AI IN EDUCATION: A STUDY WITH REFERENCE TO ENGLISH LANGUAGE LEARNING

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Abstract

Artificial Intelligence (AI), a computer-based simulation of human intelligence intended to act like humans. AI is one of the driving forces behind the 4.0 industrial revolution, making teaching and learning more accessible in universities. Being the primary driving factors behind the 4.0 industrial revolution, artificial intelligence (AI), is opening up education to more students. Artificial intelligence technology provides the chance to enhance English linguistic competence among students. By offering practice exercises and personalized feedback based on individual student needs and learning styles, artificial intelligence (AI) technology holds the prospect of improving the effectiveness and efficiency of language acquisition. AI provides the learner's a customized environment where students can learn English as per their needs. AI boosts practical abilities like writing using correct grammar and acquiring vocabulary. Additionally, it increases students' practice proficiency in the language while optimizing the impact of English teaching in ELT. As a result, learners may understand English since they have access to a large range of AI-powered ELT applications. Such technologies include Google Translate, Text to Speech (TTS), EnglishAble, Orai, Elsa, Chatbot, Duolingo, Neo platforms, and many others. With the use of tools like ChatGPT or Google's Bard, genAI is able to produce human-like text with minimal effort on the user's part. These intelligent machines may simulate intelligence and make judgements in the same way as people by using a technique that is compatible with computers and mobile devices. The paper aims at gaining a deeper understanding of the ways in which AI is being used to enhance the learning of English language, by conducting an in-depth analysis of the existing literature available on this topic. The results of the study show that AI offers an environment that is conducive to learning English.

Keywords: Artificial Intelligence (AI), Generative Artificial Intelligence (Gen-AI), Machine Learning, Mobile Apps, ELT, Teaching-Learning.

INTRODUCTION

The remarkable progress of artificial intelligence has transformed multiple fields, including education, with significant consequences for methods of teaching and learning. Artificial Intelligence (AI) is a field of computer science that gives machines the ability to learn from experiences, mimic human intelligence, and carry out tasks that normally require human cognitive abilities. Artificial Intelligence (AI) technologies have the potential to revolutionise education by offering individualised learning experiences that are catered to each student's requirements and preferences.

AI is defined as a programme with intelligence that can do a variety of work. For example, people can ask AI-powered tools for help with academic queries, and these technologies quickly respond with the information needed. AI is used in educational scenarios when it can make intelligent decisions that are similar to those made by humans. Furthermore, AI is frequently used in language learning to improve learners' language skills and subskills. On PCs and mobile devices, a plethora of AI-assisted language learning resources are available to support language learners in their language acquisition efforts.

These resources provide helpful assistance in enhancing a variety of language learning skills. For example, ChatGPT, an AI-assisted tool, can be used in language learning environment to support learners in honing their language learning skills and sub-skills. In order to support language learners' overall language achievement, ChatGPT may offer the necessary feedback and comments on various language learning skills and sub-skills skills. With the help of grammatically correct sentences from ChatGPT, students can create writings that are well-structured. Additionally, this AI-assisted language learning technology is capable of comprehending human inquiries and offering the most appropriate responses.

METHODOLOGY

This research that is done through the collection of data, scientific writing that focuses on the subject of the investigation, the gathering of bibliographic data, or a study that is done to address a problem based on a critical and in-depth examination of relevant resources. Several books, journals, articles, newspapers, and other sources relevant to the study topic are used as research data sources. The data collection method used in this study is documentation, which seeks information about items or factors in books, journals, papers or postings, newspapers, and other sources. However, this study analysed the ideas and hypotheses using existing literature, specifically several publications published in various scientific journals.

The writer then examines the material to reach a conclusion when all the data has been gathered. The writer employs content analysis approaches to obtain accurate and accurate results while reviewing the data. A detailed investigation of the written materials' contents is required for content analysis since the investigated data needs a descriptive justification.

LITERATURE REVIEW

A substantial body of studies has been carried out examining the use of AIin Education, especially in language learning (Suryana et al., 2020; Divekar et al., 2022; Fitria, 2023).

The field of artificial intelligence (AI) has made significant progress in improving foreign language instructions due to the swift development of big data and natural language processing technologies. Artificial intelligence (AI) in English language education is a fascinating and creative field (Zhu, 2017). Artificial intelligence technology may enable learning environments that are inclusive of all learners, including those who speak various languages or who might have visual or hearinsg impairments (Marr, 2018). Gawate (2019) predicts that artificial intelligence (AI) will play a significant role in the additional support system for teachers and students of English. Mukhallafi (2020) defines artificial intelligence (AI) as using AI systems to improve content organisation, arrangement, and selection in English language teaching and learning. By considering the students' competency levels, it further diversifies the educational streams and methods of instruction. Moreover, it creates personalised self-study procedures and evaluation methodologies by simulating intelligent and expert systems.

