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# **New Methods of using Digital Technology Tools in Education**

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**ABSTRACT:** This article explores and analyzes several effective opportunities for using digital technologies tools in the study of foreign languages. The concept of digital technologies is considered in detail and various modern methods of their application in teaching a foreign language are compared. The methodological, didactic and educational features of the use of digital technologies are also analyzed. In addition, the authors of the article propose various algorithms for improving the efficiency of the educational process based on digital technologies, including wiki-technologies, AI, ChatGPT, as well as some methods and tools for language translation and language learning.

**KEYWORDS:** digitalization, artificial intelligence, AI, VR, AR, wikis, wiki technologies, writing skills. ChatGPT, education; translation, language education.

## **1.INTRODUCTION**

Digital technology has become an essential factor in language learning, and there are various tools and techniques that teachers can use to incorporate technology into their teaching practice. The use of digital technology can enhance learners' motivation and engagement, as well as provide access to authentic materials and real-world language use [1]. However, it is important to ensure that the use of technology is purposeful and appropriate for the learning objectives and needs of the learners. The web search results provide more information about the use of digital technology in language learning. For example, in following article [4] discusses some of the applications and programs that can be used to incorporate technology into language teaching. Using technology has always been an important part of teaching, even in the pre-digital age. Like many early adopters, he gets super-excited by the nice factor of new digital technology. However, some technologies (like VR – virtual reality) is still quite challenging to use successfully. The next publication [5] offers insights from leading experts in the use of technology in language learning and teaching through the Teachers Talk Tech podcast. Meanwhile, [6] presents a quantitative study on the use of technology and teacher support in technology-based learning of English as a foreign language among high school students in Bosnia and Herzegovina.

One of the digital technology-based method that is effective in the language learning process is Wiki-technology [2]. It is one of the services of web-2.0 (webinar), which allows a group of people to work on a single document or project in different places. Based on the various capabilities of the Internet, any number of people can work on creating a wiki-page, make changes to it, add additions, change its content, and add unnecessary or incorrect information. will be able to lose. It will be possible to use textual information, pictures and graphics, audio and video files, and make hyperlinks to other Internet resources. After the input is peer-reviewed and edited, a somewhat definitive and peer-reviewed and trusted information base is created for the subject or field being studied. Most wiki-pages are in hypertext format, which makes it easy for users to jump from one page to another to find the information they need. The first wiki service was created by Ward Cunningham in 1995 as a data repository. Later, in 2000, an online network encyclopaedia called Wikipedia (wiki-server - [www.wikipedia.org](http://www.wikipedia.org)) appeared, where any person can post his article and share it with others, their comments on this article. can review and evaluate changes. This system has its own security service, information in the network encyclopedia can be changed, added or removed with their permission. So, the information you want to post on Wikipedia will be visible to the public only after the system administrators have reviewed it and given permission to post it in the system, and this action will ensure the reliability of the information in it.



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## II. SIGNIFICANCE OF THE SYSTEM

The paper mainly focuses on how to use different methods of digital technology tools in education, like wiki-technologies, smart-technologies, artificial intelligence technologies and new tools of communication based on AI, which is developing worldwide in current time.

## III. LITERATURE SURVEY

In teaching foreign languages, Wikipedia can be used as a unique information resource for students. Because students can improve their knowledge of the language they are studying, find new information, and get to know the cultural and spiritual aspects of the country where the language is being studied, using wiki-technology. In addition to Wikipedia, examples of such wiki-resources include Pbworks ([www.pbworks.com](http://www.pbworks.com)), MediaWiki ([www.mediawiki.com](http://www.mediawiki.com)), Wikihost ([www.wikihost.org](http://www.wikihost.org)). Systems organized on the basis of Wiki-technology have the following didactic properties [3]:

- It is possible to add information in various forms to a wiki-document, including text, graphics, tables, photos, audio and videos in various formats (multimedia).
- It is possible to add internal and external hyperlinks.
- Publicity - the wiki-document is visible to all participants of this project who live in different regions, and they will be able to freely express their opinions on the document.
- Changes to a wiki-document can be made in any order (by making changes to the previously saved version of the document) rather than sequentially like blogs or forums.
- The ability to see the history of the creation of the document, because all versions of the document are stored on the wiki-server, and therefore each participant of the project can return to the previous versions of the document, and see who made changes to this document and when.

