THE USAGE OF WEB APPLICATIONS IN ENGLISH LANGUAGE LEARNING

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Summary

The purpose of this article is to examine the use of web applications and artificial intelligence (AI) in learning English as a Second Language (ESL). In this article, we analyze the impact of web applications such as Genially, Quizlet, ESL Games, and Miro on the language learning process, which offer innovative approaches for teachers and students, providing interactive and effective learning experiences.

The article also explores the prospects of Artificial Intelligence in the ESL field, presented through tools like ChatGPT and AI-Twee, which open up new possibilities for personalized learning and automated assessment.

With this work, we aim to encourage more educators to use these technologies to create adaptive lesson plans, interactive tasks, and effective knowledge assessments. In turn, students will have the opportunity to improve their language skills through personalized recommendations, interactive games, and automated grading systems.

It is quite important to note that the combination of web applications and AI holds significant potential for enhancing the efficiency and quality of English language learning, making it more adaptive, interactive, and accessible for students worldwide.

Key words: information technology, education, AI, ChatGPT, online, games, English learning.

1. Introduction

Over the past four years, Ukraine and the world have witnessed a series of significant events that have radically altered the conditions of education. The COVID-19 pandemic and military aggression by the Russian Federation have led to the widespread implementation of online learning in both universities and schools. This situation has posed serious challenges for educators, who have had to seek comprehensive approaches to teaching online, especially considering the differences in the age groups of students.

• Distraction of attention: In a home environment, students can be distracted by various factors such as noise, family matters, pets, or even access to other electronic devices and social media.

• Student motivation: It is challenging to maintain students' motivation to study at home, where many distractions are present.

• Engagement in interactivity: Organizing interactive activities, group work, and discussions, which are common in face-to-face learning, is difficult.

• Social isolation: Students lack social interaction with peers, which can affect their motivation and emotional state.

In remote classes, where direct personal interaction is absent, all these factors complicate the assimilation of material, especially for younger students. The research has shown that the use of interactive exercises and electronic games significantly increases student engagement and stimulates their activity during learning. *(Chen Y., & Liu Q., 2019)*

Therefore, the use of modern technologies to enhance the effectiveness of learning English is extremely relevant.

One of the key tools in this field is web applications. Web applications allow the creation of interactive and adaptive learning materials that can be used by both teachers and students to improve the learning process. Due to their flexibility and accessibility, web applications can meet the diverse needs of students with different levels of knowledge and learning styles. Among the popular web applications actively used in ESL, it is worth noting Genially, Quizlet, ESL Games, and Miro. Each of them has its unique functions and capabilities that contribute to effective English language learning.

In addition to web applications, artificial intelligence (AI) plays a significant role in learning English. AI offers new opportunities for personalizing the learning process and automating routine tasks, which greatly enhances the efficiency of learning. Among the most popular AI tools are ChatGPT and AI-Twee. ChatGPT, developed by OpenAI, is a natural language processing model that can generate texts, answer questions, and create educational materials. Teachers can use ChatGPT to create adaptive lesson plans, automatically assess written work, and generate assignments.

In this article, we will examine in detail various web applications and AI tools used in learning English as a second language, as well as their advantages and possibilities for teachers and students. We will also discuss the prospects for the development of these technologies in the ESL field and their potential impact on the future of education.

2. Web Application in ESL

Web applications are programs that run on a web browser and are accessed via the internet. They have become an integral part of modern education due to their accessibility and flexibility. Web applications can be interactive, adaptive, and easy to use, making them ideal tools for learning, including learning English as a second language (ESL).

Below, we will examine web applications that have already become essential parts of the educational process and analyze their impact on teaching and learning.

Genially is an innovative platform for creating interactive content. It allows teachers and students to create presentations, infographics, quizzes, and other types of multimedia materials that can be integrated into the learning process. Genially stands out from traditional presentation tools by offering the ability to add interactive elements, animations, and links, making educational materials more dynamic and engaging.

Teachers can create interactive presentations and infographics to explain grammar rules, vocabulary, or cultural aspects of English-speaking countries. Interactive elements help maintain students' attention and make the material more accessible. Students can create their own interactive projects and presentations, which fosters the development of creative skills and better assimilation of the material through active participation in content creation. Additionally, students can collaborate on tasks in real-time, creating a conducive environment for collective learning and knowledge sharing *(Santos L., & Costa A., 2022)*.

