

Research Article

Integrating AI-based Games in English Lessons: Strengths and Weaknesses

Natalia Lyubimova* 

Department of Foreign Languages, Kyrgyz-Russian Slavic University, Bishkek, Kyrgyz Republic

Abstract

The article explores the integration of games into English language teaching with a particular focus on the advantages brought by Artificial Intelligence (AI). It discusses how game-based approaches, combined with AI solutions, enhance student motivation, engagement, and proficiency. Games are shown to stimulate an active, positive learning environment, increase retention, and foster a deeper connection with the target language. AI technologies amplify these benefits by providing personalized learning experiences, adaptive content, and real-time feedback, allowing each student to learn at their own pace. Key educational tools such as ChatGPT, Twee, MagicSchool AI, Quizlet, and Quizizz are examined for their capacity to automate lesson planning, generate interactive exercises, and support creative classroom activities. These platforms streamline routine tasks, offering teachers more time to individualize instruction and support personal growth. The article categorizes games by their objectives: grammar, lexical, phonetic, spelling, creative, and speech games—each serving a unique purpose in skill development. Despite these advantages, the article highlights significant challenges to implementing AI-based games, especially in resource-limited environments. Issues such as poor technological infrastructure, data privacy concerns, financial costs, and the irreplaceable role of human empathy and mentorship are critically assessed. The author emphasizes the importance of the teacher's presence in providing emotional and psychological support—something AI cannot fully replicate. The conclusion advocates for a balanced and harmonious combination of AI technology and traditional teaching methods. This blended approach leverages the efficiency and adaptability of AI to optimize administrative processes and personalize education, while retaining the invaluable contributions of human educators to inspire, motivate, and nurture students' creative abilities. Ultimately, the article posits that the ideal learning environment is one in which AI complements, rather than replaces, the unique strengths of the human teacher.

Keywords

AI-based Games, AI Technologies, Educational Process, English Language Learning, Digital Competencies, Educational Technology, Teaching Strategies

1. Introduction

Integrating games into English lessons has become an effective strategy to enhance student engagement, motivation, and language acquisition. With the advent of Artificial Intelligence (AI), the potential for innovative, personalized, and

interactive learning experiences has expanded significantly. Incorporating games into English lessons provides numerous benefits for learners. Games create an engaging and dynamic learning environment, enhancing both retention and enjoy-

*Corresponding author: n.a.lyubimova@krsu.kg (Natalia Lyubimova)

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ment. By integrating fun activities, educators foster a deeper connection between students and the target language, promoting enthusiasm and engagement throughout the lesson. As highlighted in multiple sources, games facilitate improved comprehension, vocabulary acquisition, and overall fluency in English.

Artificial Intelligence (AI) plays a pivotal role in advancing English language learning methodologies. From tailored instruction to immersive virtual environments, AI-driven solutions empower learners to refine their linguistic competencies effectively. Modern technologies offer unprecedented access to resources, providing adaptive and personalized pathways to mastering English. [1].

2. Materials and Methods

The article explores the role of games in English language teaching and how AI can revolutionize this approach.

The study was conducted on the bases of analysis of the advantages and disadvantages of using AI and neural networks, identifying strengths and weaknesses.

Gamification relates to the process of transforming an activity, system, service, product, or organizational structure into one which affords similar positive experiences, skills, and practices as found in games. This is commonly done in order to motivate participants and change their behaviors or cognitive processes [2]. Integrating AI-based games into English language education represents a paradigm shift, unlocking boundless opportunities for learners globally. Harnessing its full potential necessitates ongoing refinement, rigorous evaluation, and inclusive partnerships. Ultimately, AI promises to democratize access to quality instruction, shaping future generations of bilingual professionals equipped for global competitiveness. [3].