When teaching foreign languages, it is necessary to take into account the above-described didactic properties of wiki-technology and the methodological features arising from them.

Another method of digital technology is artificial intelligence (AI) has been increasingly applied in language learning and teaching. AI can be used to produce natural language, computer code, images, or other media in response to users' queries. In education, AI has been implemented in automated assessment, speech recognition, adaptive and personalized provision of educational resources, and more [7]. The potential of AI to support language learning and teaching is significant, and some contemporary AI instruments are being developed to learn the rules and patterns of human languages on their own, providing explanations of grammatical functions such as tense, case, and gender [8]. The use of AI can help personalize the learning experience, provide immediate feedback, and enhance the learning process in a variety of ways. However, it is important to keep in mind that AI should be used to complement and support human teaching, not to replace it. For example, ChatGPT, as an AI specific language model, can be used in various ways in education. Here are some possible use cases:

- **Research assistance:** ChatGPT can assist students and educators in finding and evaluating relevant research materials, such as academic papers, books, and online resources.
- **Learning support:** ChatGPT can serve as a virtual tutor, answering questions and providing explanations on various topics. It can also provide personalized recommendations for further learning based on the user's interests and abilities.
- **Language learning:** ChatGPT can be used as a language learning tool, allowing students to practice their writing and conversation skills with a native speaker-like partner.
- **Writing support:** ChatGPT can help students improve their writing skills by providing feedback on grammar, syntax, and style. It can also generate writing prompts and provide suggestions for essay topics.
- **Course design:** ChatGPT can assist educators in designing and developing educational courses, such as by suggesting course topics, creating lesson plans, and developing quizzes and assignments.

## IV. METHODOLOGY

To use ChatGPT in education, educators can integrate it into various educational technologies, such as learning management systems, chatbots, or virtual assistants. Alternatively, students can access ChatGPT directly through web-based chat interfaces or messaging platforms. It is important to note that while ChatGPT can provide useful assistance,



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it should not be seen as a replacement for human educators, but rather as a complement to their teaching efforts. ChatGPT can be a useful tool for research assistance in education. Here are some ways that ChatGPT can be used in this context:

1. **Summarizing and paraphrasing sources:** ChatGPT can help students summarize and paraphrase information from sources, which can be useful when incorporating research into papers. According to the Center for Innovation in Teaching and Learning at the University of Illinois, ChatGPT can help students "summarize and paraphrase information from your sources" [9].
2. **Generating bibliographies and citations:** ChatGPT can also help students generate bibliographies and citations in the format required by their university or professor. This can save time and ensure that students are accurately citing their sources. The University of Illinois also notes that ChatGPT can help students "generate bibliography and citation in the format required by your university or professor" [10].
3. **Answering test questions and writing essays:** According to the American Psychological Association, ChatGPT can answer test questions and write essays [11]. However, it's important to note that using ChatGPT in this way could raise ethical concerns, as it may be seen as a form of academic dishonesty. It's important for educators to set clear guidelines around the use of ChatGPT in their classrooms and ensure that students are using the tool in an appropriate and ethical way.

ChatGPT, the chatbot software developed by OpenAI, can be used also as a useful learning support tool in education. Here are some ways to use ChatGPT in education:

1. **Answering Questions and Writing Essays:** ChatGPT can answer test questions and even write essays. Educators can use this feature to help students with their assignments and provide feedback.
2. **Generating Ideas:** ChatGPT can help generate ideas for research papers or creative writing projects. Students can use this feature to brainstorm ideas and expand on them.
3. **Starting Point:** Teachers can use ChatGPT as a starting point for classroom discussions or activities. Students can generate answers on GPT and then work from there. GPT-generated essays can also be used as a reference for students to improve their writing skills.
4. **Summarizing and Paraphrasing:** ChatGPT can assist with summarizing and paraphrasing information from sources, which can be useful when incorporating research into papers.