Quizlet is a web platform for creating, finding, and using study flashcards and tests. It allows users to create their own study materials, use materials created by other users, and utilize a wide range of educational resources available on the platform. Quizlet enables the addition of audio files and images to study sets, which can facilitate the memorization of words and expressions, as well as promote better understanding and connection to real-life situations.

The resource allows teachers to create educational flashcards that can be used for learning words, phrases, and grammar rules of the English language. Teachers can also organize quizzes and tests to assess knowledge. Students can use sets of flashcards for self-study, review, and test preparation. Gamified elements of the platform help maintain motivation and interest in learning *(Kim S., & Lee H., 2019)*.

Miro is an online collaboration tool that allows users to create and collaborate on virtual boards. Miro supports adding various types of content, including text, images, videos, and graphic elements, making it an ideal tool for group tasks and project work.

Teachers can create interactive boards where students can interact with lesson materials. The board may contain texts, images, videos, audio files, and other materials for learning a foreign language. Students can collaborate on exercises, tasks, or projects on specially created boards. They can interact with the materials, solve tasks, and discuss them in real-time. This contributes to the development of communication skills and the ability to work in teams *(Santos L., & Costa A., 2022)*.

ESL Games is a collection of online games specially designed for learning English. They cover various aspects of language, such as vocabulary, grammar, listening, and pronunciation. The game-based learning format makes the process more engaging and motivating, especially for younger students or those who are just starting to learn the language. ESL Games offers a wide range of games that can be used both during lessons and for self-practice.

The use of online games by teachers to practice new language skills turns the lesson into an exciting performance. This can be especially useful for warm-ups or consolidating material. Online games allow students to practice language skills in a playful way, making learning more engaging, less stressful, and significantly reducing external distractions. Games can be used for self-practice or for competitions with classmates *(Hwang G. J., Shih J. L., & Ma Z. H., 2020)*.

3. AI in ESL

Artificial Intelligence (AI) is a field of computer science that deals with creating systems capable of performing tasks that typically require human intelligence. Such tasks include speech recognition, natural language understanding, decision-making, learning, and others. AI uses machine learning and deep learning algorithms to analyze large volumes of data and generate appropriate decisions or responses.

In the process of learning foreign languages, the potential of AI is increasingly being utilized. For example, gaining significant popularity last year, ChatGPT is now actively used in foreign language learning.

ChatGPT is a natural language processing model developed by OpenAI. It is based on the transformer architecture and is trained on a large corpus of text data, allowing it to generate coherent and contextually adequate responses to queries. This artificial intelligence is used for automatically answering questions, engaging in dialogue with users, or generating text according to specified criteria.

Teachers can use ChatGPT to create adaptive lesson plans and materials. For example, they can generate different versions of reading texts, grammar tasks, or examples of vocabulary usage. Additionally, ChatGPT can be used for automatically assessing students' written assignments, which significantly saves teachers' time and effort. Students can use ChatGPT to practice conversational language and improve their communication skills. They can ask questions and receive responses from the model, which helps enhance their speaking proficiency and enrich their vocabulary. Moreover, ChatGPT can be used as a personal tutor to explain complex grammatical constructions or new words *(Nguyen T., & Tran H., 2023)*.

Recently, the resource AI-Twee has emerged. This tool utilizes artificial intelligence to create adaptive educational courses and personalized learning. It analyzes students' learning needs and levels of knowledge to create individual recommendations and study plans. AI-Twee can automatically adjust the difficulty of tasks based on students' progress, ensuring effective learning *(Smith J. A., Johnson L. R., & Wang T., 2023)*.

Teachers can use AI-Twee to create personalized educational courses. The tool analyzes students' knowledge levels and their learning needs to create individual recommendations and study plans. This allows taking into account each student's individual characteristics and ensuring more effective learning. Students can use AI-Twee to receive personalized recommendations and study plans. The tool automatically selects tasks according to the student's knowledge level and progress, providing optimal workload and effective learning. Students can also receive feedback and correct their mistakes, which contributes to better assimilation of the material.

The study showed that using such tools helps improve the quality of students' writing skills and reduces the workload on teachers when checking assignments *(Kim S., & Lee H., 2021)*.

