Examining the Transformative Role of Artificial Intelligence in Language Skill Enhancement: A Case Study of BS English Students in Okara, Pakistan

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Chronicle	Abstract
  Waqar Mahmood Khan is currently affiliated with the Department of English University of Okara, Pakistan **Email**: waqarmahmoodkhan@uo.edu.pk **Corresponding Author***	Artificial intelligence (AI) has emerged as a powerful tool in a multitude of disciplines, with education being one of the most essential. The goal of this research is to investigate the impact of artificial intelligence (AI) on the acquisition of productive and receptive language skills among BS English students in Okara, Pakistan. The study used a qualitative research methodology, with semi-structured interviews with 150 students enrolled in the BS English program. The findings suggest that AI-based language learning systems improve students' language abilities by improving their writing, reading, listening, and speaking capabilities. However, flaws were revealed, notably when it came to deciphering complex linguistic aspects that required human judgment and when pupils relied too heavily on AI and ignored their thinking. According to the study, while AI has enormous potential in language acquisition, it should be paired with human-driven educational methodologies for the best results. Teachers and students are urged to adopt AI to improve students' learning opportunities and academic success.

INTRODUCTION

Increasingly commonplace in many spheres of society, including education, is artificial intelligence (AI). Machines can now perform tasks that need human intelligence, such learning, thinking, and problem-solving, thanks to artificial intelligence (AI), which imitates human intelligence. AI in education has been a trending issue due to its ability to improve the learning experience and assist students in improving their academic performance. The goal of this research paper is to look at the impact of artificial intelligence (AI) on the learning of productive and receptive language skills by BS English students in Okara, Pakistan. The paper will also examine how artificial intelligence can help BS English students enhance their writing, reading, listening, and speaking skills. According to Ghafar et al. (2023), AI improves practical skills such as writing and provides a reliable simulation dialogue platform similar to spoken English. It increases students' practice abilities while boosting the teaching impact of English in ELT. Learning English has become easier as technology and platforms have advanced. The science of artificial intelligence (AI) is expanding quickly, and applications of it are becoming more and more common in various spheres of society. The education sector has become a special focus of AI application. The application of AI has broadened the scope of learning and educational

procedures. AI has evolved into a potent tool for improving productive and receptive abilities such as speaking, reading, writing and listening in BS English students. However, there is some controversy about whether AI hurts pupils' cognitive ability because they rely on AI rather than thinking for themselves.

Purpose of the study

The purpose of this study is to investigate the impact of artificial intelligence (AI) on the productive and receptive skills of BS English students in Okara, such as speaking, reading, writing, and listening. The impact of AI on pupils' thinking capacity will also be examined, among other things.

Research Objectives

- To evaluate the efficacy of AI-based language learning systems in increasing students' writing, reading, listening, and speaking abilities.
- To investigate the potential disadvantages of depending too heavily on AI in language acquisition, particularly when understanding complicated linguistic characteristics that require human judgement.

Statement of the problem

Artificial intelligence (AI) is being used more and more in education, particularly to improve language proficiency. However, it is necessary to comprehend the influence of AI on BS English students in Okara, Pakistan. Furthermore, the potential negative repercussions of relying only on AI rather than critical thinking and decision-making should be investigated. This study attempts to fill these information gaps and provides insights for educators and students on how to integrate AI into language learning effectively.

REVIEW OF LITERATURE

For many years, the public has debated the concept of artificial intelligence (AI). It is typically depicted in science fiction films or conversations about how intelligent computers would soon govern the world, relegating humans to a mundane existence in order to sustain the new AI order. While this image is a caricature of artificial intelligence, the reality is that the technology has come and many of us are dealing with it on a daily basis. AI technology is no longer the domain of futurologists; it is now an inherent component of many firms' business models and a critical strategic component in the plans of many sectors of business, medicine, and governments on a global scale. With current studies focused on the ramifications and consequences of technology rather than the performance implications of AI, which appears to have been the primary research issue for a number of years, this (Dwivedi et al., 2021). AI provides an excellent learning environment for English. It has the capacity to create a tailored environment in which learners utilize their senses to simultaneously exercise English skills based on their present level of English, vocational needs, or interests.