One example of using ChatGPT for language learning is demonstrated in a video by Tom Gally, a professor at the University of Tokyo, where he showcases how ChatGPT can be used to assist people in learning and teaching second languages. ChatGPT can respond to user-generated prompts using natural language processing techniques, making it an effective tool for practicing speaking and writing in a new language. It can also be used to generate prompts for language learners to respond to, aiding in their development of reading and listening comprehension.

## V. EXPECTED RESULTS

ChatGPT can be used also as a writing support tool in education in various ways. One way is to use ChatGPT as an ideation tool, for organization of thoughts, and for iterating on a concept. This can be done by providing ChatGPT with a prompt related to the writing task and seeing how it generates ideas and outlines. Teachers can also have students run their own writing assignments through ChatGPT to see how it does and structure the assignments accordingly. This can help students see how ChatGPT generates responses and what they can learn from its methods.

ChatGPT can also be used as a heuristic engine that helps the student think through refining questions. By providing a prompt or a question, ChatGPT can help students generate ideas and refine their thoughts. For writing assignments, ChatGPT can be used to help students with the research process. Students can use ChatGPT to find information on specific topics and incorporate it into their writing. It is important to note that while ChatGPT can be a useful tool for writing support in education, it may also have some limitations. For instance, ChatGPT was trained using a massive dataset of text written by humans, which was pulled from the internet, and as such, the responses generated may reflect the biases of the humans who wrote the text used in the training dataset. Additionally, there are concerns that the use of AI writing tools like ChatGPT could lead to issues related to academic integrity. Therefore, it is important to use ChatGPT responsibly and alongside other writing support tools and resources.

ChatGPT can be used as a course design tool in various ways. One approach is to run course assignments through ChatGPT to see how it performs and then structure assignments accordingly. Another approach is to use ChatGPT as an ideation tool to help students organize their thoughts and iterate on concepts. Additionally, educators can use ChatGPT as a heuristic engine that helps students refine their questions and develop a deeper understanding of knowledge and skills. It is important to note that ChatGPT was trained using text written by humans, so it may reflect human biases.



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Therefore, educators should encourage students to think critically and use ChatGPT as a tool to supplement their own knowledge and skills rather than as a replacement for them.

## VI. CONCLUSION AND FUTURE WORK

In conclusion, as a main direction of future work we can say, that the integration of artificial intelligence (AI) and specifically, ChatGPT, can serve as a valuable tool in contemporary education. ChatGPT can be utilized to assist with academic writing, help students develop research questions, organize thoughts and iterate on concepts, and provide heuristic engines to guide students in their thinking and question refinement, as mention above. Furthermore, AI chatbots such as ChatGPT have the ability to produce flawless academic essays, making it a useful tool for students and educators alike. However, it is important to keep in mind that AI writing tools are constantly evolving, and the enforcement of a ChatGPT ban could result in the injustice of false positives, given that AI writing tools are always one step ahead of the tools used to detect them. Overall, the implementation of AI and ChatGPT in education has the potential to revolutionize the way students learn and educators teach. We believe, that artificial intelligence (AI) and chatbots such as ChatGPT have become increasingly popular in contemporary education. These technologies have been used in a variety of ways to enhance and support student learning, including providing personalized feedback and guidance, assisting with academic writing, and even teaching coding skills. One of the most promising applications of AI and chatbots in education is their ability to provide personalized support and feedback to students. By analysing student data, these technologies can identify areas where students are struggling and provide targeted assistance to help them improve. This can be particularly useful for students who may be falling behind or struggling with a particular subject. Another important use of AI and chatbots in education is their ability to assist with academic writing. ChatGPT, for example, can help students with developing research questions, outlining papers, and even writing essays. These tools can help students become more confident writers and improve the quality of their work. While there are concerns that the use of chatbots in education may lead to increased plagiarism and other academic integrity issues, experts argue that these technologies can be used to complement traditional teaching methods rather than replace them. As with any new technology, there are potential risks and challenges associated with the use of AI and chatbots in education, but with careful planning and implementation, they have the potential to be a valuable tool for improving student learning outcomes. In conclusion, AI and chatbots such as ChatGPT have the potential to revolutionize education by providing personalized support and feedback to students, assisting with academic writing, and complementing traditional teaching methods. While there are challenges associated with the use of these technologies, they offer exciting possibilities for enhancing student learning outcomes in the contemporary education system.

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