The following is the link between artificial intelligence and English teaching (Wang, 2019) in his study titled "Research on Artificial Intelligence Promoting English Learning Change":

1. Artificial intelligence is changing the setting in which English is learned. Artificial intelligence makes it feasible to learn English through immersion. By combining and logically processing text, speech, and visual data in an intelligent device, English learning becomes more stereoscopic and visual. Students can interact with AI through the human-computer interface, which improves the linguistic settings' authenticity. According to Zilberman (2019), artificial intelligence (AI) has a significant potential to create a customised learning environment where adult learners use all of their senses to simultaneously educate their English skills in relation to their present level of English or vocational expectations or wants.

2. Artificial intelligence is used to maximise the effectiveness of teaching English. Artificial Intelligence will provide a realistic conversational simulation platform for studying and teaching English. We will work with students to help them become more proficient in written, spoken, and written English as well as understanding. AI's understanding of the customs and traditions of the numerous English-speaking countries can be used to engage and connect with students, greatly boosting their interest in learning the language.

3. AI has improved the practical skills of English language learners. To effectively use science and technology in education, teachers and students need to be able to navigate a system and solve problems quickly (ELT). As a result, students' practical operational capacity increases when AI is employed to teach English.

Among the advantages of AI-based instructional programmes for teaching and learning English, according to Gawate (2019) in his work "Artificial Intelligence (AI), Based Instructional Programmes in Teaching-Learning of English Language," are the following:

1) Customer-friendly, need-based programmes. The goals of the learners are integrated with the needs of their context by the AI-based teaching software. It is laid out with the clear expectations and exact standards of the learners. It is ineffective to teach or learn English without taking into account the needs of the students.

2) High-quality contents: With the use of artificial intelligence, it is now possible to create instructional materials that cover every facet of language learning, such as speaking, listening, reading, and writing.

3) More resources for teachers and students. For teachers and students of English language learning, artificial intelligence (AI) is an essential external assistance system. AI can do this anytime, anywhere, and with the precise assistance when it incorporates humanised expertise. Even with integrated AI-based services, educators' works are still acknowledged.

4) Instant feedback system: A number of AI-based models for English language learning and feedback acquisition may be developed. Artificial Intelligence (AI) has the potential to assess and analyse student expectations in educational systems, including grading, reviews, cross-verification, and in-depth presentations. Every aspect of the students' performance is assessed.

5) The teacher's role as an advisor and director is changed. It is difficult to take the instructor out of the classroom and put someone else in their place as a director and guide. The function of the teacher in the ELT process is only changed by AI-based technologies. Teachers have a duty to mentor and assist their students. Teachers can administer and manage such an AI-based tool, and they can manually make the necessary adjustments. AI-related educational services are restricted to aiding in English language instruction and acquisition.

6) Global access. With the many AI-related educational platforms available, students have endless alternatives. Time and spatial constraints can be resolved with the help of artificial intelligence. It is possible to share knowledge from reliable organisations as well as between organisations. Using AI-based teaching tools is a truly wonderful possibility. It allows for student mobility, voice recognition, and facial recognition for remote access. In conclusion, all student behaviour may be controlled by AI-based solutions.

7) By enabling students to highlight and repeat difficult topics, as well as participate in activities that align with their interests, the Intelligence learning platform caters to a variety of learning methods. Applications for education powered by AI are developed to enhance English instruction and learning. It highlights how needs were taken into consideration when developing the English course materials.

8) Tailored English language instruction and acquisition. The requirements and preferences of the students may inform the development of the course. It can be tailored to be more student-centered.

Artificial intelligence technology is a field of study that initially ranked among the most advanced information systems in the world. Its goal is to understand how robots can perform intelligent jobs that humans can only perform (Han, 2019). The development of technology also facilitates our ability to complete certain jobs, such as learning and studying English. One of the technologies that is regularly debated by the general public is artificial intelligence.

Technology is opening up a lot of new possibilities for language acquisition (Fryer & Carpenter, 2006Artificial intelligence (AI) technologies are the driving force behind foreign language training, claim Luo & Cheng (2020). Among other things, artificial intelligence (AI) technology may be able to solve problems including constrained instructional time, available space, resources, and a laborious measuring process. Almost all Artificial Intelligence (AI) methods and technologies can be said to solve some problems, according to Thornton (2007, p. 1).