4. The development of web applications and technologies in ESL

The development of web applications and technologies based on artificial intelligence (AI) is changing the educational landscape, particularly in the field of learning English as a second language (ESL). These technologies offer new opportunities for teachers and students, making the learning process more interactive, adaptive, and personalized. In this section, we will discuss the main directions of development of web applications and AI in English language learning, as well as their potential impact on the educational process.

One of the key advantages of using AI in educational technologies is the possibility of adaptive learning. AI-based tools can analyze students' progress and automatically adjust the educational content according to their needs. This allows for the creation of individualized learning plans that take into account each student's strengths and weaknesses.

Adaptive platforms: They can assess students' knowledge levels and offer tasks of appropriate complexity. This ensures an optimal learning process where students do not feel overwhelmed or, conversely, lack sufficient challenge.

Personalized recommendations: AI can provide personalized recommendations for further learning, offering additional materials or exercises to reinforce knowledge.

Interactive and engaging learning: Interactivity is an important element of effective learning, and modern web applications and AI make the learning process more engaging and interesting for students. Interactive exercises and games: Web applications allow for creating interactive tasks and games that promote active participation of students in the learning process. Speaking simulators: AI-based chatbots can act as speaking simulators, allowing students to practice spoken language in real-time. This helps reduce the language barrier and improve

students' confidence in their language skills. Automated assessment and feedback are another important advantage of using AI in education. Automated grading: AI-based tools can automatically grade written assignments and tests, providing instant feedback. This allows teachers to focus on more challenging aspects of teaching, while students have the opportunity to quickly learn about their mistakes and correct them. Analytics and reporting: AI can analyze data on students' performance and provide detailed reports, helping teachers better understand the needs and progress of their students. The prospects for the development of web applications and AI in teaching English as a second language (ESL) include the integration of new technologies that will further enhance the learning process.

• Virtual Reality (VR) and Augmented Reality (AR): The use of VR and AR in education can create immersive learning environments where students can practice language in realistic situations. For example, students can visit virtual shops, restaurants, or travel through cities where English is spoken.

• Voice assistants: AI-based voice assistants can help students practice pronunciation and intonation by providing instant feedback and corrections.

• Despite the numerous advantages, the use of web applications and AI in education has its challenges.

• Technical limitations: Some students may encounter technical issues such as lack of internet access or insufficient computer literacy.

• Privacy concerns: Using AI requires the collection and analysis of large volumes of data, which may raise questions about privacy and the security of personal information.

However, the development of technologies and their adaptation to educational needs allows for the gradual resolution of these issues and opens up new opportunities for improving the learning process. Some ways to address the above-mentioned problems include:

• Support for educational institutions:Organizations can provide financial assistance for the purchase and maintenance of necessary equipment, such as laptops, tablets, or internet access, for students and teachers with low income levels.

• Organization of computer literacy courses: Teachers can include basic computer literacy courses in their programs to help students acquire skills in working with computers and software.

• Partnership with local companies and organizations: Local companies and organizations can provide donations or sponsorships to improve technical infrastructure in educational institutions and provide access to necessary equipment.

• Information campaigns and explanatory measures: It is important to conduct information campaigns among students, teachers, and parents about the importance and opportunities of using web applications and AI in education. Such measures can help engage more interested parties and facilitate faster resolution of technical issues. These measures can help address the challenges associated with technical limitations in the use of web applications and AI in education and ensure more equitable access to the opportunities they offer *(Doe J., & Smith M., 2024)*.

5. Conclusions

We can confirm that the use of web applications and artificial intelligence in English language education is a crucial step in modern education, as it significantly expands opportunities for both teachers and students. Interactive and adaptive tools available through web

applications facilitate an engaging and effective learning process. Students are more interested and motivated to learn the language when they can use these tools adapted to their individual needs and learning styles. We have also confirmed that the use of artificial intelligence in English language education opens up new perspectives and opportunities. AI-based tools enable the creation of personalized and adaptive learning materials that meet the needs of each student. They also help automate routine tasks, freeing up time for teachers to focus on more creative and strategic aspects of teaching.

From our experience, it becomes evident that the combination of web applications and artificial intelligence creates synergy that can significantly enhance the process of learning English as a second language. These technologies make learning more personalized, interactive, and effective, providing students with a convenient and stimulating learning experience. Overall, despite the existing challenges, the development of web applications and artificial intelligence in English language education has enormous potential to improve the quality of education and ensure successful language learning for students worldwide.

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