AI provides a real-world simulated conversation platform, such as spoken English, and improves practical abilities, such as writing. It improves students' practice capacity and maximizes the teaching impact of English in ELT. The advancement of technology and platforms has made it easier to learn English. AI technology allows you to increase your English language skills. The availability of numerous types of learning technologies facilitates students' understanding of English. Many ELT programs are based on AI

technology and can be utilized by students. Google Translate, Text to speech (TTS), English Able, Orai, Elsa, Chatbot, Duolingo, Neo platforms, and many more are examples of smart machines that think and behave like people, with the ability to simulate intelligence and make decisions identical to human reasoning through a process that both computers and cell phones can use. (Fitria, 2021). Everyone has been influenced by the industrial period to be able to adapt to quick changes. Globalization and the Fourth Industrial Revolution have brought us new creative opportunities and technological problems. As a result, technology is crucial in transmitting information through text, pictures, and sound (Rahayu & Pujiyono, 2017). Artificial Intelligence in Education (AIEd), according to several international sources, is one of the actively growing disciplines in educational technology. While it has been available for almost 30 years, educators are still unsure how to use it for pedagogical purposes on a larger scale, and how it may have a meaningful impact on teaching and learning in higher education. Through a systematic review, this paper aims to provide an overview of research on AI applications in higher education. Out of 2656 initially discovered publications from 2007 to 2018, 146 were included for final synthesis based on clear inclusion and exclusion criteria.

According to the descriptive findings, computer science and STEM fields account for the majority of the disciplines represented in AIEd articles, while empirical investigations most frequently used quantitative methodologies. Four areas of AIEd applications in academic support services, as well as institutional and administrative services, are highlighted in the results synthesis: 1. profiling and prediction, 2. assessment and evaluation, 3. adaptive systems and personalization, and 4. intelligent tutoring systems. The conclusions reflect an almost complete lack of critical reflection on the problems and risks of AIEd, a lack of connection to theoretical pedagogical perspectives, and the need for a deeper investigation of ethical and educational methods in the implementation of AIEd in higher education (Zawacki-Richter, Marín, Bond, & Gouverneur, 2019).

Artificial intelligence in education (AIEd) is a three-decade-old scientific study subject that is particularly interested in the creation of AI-based solutions to support and comprehend the teaching-learning process. With the advent of communication technologies, education is evolving on a regular basis. Nowadays, the teaching-learning process increasingly relies on new technology, particularly artificial intelligence and its different subsets and methodologies. Here are some of the most intriguing uses, without going into depth, because we shall discuss the many aspects of artificial intelligence in education in the following sections. (Ezzaim, Kharroubi, Dahbi, Aqqal, & Haidine, 2022)

- Content personalization with machine learning algorithms
- Natural language processing (NLP) techniques for automatic translation
- Online monitoring of student actions via sites such as Grammarly, TurnItIn, and White Smoke
- Using learning analytics to identify at-risk learners

The appropriate education departments have given English teaching and learning more consideration as a crucial element of the new curriculum reform. Because of the ongoing improvement and extension of teaching level and scale, as well as the growth of Internet information technology, the environment of English teaching and learning is undergoing

tremendous changes. How to successfully integrate AI into English teaching and build compound abilities for society is a growing concern in the field of English teaching and learning. (Wang, 2019). The literature review focuses on the studies on the application of AI in language learning that was available. According to the study, research investigations have indicated that the use of AI in language training is highly beneficial, particularly for receptive skills such as reading and listening. Wong et al. (2018) conducted research on the application of artificial intelligence in teaching English as a second language. The study found that students who used AI-based language learning systems outperformed those who did not use AI in reading and listening comprehension assessments.