Therefore, this flexible approach to problem-solving and the human-like capacity to understand intention and behaviour are all encompassed under the broad field of research known as artificial intelligence (AI). (Cobar, 2019). Artificial intellect (AI) aspires to create intelligent computers that think and behave like people by mimicking intellect and making judgements in a manner similar to human thought processes (Salvaris et al., 2018, pp. 3–4)

As a result, creating a computer system that can both create and translate English language fragments has proven to be difficult. One of the reasons for the issue is that language developed as a means of communication among human beings. The proliferation of digital platforms has simplified English language teaching and learning. Thanks to artificial intelligence (AI) technologies, advanced English language competency is now possible. Having both language and computer literacy can make you more globally capable. AI starts with a language's text processing capabilities. The more sophisticated the AI, the more precise the language he learned. As a result, applying AI technology would enhance foreign language instruction and acquisition. (Yingsoon, 2021).

Because a variety of instructional technologies are readily available, it is easier for these kids to understand what the teacher has said. Even young students can learn effectively without having to interact with instructors face-to-face. English teachers, students, and learners may use a variety of Artificial Intelligence (AI)-based language learning programmes. Here are a few examples of AI tools that can be used for English language learning.

Chatbot

Chatbots are a type of artificially intelligent conversational system that is the newest technology designed to engage with computers and humans automatically (Nghi et al., 2019). Chatbots are an effective learning tool, especially for English language learners, according to prior study (Afrianto et al., 2019). The developed chatbot app will serve as a discussion partner for teachers and students of English. Generally speaking, the user should be able to practise both verbal and written communication techniques. For the chatbot programme to fulfil its purpose of serving as a tool for training English conversation, it must have the ability to correct grammar errors and maintain a daily record feature.

The responses that were sent in contained explanations of the issues, suggestions for words or phrases to use in their place, as well as the mistakes' placements. This attempts to lessen user-made grammatical errors. As a result, the daily log function aids in assessing the extent to which the user's practice has enhanced their comprehension of English language and sentence structure. By using this strategy, users get more at ease speaking in conversational English and receive feedback on their practice and any mistakes they may have made. The first thing the basic chatbot function looks at is the message the user enters. By comparing the message to the data already present in the

database, the chatbot and NLP (Natural Language Processing) could interpret the meaning of the message (Haristiani, 2019).

Google Translate

Word definitions and pronunciations in other languages are provided by Google Translate. The smartphone software "Translate" allows users to rapidly understand traffic signs. Additionally, Google Translate can be used to translate websites into a few different languages. Google Translate, available at http://google.com/translate, is arguably the most important tool among the various user tools the company has created (Smallwood, 2015, p. 51). Text speech has even been replaced with a translator. Programmes like Google Translate are already integrated with Google Board. It is therefore as easy as typing to translate from Indonesian to English or vice versa.

Text-to-speech

Text-to-speech is one of Google Translate's additional features. Google Translate's text-to-speech technology enables words translated from several languages, including English. GoogleTranslate's text-to-speech tool translates words more easily. A text-to-voice system is a machine that can phonetically translate text into speech (the arrangement of phonemes to produce an address). This system can pronounce any word because it has an endless vocabulary.

Text-To-Speech (TTS) can convert computer-generated text into audio pronunciation, which can be adjusted for intonation and speed. The audio output can also be recorded as an audio file, which is useful for teaching and learning English. Particularly in the English laboratory, TTS technology may improve the resources for learning English and expedite the process of teaching and learning (Yudhistiro, 2016).

Orai

Orai acts as a teacher as well as a network of support for educators. It is best suited for enhancing public speaking skills. It's also enjoyable to utilise Orai, which receives excellent ratings. Orai is also easy and enjoyable to utilise. You may easily and independently get better at speaking. One of Orai's strengths in teaching and studying English is her ability to count the words and fillers we use in our speech. Teachers can use Orai in the classroom to combine it with other English-speaking topics such character descriptions. After giving students about fifteen minutes to use Orai, they can choose a student at random and have them practise speaking right away.

Orai provides lessons, practice, progress, and recordings among other resources to assist students become more proficient speakers. Because they include exciting material, you can often examine the fundamental components to develop these speaking abilities. Speaking practice is available for anyone who would like to use the provided knowledge in the "Lessons" section.

You have to complete the first three steps of the material before you can study the topic of the next session. To help students become more proficient English speakers, an app named Orai was developed (Suryani et al., 2019).

