INTEGRATING TECHNOLOGY INTO ESP CLASSE

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DOI: https://doi.org/10.5281/zenodo.14512252

ABSTRACT

Artificial Intelligence (AI) is transforming language instruction by providing cutting-edge resources and approaches that improve student learning. AI-powered tools like chatbots, speech recognition software, and adaptive learning platforms give students engaging learning environments, real-time feedback, and tailored learning routes. By attending to the needs of each individual student, encouraging participation, and increasing efficiency, these technologies aid in language acquisition. The present applications of AI in language learning are reviewed in this article, along with its benefits and drawbacks. It also emphasizes how AI has the potential to revolutionize conventional teaching methods. According to the study, using AI technologies is crucial for creating inclusive and productive language learning settings.

Keywords: Artificial Intelligence, language teaching, language learning, adaptive learning, personalized education, AI in education, speech recognition, educational technology.

INTRODUCTION

The computer will only process numbers 0 and 1. However, artificial intelligence (AI) was committed to providing the necessary capability to turn computers into learning tools a few years ago. With the idea of emulating biological development, human learning, and brain modeling, this can be the main objective of computer experts like Alan Mathison Turing, John von Neumann, and Norbert Wiener. The latest information and communication technology (ICT), knowledge networks, actuators, sensors, and automated identification and material pursuit technology—known as machine learning (ML)—are also used in info sharing. ML is an AI application that, even if the system isn’t specifically developed, allows you to automatically learn from experience and get better over time. When it comes to putting together library materials and user services, machines are crucial. Robotics, chatbots, text data processing (TDM), enormous data, and pattern recognition are instances of machine learning techniques within AI.[1]

In education, artificial intelligence has shown to be a potent instrument. Numerous analytical investigations on artificial intelligence's pedagogical victimization are anticipated. Computer science is helping to advance education more and more. The

[1] Anikushina V, Taratukhin V, von Stutterheim C (2018) Natural Language Oral Communication in Humans Under Stress. Linguistic Cognitive Coping Strategies for Enrichment of Artificial Intelligence. Procedia computer science, 123, 24-28

teaching technique will be mechanically analyzed by instructors using artificial intelligence technologies. Additionally, the integration of artificial intelligence technologies appears to have enhanced education. Analysis is disseminated through research articles and various techniques in science communication. This include doing original research, developing concepts, and communicating and sharing study findings. All disciplines' analysis must be successfully shared in order to gain traction and a wider viewpoint.

Learning is the process of improving knowledge. By taking part in an exceedingly explicit exercise, every learner bit by bit shifts from a beginner to the main target of the following area. within the practice of participation, learners convey their experiences and social experiences through a range of direct and indirect ways in order to develop sensible skills and acknowledge their values. Due to the need for English as a universal language, its utility becomes more and more important, particularly in countries where English could be a second language. Hence, it is necessary to improve the schoolroom surroundings and develop the learner in the simulation language environment. Building a man-made intelligence English education system is often used as a breakthrough to facilitate the transformation of contemporary info technology into English education, improve the standard of teachers' English education, and improve student initiatives in learning English. Advances in computer science in language translation and understanding programs have evolved into new ideas for human language processing. Not solely are you able to realize the mistakes created by the coed, however you will additionally mean the mistakes made by the student with the targeted recommendation and research suggestions. [2]

While the interview approach we utilize is an in-depth interview, probing extensively into one issue that has been decided (depending on the goal and objective of the interview) utilizing open-ended questions. This investigation is carried out in order to ascertain the respondents' viewpoints on a topic. The purpose of this study was to find out how informants felt about AI's potential to help students learn English.[3]

METHODOLOGY

The framework for evaluating artificial intelligence (AI) applications in language instruction and learning is described in this methodology section, along with links to the traits, categories, and structure of the project approach. The review focuses on determining how AI fits with contemporary educational approaches and how it may improve language instruction.

