just as there is no single universal textbook for learning a foreign language, there is also no single universal AI platform for this purpose. Instead, AI offers a wide range of platforms and tools that effectively complement each other. Both teachers and learners can select the most suitable tools based on their specific needs and learning goals. The choice of a particular platform or tool depends largely on the intended purpose of the study, whether it is improving vocabulary, mastering pronunciation, developing translation skills, brushing up grammar skills or enhancing overall language proficiency. In our survey, we aimed to explore the most popular and effective AI platforms and tools for practical mastering language learning, highlighting their strengths and hardships, potential applications and the unique benefits they bring to the educational process.

At the same time, the educational programs and services created on its basis really help students significantly, offering personalized content, feedback, and materials adapted to the tasks at hand. In addition, AI allows teachers to optimize the learning process and focus on what is truly valuable – teaching and helping students to reveal their language potential.

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