English Learning Speech Assistant

Vu Van founded the English Learning Speech Assistant (ELSA) in 2015; it is based in San Francisco, California, in the United States. This software aims to enhance English pronunciation through speech recognition and artificial intelligence (AI). The acronym for English Learning Speech Assistant is ELSA. Speak is an artificial intelligence and speech recognition programme for learning English. With the use of this technology, users can engage in a two-way learning process whereby they utter particular phrases or sentences, which the system then analyses and provides with corrected input. Voice samples of people speaking English with different accents are used to train the ELSA framework, which separates non-native speakers from most other speech recognition algorithms.

ELSA can detect attractive sounds that require further customisation based on the findings, allowing it to tailor the user's learning path. ELSA will suggest courses for the user to take next based on their ability level. With reference to the process of learning and teaching English, Application The acronym for English Learning Speech Assistant is ELSA. Speak is an English language learning app that helps students improve their spoken English fluency by utilising voice recognition technology and artificial intelligence. With the use of this technology, learning can occur in both directions. For example, users can listen to the pronunciation of particular English words or phrases, and the algorithm will then analyse and rectify any grammatical or structural errors (Eka, 2020)

Duolingo

To become multilingual, visit the Duolingo website. A method of learning a language using a game-like structure that involves matching words and finishing unfinished sentences is implemented by a software programme called Duolingo. Using this method, students learn the words, grammar, and phrases needed to put sentences together. Students can use Duolingo to study and teach English while simultaneously learning a new science, regardless of their existing level of English ability. Before offering users instructional materials according to their skill levels, Duolingo assesses its users to ascertain their proficiency levels. When Duolingo users take the test, they will learn more about how proficient they are in English right now. Duolingo offers the chance to learn grammar as well as vocabulary, nomenclature, and a variety of other disciplines. Duolingo's approach to teaching English is intended to resemble games and promote "competition" among its users. After then, users of this programme will be able to monitor their advancement in developing their English language skills.

FINDINGS AND DISCUSSION

1) Artificial intelligence is capable of tasks that are difficult for humans to complete, such deciphering phonemes in English and very instantly identifying how your language skills have evolved over time.

2) They are available anywhere, at any time, and sometimes even without an internet connection.

3) An easier to use and more efficient substitute for learning spoken English is artificial intelligence (AI) technology.

4) They are more scalable than people and can help a lot more kids.

5) As human educators get more sophisticated, they may be able to accelerate learning by acquiring a greater degree of expertise.

6) AI's resources allow those who are self-conscious about their speaking abilities to study in a stress-free environment.

7) The usefulness of the AI-based method for assisting university students improve their language skills.

8) Examining the training requirements for English instructors in academic places in light of AI applications.

The results showed that the learners' language learning achievement was enhanced and they were involved in interactive language learning activities by the AI-assisted language learning tool that used a speech recognition feature. The findings offer insight on the possible effects of AI-assisted language learning technologies in language classrooms and have important implications for EFL learners and teachers alike.

The study suggests that EFL learners should embrace AI-powered language learning technologies as useful tools to improve their language learning process. These resources provide a more personalized and engaging learning environment, which boosts enthusiasm and motivation for additional language learning activities. Learners may access language practice anytime and anywhere with AI-powered platforms like Duolingo, ELSA, Orai, etc. giving them the ability to take charge of their education and developing a sense of autonomy and self-regulation.

The study also emphasises how AI-powered language learning tools have the potential to transform EFL classrooms by fostering an atmosphere that is personalised and adaptable. Instant feedback, comments, and alternative sentences are provided to learners interacting with interactive AI systems, encouraging ongoing development and boosting self-assurance in their language skills.

This on-the-spot assistance fosters a healthy learning environment by offering encouragement and support. Furthermore, the application of AI to language acquisition creates new and interesting opportunities for pedagogical study and development. Researchers and educators might investigate creative ways to harness AI technology's potential to enhance language learning outcomes and instructional strategies as it develops.

The long-term impacts of AI-assisted language learning, its use in various language situations, and the creation of increasingly advanced AI tools suited to particular language learning requirements might all be the subject of future research.

CONCLUSION

AI-assisted language learning resources are beneficial for EFL teachers to incorporate into their lesson plans. These platforms give teachers useful information on each student's development and opportunities for growth, enabling them to better adapt their instruction. Teachers can provide tailored help and guidance to individual students by recognising specific language learning obstacles, which can result in more efficient and successful language learning results. With the aid of AI-supported instruction, teachers can adapt their methods to the various demands and skill levels of their students.

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