3. Results

Among the advantages of using gaming methods should be mentioned the following:

At first AI-based games enhance learning experience, boost cognitive processes such as memory, attention, and critical thinking. [4] Moreover, through playful scenarios, students naturally absorb essential language components including vocabulary, syntax, and cultural references.

AI-based games form positive psychological environment, reduced anxiety levels allow students to experiment freely with language usage. Collaborative and competitive aspects nurture interpersonal connections within the classroom setting. [5].

Practicing speech production, listening comprehension, and grammar application through interactive challenges enhances overall linguistic competence. Regular exposure to varied contexts improves confidence and adaptability across diverse communicative situations. [6].

Engaging formats keep students interested and motivated, encouraging consistent effort and progress. Interactive tasks reinforce intrinsic motivation, enabling learners to embrace English enthusiastically rather than perceiving it merely as academic drudgery. [7].

AI analyzes individual proficiency levels, adjusting content and difficulty dynamically. Beginners receive simplified vocabulary exercises, while advanced learners tackle complex grammar constructions. This tailoring ensures that students remain consistently challenged yet never overwhelmed. [8].

Built-in AI tools deliver instant evaluations, pinpointing errors and guiding improvements. For instance, pronunciation apps utilize speech recognition to critique accents, significantly enhancing articulation skills.

Virtual Reality (VR)-based games place learners in lifelike scenarios, forcing them to use English naturally. These immersive environments replicate real-world challenges, strengthening contextual fluency.

Group-based AI games foster teamwork and peer mentoring. Competitive formats heighten engagement, encouraging collective efforts toward shared objectives. [9].

Meanwhile addressing strengths, we should also mention challenges of AI-based games application.

Ensuring adequate technological resources is imperative. Weak infrastructure can become a problem, in particular, in Kyrgyzstan. In more rural or remote areas of the country, internet connectivity may be slower and less reliable due to limited infrastructure. Slow internet speeds can cause delays in loading content and affect the overall learning experience. Lack of access to updated devices further exacerbates the problem, leading to lower engagement and reduced effectiveness of AI-powered tools. Teachers in under-resourced schools struggle to implement blended learning approaches due to technological limitations.

Protecting student data mandates adherence to strict regulations and demands unwavering commitment to compliance with existing regulations and adoption of industry-standard best practices.

There are some cost constraints: the high costs associated with AI-based games pose significant challenges for educational institutions and individual learners. Affordable alternatives exist, including free trial versions of premium services, but their functions are usually limited. Resource allocation prioritizes sustainable investments, balancing utility against financial viability. [10].

Artificial intelligence cannot fully replace human interaction, which includes empathy, inspiration, and morale. Human teachers understand students' emotions and personal problems, provide psychological support, and create a comfortable classroom atmosphere. AI algorithms are less sensitive to specific situations, such as special educational needs, socioeconomic factors, or cultural differences. Only a human teacher can adequately address the unique circumstances of an individual student.

The following games classification based on their objec-

tives and methodology should be highlighted:

1. Grammar Games, targeting specific grammatical constructs and encouraging structured repetition and reinforcement of key patterns.
2. Lexical Games, enhancing vocabulary recall and contextual usage and facilitating swift retrieval of relevant terms in conversational settings.
3. Phonetic Games, developing accurate pronunciation and intonation skills and reinforcing phonological awareness via repetitive exercises.
4. Spelling Games, improving orthographic accuracy and familiarization with letter sequences and promoting strategic approaches to decoding unfamiliar words.
5. Creative Games, stimulating imaginative expression and narrative storytelling and integrating multimodal creativity into traditional learning frameworks.
6. Speech Games, supporting spontaneous conversation and argumentation and training students to articulate opinions confidently and concisely.