AI-powered tools for language learning have many of the same features as the project approach, including real-time feedback, tailored learning, and the promotion of creativity and critical thinking. The potential of AI-driven platforms, including chatbots, virtual assistants, and adaptive learning systems, to deliver meaningful and student-centered language experiences was assessed using a methodical methodology for this

[2] B. Hamuddin, K. Julita, F. Rahman, and T. Derin, "Artificial Intelligence in EFL Context: Rising Students" Speaking Performance with Lyra Virtual Assistance," Int. J. Adv. Sci. Technol., vol. 29, no. 5, pp. 6735–6741, 2020

[3] C. González García, E. Núñez-Valdez, V. García-Díaz, C. Pelayo G-Bustelo, and J. M. Cueva-Lovelle, "A Review of Artificial Intelligence in the Internet of Things," Int. J. Interact. Multimed. Artif. Intell., vol. 5, no. 4, p. 9, 2019, doi: 10.9781/ijimai.2018.03.004

research. The features of these technologies are examined in relation to how well they support learner autonomy and engagement.[4]

The diversity of AI applications in language education parallels the varied types of projects used in teaching. Research categorized AI tools into:

- Adaptive Learning Platforms: Systems that tailor learning materials to individual student needs, akin to research-based project methods.
- Interactive Chatbots: Tools that simulate real-life conversations, resembling creative project approaches.
- Speech Recognition Systems: AI tools for pronunciation and speaking practice, aligning with technical project methods.

Each type of AI application was evaluated based on its effectiveness in enhancing specific language skills, such as speaking, writing, and listening. This categorization highlights how AI serves as a complement to traditional project-based teaching approaches. [5]

The organization of AI-based tools in language teaching mirrors the structured planning essential in project methods. For this review, data were collected on the integration of AI in curriculum design, the role of educators in facilitating AI-driven learning, and the assessment of student outcomes. Key aspects include:

- Setting clear objectives for AI use in language skills development.
- Ensuring accessibility and user-friendliness of AI tools.
- Providing teacher training to maximize the benefits of AI integration.

This structured approach to organizing AI-driven language learning ensures its effective implementation and alignment with pedagogical goals [6]

DISCUSSION AND RESULTS

Artificial Intelligence (AI) has shown great promise to revolutionize conventional pedagogical approaches in language instruction. This part presents the results on the effects of AI on language instruction and talks about how AI applications fit in with the traits, categories, and structure of the project approach.

The project approach and AI technologies have a number of important things in common, such as goal-oriented activities, individualized learning, and real-world applications. AI-powered tools like chatbots and adaptive learning systems provide students personalized feedback and information, encouraging independence and drive. These resources imitate the features of project-based learning, in which students actively participate in reaching predetermined learning objectives. For example, by customizing information to each learner's unique profile, adaptive AI systems such as Duolingo have been shown to increase retention rates. [7]

Similar to project techniques, AI fosters collaborative learning settings. AI-powered group activities and virtual assistants are two examples of tools that improve communication and collaboration. Because of these qualities, AI can be a good addition to project-based learning techniques. [8]

[4] Smith, J., & Johnson, R. (2021). *Artificial Intelligence in Education: Enhancing Language Learning*. Springer.
[5] Brown, H., Richards, J., & Davis, T. (2020). *AI Applications in ESL Classrooms: Innovations and Outcomes*. Cambridge University Press.
[6] Harmer, J. (2022). *The Practice of English Language Teaching: Integrating Technology*. Longman ELT.
[7] Smith, J., & Johnson, R. (2021). *Artificial Intelligence in Education: Enhancing Language Learning*. Springer.
[8] Brown, H., Richards, J., & Davis, T. (2020). *AI Applications in ESL Classrooms: Innovations and Outcomes*. Cambridge University Press.

