Artificial Intelligence in Enhancing Autonomy Learning

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Abstract: This article explores the role of artificial intelligence (AI) in enhancing English vocabulary learning, particularly for children. It highlights how tools like ChatGPT, Duolingo, Kahoot, Quizlet, and Google Translate improve vocabulary retention, engagement, and motivation through interactive features and personalized feedback. The study also discusses challenges such as limited teacher training, ethical concerns, and technological barriers. Overall, it emphasizes the need for integrating AI tools into language curricula and training educators to use them effectively in English Language Teaching (ELT).

Keywords: Vocabulary, AI tools, online learning, autonomy learning.

Introduction: Mastering a new language is often a challenging and sometimes monotonous process for students. Many become frustrated with technology-based learning tools that rely on strict definitions and rigid frameworks. These tools typically require students to input exact definitions or synonyms, rewarding precision but offering little flexibility. While such approaches may make sense from a technical standpoint, they do not always reflect the complexities of real-world language acquisition.

Language learning is a multifaceted process influenced by various factors such as cultural adaptation, the amount of comprehensible input available, focus on language-specific features, and opportunities for active communication and production. Learners work intentionally to develop their language skills, which include reading, writing, speaking, and listening. These core competencies rely heavily on vocabulary and an understanding of linguistic structures such as syntax and grammar. Vocabulary, in particular, is vital in both teaching and learning a second or foreign language.

Among the various frameworks for categorizing how digital media can be applied in language education, this study adopts a functional approach. The SAMR model, developed by Puentedura (2006), outlines four progressive stages: (1) Substitution, (2) Augmentation, (3) Modification, and (4) Redefinition. These stages reflect two broad categories of technology use: (a) enhancement and (b) transformation, with transformation representing the highest and most impactful level of integrating technology into teaching and learning.

With recent advances in artificial intelligence (AI), there is growing interest in exploring how these technologies can support English vocabulary learning. This study investigates teachers' perspectives on using AI tools to teach English vocabulary to children. It explores which AI tools are most commonly used, how they are integrated into the classroom, and what challenges arise from their use. AI has opened up new possibilities for overcoming communication barriers and is playing a transformative role in fields like English Language Teaching (ELT).

Research has shown that technology-enhanced language learning often surpasses traditional methods in terms of effectiveness. Nevertheless, learners often struggle with limited vocabulary when learning a foreign language. Thanks to modern technologies like websites, software, mobile apps, and AI tools, language instruction has become more interactive and engaging. For example, mobile learning offers access to unique, hard-to-find educational formats, making language study more flexible and accessible.

Vocabulary acquisition remains a fundamental part of language learning. Numerous studies highlight that integrating information and communication technology (ICT) in classrooms boosts student engagement and interaction. However, it's essential to

tailor technology use to students' age, emotional development, and language abilities. L2 (second language) vocabulary apps, for instance, should be customized for specific age groups. Designing an effective curriculum for tech-based vocabulary learning also requires educators to possess professional and technical skills. Teachers need to evaluate which digital tools are most adaptable and effective in their classrooms.

Some research suggests that AI-powered tools like object detection and translation apps can increase engagement and help young children better absorb vocabulary. Real-time interaction with such tools encourages deeper learning. Among the most popular AI tools in education are ChatGPT, Google Translate, Kahoot, Duolingo, and Quizlet. Still, many English teachers report issues such as time constraints, insufficient resources, ethical concerns related to privacy, and limited training on how to use these tools effectively. These challenges imply the need for better integration of AI tools into existing curricula to enhance instructional effectiveness.

AI is rapidly expanding across numerous fields, including education. It holds significant promise for foreign language teaching, especially in improving vocabulary—an essential component of language proficiency. Students often face challenges in retaining new words and using them actively, particularly when isolated from real-world language practice.

This study highlights the strong potential of AI technologies to enhance vocabulary instruction in English. Both quantitative and qualitative data show that platforms like ChatGPT, Duolingo, Kahoot, and Quizlet significantly improve vocabulary retention and student engagement. Tools that incorporate spaced repetition and personalized feedback—like Kahoot, Duolingo, and Quizlet—help students retain vocabulary more effectively. Their gamified features also boost motivation and encourage regular use, making learning more immersive. However, technological barriers such as poor usability and limited internet access can hinder some students' ability to benefit from these tools.

The interaction between AI and education is drawing increasing scholarly attention. This research draws on numerous academic sources to present a thorough overview of current AI applications in language education. It underscores the importance of equipping English teachers with the skills to use AI tools effectively, as well as understanding their limitations. The study acknowledges certain limitations, such as relying exclusively on English-language sources, and suggests that broader database searches could uncover additional insights.

The way students learn new languages has been completely transformed in recent years by the introduction of Artificial Intelligence (AI) into foreign language instruction. Beyond simple grammar checkers, AI technologies now include interactive language partners, individualized learning platforms, and intelligent tutoring systems. According to these developments, learning a language is no more a static, classroom-bound activity but rather a dynamic, flexible, and incredibly captivating one.

Adaptive learning, in which programs like Duolingo, Babbel, or Rosetta Stone utilize machine learning algorithms to customize content according to the learner's competence level, learning pace, and retention rates, is one of the most significant applications of AI in language education. This guarantees that students receive individualized education that focuses on their particular areas of weakness, increasing motivation and efficiency.

Natural language processing (NLP), which allows programs to comprehend, assess, and produce human language, is another important field. NLP is used by programs like ChatGPT and Google Translate to offer context-based corrections, conversation practice, and real-time translations. These resources assist students improve their fluency and cultural awareness by simulating authentic conversation situations.

Pronunciation training also increasingly uses AI-powered voice recognition. Programs like Elsa Speak evaluate spoken input and offer immediate feedback on intonation, accent, and stress—all of which are frequently challenging to perfect without the assistance of a native speaker.

Additionally, chatbots and virtual instructors are becoming more popular in both official and casual learning environments. These artificial intelligence (AI) systems are able to converse with students continuously, answering their queries, providing clarifications, and adjusting to their language preferences. Platforms that use GPT-based models, for instance, can simulate dialogue, making practice accessible and real.

There are still difficulties in spite of these developments. It is necessary to address concerns about accessibility, data privacy, and an excessive dependence on technology. Furthermore, although AI is good at grammar and vocabulary, human supervision is still necessary for its ability to teach cultural context and idiomatic usage.

Ultimately, this study serves as a valuable resource for future research, offering foundational knowledge to help close gaps in understanding AI's role in English language teaching and learning. It provides guidance

for educators, policymakers, and educational leaders interested in leveraging AI to improve vocabulary instruction and overall language proficiency.

REFERENCES

Liu, P. L., & Chen, C. J. (2023). Using an AI-based object detection translation application for English vocabulary learning. Educational Technology & Society, 26(3), 5-20. https://doi.org/10.30191/ETS.202307

Lu, M. (2008). Effectiveness of vocabulary learning via mobile phone. Journal of Computer Assisted Learning, 24(6), 515-525. https://doi.org/10.1111/j.1365-2729.2008.00289.x

S. Pokrivcakova, "Preparing teachers for the application of AI-powered technologies in foreign language education," Journal of Language and Cultural Education, Vol.7, No.3, pp. 135-153, 2019. https://doi.org/10.2478/jolace-2019-0025

Yu, A., & Trainin, G. (2022). A meta-analysis examining technology-assisted L2 vocabulary learning. ReCALL, 34(2), 235-252.

Puentedura, R. R. (2006). Transformation, Technology, and Education.