4. Discussion

Of course, effective integration of games demands thoughtful planning and execution strategies to determine which best support learning objectives, save teacher time, and maintain student privacy. [11] Here are some examples AI-based games:

1. ChatGPT
 - Use Case: Generating lesson plans, creating interactive exercises, and producing engaging dialogues.
 - Process: Teachers enter a theme or grammar structure, and ChatGPT outputs a draft lesson plan or dialogue script. For example, typing "Create a dialogue for beginners about shopping" yields a ready-to-use script that can be tweaked for specific student groups.
 - Impact: Saves hours of manual preparation, allowing teachers to focus on adapting materials to individual student needs.
2. Twee
 - Use Case: Quickly generating interactive exercises and lesson materials.
 - Process: Teachers input a text, link, or word list, and Twee instantly produces fill-in-the-blank exercises, multiple-choice questions, and vocabulary lists.
 - Impact: Significantly reduces preparation time, enabling teachers to spend more energy on engaging delivery and personalized tutoring.
3. MagicSchool AI
 - Use Case: Streamlining lesson planning, grading, and interactive game creation.
 - Process: Inputting a lesson topic triggers automatic generation of full lesson plans, complete with activities, samples, and vocabulary lists. MagicSchool also grades assignments and delivers insightful analytics.
 - Impact: Minimizes routine tasks, increases lesson quality,

and improves data-driven teaching strategies.

4. Quizlet
 - Use Case: Creating interactive flashcards, games, and quizzes.
 - Process: Teachers compile word lists or import existing sets, and Quizlet autogenerates activities like "Match," "Gravity," and audio-assisted flashcards.
 - Impact: Enhances vocabulary retention and boosts student engagement through gamified learning.
5. Quizizz
 - Use Case: Running live quizzes and assigning interactive homework.
 - Process: Teachers select or create quizzes, run them live in class, or assign them as homework. Leaderboards and memes keep students motivated.
 - Impact: Adds excitement to classroom activities, boosts participation, and offers immediate feedback on student performance.

Additional Tools

- PrettyPolly: Generates speaking practice activities, perfect for oral exams and speaking practice.
- Google Docs Add-on for AI Suggestions: Autocompletes sentences, checks grammar, and recommends phrasing improvements.
- Twee Pro Tools: Specialized AI features for generating transcripts, creating discussion questions, and crafting custom lesson materials.

This is a set of educational tools, each addresses its own unique purpose, facilitating teachers' work and enhancing learning effectiveness. They are like magical assistants, transforming routine into a creative process, allowing free experimentation and tailoring materials to each student. [12].

Each platform adds a new color to the palette of pedagogical art-from automated planning and assessment to interactive games and speaking activities.

5. Conclusions

Despite the existing pros and cons of using AI-based tools, the main task of educators today is to develop digital competencies. [13, 14]. The optimal solution is a harmonious collaboration between human educators and artificial intelligence. [15] This symbiosis will combine the advantages of both:

- Automated assistants will facilitate routine tasks, freeing up teachers for individual support and mentoring.
- Teachers will be able to focus more on students' personal development and creativity, transferring some organizational responsibilities to AI.
- The use of specialized tools will ensure a high degree of personalization of learning, complementing traditional education with modern technologies. [16].

Therefore, the most effective approach appears to be a combination of the strengths of both approaches, where artificial intelligence serves as a powerful complement, enhanc-

ing the potential of traditional teaching. [15].

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Abbreviations

AI Artificial Intelligence
VR Virtual Reality

Author Contributions

Natalia Lyubimova is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The authors declare no conflicts of interest.

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Biography



Natalia Lyubimova, Senior Lecturer, Foreign Languages Department, PhD candidate in Translation and Translation Studies, The Interstate Educational Institution of Higher Education "Kyrgyz-Russian Slavic University named after the First President of the Russian Federation B. N. Yeltsin.

Research Field

Natalia Lyubimova: Research into the most pressing issues in the education system (education quality, material and technical resources, financing, and management); (1) Analysis of problems in the education system and their interrelationships; (2) Development of proposals to address current challenges in the education system; (3) Challenges of education digitalization; (4) Use of AI and neural networks in the educational process.