The various types of AI applications correspond to the diversity of project methods used in language teaching:

- Adaptive Learning Systems: These systems customize materials to learners' proficiency levels, akin to research-based projects. Students reported a 30% improvement in reading and listening comprehension when using adaptive platforms like Memrise (Harmer, 2022).
- Interactive Chatbots: AI chatbots like Replika and ChatGPT simulate real-life conversations, helping students practice communication skills in a low-pressure environment. These tools resemble creative project tasks, encouraging self-expression and confidence.
- Speech Recognition Systems: Applications such as Speechling focus on pronunciation and fluency, offering technical project-based learning by solving language-specific problems like accent reduction.[9]

These AI applications cater to different learning styles, providing tailored opportunities for developing essential language skills while aligning with project-based learning principles.

Effective organization is a fundamental component of project techniques and is necessary for the successful integration of AI into language instruction. Achieving intended results requires careful planning, resource allocation, and monitoring. Teachers need to set specific goals for using AI, such increasing students' speaking fluency or vocabulary, and teach them how to utilize AI technologies efficiently.

A research on AI-enhanced curriculum, for instance, revealed that students who used teacher-assisted voice recognition systems had a 40% boost in pronunciation scores, as opposed to a 25% improvement in unsupervised situations.[10] This emphasizes how crucial organized planning and teacher participation are to maximizing AI's advantages.

The review revealed several key outcomes:

1. Enhanced Personalization: AI tools provide individualized learning experiences, improving student outcomes in speaking, writing, and listening skills.
2. Improved Engagement: Interactive AI applications, such as chatbots and virtual tutors, increase student motivation and participation.
3. Efficiency in Feedback: Real-time feedback from AI platforms accelerates the learning process by addressing mistakes immediately.
4. Challenges in Adoption: Despite its advantages, the implementation of AI in classrooms faces challenges, including accessibility, cost, and the need for teacher training.
5. Alignment with Pedagogy: AI complements the characteristics, types, and organizational principles of project-based methods, offering a scalable approach to modern language education.

These results demonstrate AI's potential to enhance language education by creating dynamic, interactive, and learner-centered environments. However, careful

[9] Richards, J., & Rodgers, T. (2020). *Approaches and Methods in Language Teaching*. Cambridge University Press.
[10] Willis, J. (2023). *Frameworks for AI-Based and Project-Based Learning*. Routledge.

planning and teacher involvement are crucial to address implementation challenges and maximize AI's benefits.

CONCLUSION

The goal of artificial intelligence is to create robots with intellect on par with or even higher than that of humans. From natural language processing to vision, reasoning, object movement and manipulation, knowledge, and learning, artificial intelligence is anticipated to be able to perform a wide range of tasks that will facilitate human life. This advanced equipment was created with the intention of cutting down on working hours to increase productivity. Artificial intelligence reduces the cost of human decision-making and task completion.

The growth of digital platforms has made learning English simpler. Technology like computers and smartphones will make it possible to apply artificial intelligence more widely and provide additional possibilities to people worldwide. Another essential component of digital learning technology is personalized material. We now have an artificial intelligence and big data-based adaptive system. Depending on each user's needs and schedule, we can choose the best method for learning English. The course work concludes by stating that the way AI learns can affect the quality of a human's language. Apps, websites, and other tools that use artificial intelligence (AI) can help students understand complex words, build sentences, enhance their writing and listening skills, and acquire other language skills. Therefore, the development of AI-based learning to improve performance and creativity is a crucial field that educational institutions may take into consideration.

Identifying the applications of AI in language learning and teaching is the aim of the present reviews. According to this assessment, artificial intelligence (AI) is a system that can comprehend natural human speech, integrate the flipped learning approach into language instruction, increase learners' competency and productivity, and evaluate human speech. Overall, the research supports the notion that, because of its many advantages, artificial intelligence (AI) is crucial to language instruction and learning. Teachers who plan to use AI in the classroom will find the findings interesting. However, because the evaluation of previously mentioned publications focuses on the use of AI for speaking and listening alone, the research is hampered by the lack of knowledge on its applications for other language skills, including reading and writing. Therefore, to better comprehend AI's advantages in language teaching and learning overall, a more thorough analysis might evaluate its applications for the two talents.

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