Furthermore, AI-based language learning programs have been shown to boost students' critical thinking skills since they provide personalized learning experiences adapted to individual strengths and shortcomings. Technological advancements and the computing power of newly developed intelligent machines are fundamentally tied to the future of higher education. Artificial intelligence advancements in this subject throw up new opportunities and problems for higher education teaching and learning, with the potential to drastically transform governance and the internal architecture of higher education organizations. There is little agreement on a final definition of artificial intelligence, with solutions to the question 'what is artificial intelligence' molded by philosophical perspectives embraced since Aristotle. (Popenici & Kerr, 2017).

This guarantees that students are engaged in the learning process and may take responsibility of their learning. When it comes to productive skills like writing and speaking, AI-based language learning algorithms have showed encouraging outcomes, albeit with certain limits. Shih et al. (2019) conducted research on the use of AI in teaching English writing skills to Chinese students. The results revealed that using AI considerably improved the pupils' writing skills. However, the study also indicated that the usage of AI has limitations, notably in judging sophisticated language aspects such as writing style and tone. While AI can correctly identify grammar and vocabulary faults, it struggles to evaluate higher-order writing skills that require human judgment.

METHODOLOGY

This study employs a qualitative research methodology to investigate students' perspectives of the usage of AI in skill enhancement. Semi-structured interviews with 150 students enrolled in a BS English program were used to obtain data. The interviews were conducted to learn about the students' experiences and impressions of utilizing AI in language learning, as well as how it has impacted their learning of productive and receptive language skills. The interview questions were intended to elicit information about the influence of AI on students' productive and receptive skills, as well as the impact of AI on their cognitive capacity. Secondary data sources such as academic journals and conference papers were used to supplement the interviews.

FINDINGS

The purpose of this study was to look at the impact of AI on BS English students' learning of productive and receptive language skills. The findings indicate that AI has a positive impact on students' learning of productive and receptive language abilities. AI-based

language learning programs provide students with tailored learning experiences, which improve their academic achievement. When students of BS English use AI, they can improve their writing, reading, listening, speaking, and thinking skills. However, the application of AI in language acquisition has limitations. According to the findings, it struggles to evaluate complicated language elements that require human judgment. As a result, for optimal advantage, AI should be used in conjunction with human-driven education approaches. The study's findings show that the application of AI has a beneficial effect on students' productive and receptive skills. AI-powered technologies assist them in learning new skills more quickly and efficiently. Students claimed that AI-based applications such as Grammarly and Turnitin assisted them in improving their writing and plagiarism skills. Similarly, artificial intelligence-based speech recognition software such as Google Assistant and Siri assisted pupils in improving their pronunciation and speaking skills.

AI also assisted pupils in thinking deeply about the things they were learning. They claimed that AI-based programs such as Wolfram Alpha assisted them in better understanding complicated issues and problem-solving abilities. Students, on the other hand, claimed that relying too heavily on AI hampered their thinking ability. They contended that over-reliance on AI-based tools can lead to pupils becoming lazy and failing to think thoroughly about the concepts they are learning. Furthermore, AI-based technologies may lack empathy and emotional intelligence to comprehend students' needs and objectives. Overall, there is a lot of promise for the application of AI in language acquisition, and teachers should take use of it to boost their students' academic performance and learning outcomes. Thus, the effects of AI on BS English students' learning of productive and receptive language abilities are quite favorable and advantageous, but somewhat detrimental on BS English students' thinking abilities, because AI-using students simply go to Chatgpt and do not think on a concept by using their minds, and their minds may become rusted as a result of not thinking.

CONCLUSION

In conclusion, the adoption of AI-based tools improves the productive and receptive skills of BS English students in Okara. However, over-reliance on AI can limit their ability to think in the long run. As a result, there is a need to establish a balance between using AI-based technologies and improving critical thinking skills. Educational institutions must carefully integrate AI-based technologies into their curriculum and urge students to use them as a tool, not as a replacement for their cognitive talents.

DECLARATIONS

Consent for publication and Ethical approval: Because this study does not include human or animal data, ethical approval is not required for publication. All authors have given their consent.

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