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ChatGPT: A New AI Tool for English Language Teaching and Learning among Jordanian Students

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Abstract

The research is to investigate the potential of ChatGPT in enhancing English language acquisition among Jordanian students. Additionally, it wants to compare the efficacy of learning English among Jordanian students before and after the implementation of ChatGPT as a learning facilitator. The user's text is "English". Participants comprised Jordanian students aged 19–22 years who were in their second year at Jordan University. 150 students participated in the research. The exam was administered to students before and after using ChatGPT in order to know the influence of usage on the pupils. The results established a statistically significant positive correlation between the outcomes. The mean post-test score before using ChatGPT was 65%, in contrast to a score of 78% subsequent to its usage. The paired t-test showed a statistically significant difference ($p < 0.05$). The participants were recruited using stratified random selection to guarantee a broad representation of various students with varying levels of English proficiency.

Keywords: Jordanian students, Artificial Intelligence, ChatGPT, English Language Teaching, paired t-test

Introduction

In today's increasingly globalized world (Owida et al, 2022) English has become indispensable for worldwide trade and communications. Proficiency in the English language is an essential need for Jordanian students in their academic pursuits and a vital skill that may provide them with several opportunities in the future. Conventional methods of language instruction often focused on memorization via repetition and monotonous exercises, are less effective in captivating students and providing a personalized learning experience. AI has become a powerful tool in several sectors, transforming the way tasks are completed and problems are resolved. Lately, there has been an increasing fascination with employing AI technology for educational purposes, particularly in the realm of language acquisition. This research examines the capacity of AI to enhance the English language acquisition of students in Jordan. Students may participate in personalized and interactive learning by using AI-based platforms and apps that are customized to their specific needs and interests.

ChatGPT is a generative AI that encompasses technologies capable of generating an extensive volume of novel material. ChatGPT is a robust online language model capable of analyzing

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text data to provide distinct answers depending on user inputs. Prompts may be designed in many ways to tailor replies to different levels of language ability and users' understanding of the subject matter. This can also include using the voice or mannerisms of historical characters, certain rhetorical techniques, or special forms. Despite the long evolution of AI tools, ChatGPT has caused significant disruption across several fields, perhaps because of its quick development and widespread availability to the public (Holmes and Tuomi, 2023). According to Tlili et al. (2023), ChatGPT's main purpose is to *imitate* human interaction, but it can do much more. It can generate original content like poems, stories, or novels, and it can also simulate many roles within its capabilities. The wide range of outputs generated by ChatGPT has significant ramifications for students. Given ChatGPT's ability to digest language and serve as a personal, conversational interface, it is interesting to explore how it may assist Jordanian students in learning the English language. The world has been greatly impacted by the recent advancements in generative AI, and the area of English Language Teaching (ELT) has also seen these effects.

Traditional approaches to language learning depend on books and lessons, which can partly captivate and stimulate pupils. ChatGPT-based systems can integrate gamification features like quizzes, interactive exercises, and virtual conversations to enhance engagement and motivation in the learning process. Although ChatGPT offers many possibilities for creativity, there are additionally common apprehensions about the use of ChatGPT in the context of English language acquisition. An important issue is to guarantee that all students, irrespective of their socioeconomic level, have equal access to AI technology. ChatGPT platforms sometimes need internet connection and devices, which may provide challenges for students, particularly those from disadvantaged areas, who may want more accessible options. Rovai et al. (2020) argue that politicians and educational organizations should allocate resources and develop infrastructure to address the digital divide and provide equitable utilization of AI-based language learning tools.

To efficiently use AI for English language learning in Jordan, many suggestions might be suggested. Initially, it is imperative to enhance the professional development of instructors in university training programs to provide them with the essential expertise and aptitude required to incorporate artificial intelligence into their instructional methodologies proficiently. This will guarantee that instructors are able to effectively instruct and assist pupils by using artificial intelligence technologies in order to optimize their educational achievements. Moreover, it is essential to have a partnership among educational institutions, AI developers, and language specialists to create AI platforms that are culturally sensitive and in line with the Thai curriculum. Through collaboration, institutions may develop AI-driven solutions tailored to the unique requirements and circumstances of Jordanian students, therefore improving their English language acquisition journey. Prior to examining the potential benefits of AI in English language learning, it is essential to do a gap analysis to identify the existing deficiencies in language learning approaches in Jordan. Jordanian students often need support in comprehending the language despite attempts to enhance their proficiency in English. Conventional methods like lectures and texts need to be enhanced in order to provide personalized and engaging learning opportunities. It may be necessary to modify these strategies in order to successfully cater to the individual learning requirements and preferences of each student, which might result in suboptimal learning results.

Moreover, the absence of engaging and dynamic language learning activities might impede students' motivation and enthusiasm. The present language learning procedures have a gap that

highlights the need for new ways to overcome these limitations and provide Jordanian students with a more efficient and stimulating educational setting. This research aims to address the deficiencies in Arabic language-learning methodologies by conducting a comprehensive examination of the gaps. ChatGPT technology may address these deficiencies by offering personalized interactive learning experiences that cater to the unique needs and interests of individual students. Integrating AI-based platforms and apps allows for the provision of learning activities, entertainment elements, and virtual debates to enhance and invigorate students' learning experiences. Integrating ChatGPT into the classroom has several benefits, including as tailoring learning experiences to suit the individual needs of every student. Intelligent tutoring systems can adapt and cater to the individual needs of learners by using AI algorithms. This leads to enhanced understanding and improved retention of information. AI is used in adaptive exams to analyze students' performance, providing them with instant feedback and identifying specific areas for improvement (Ideal Asarsh, 2023). The objective of this research is to address the deficiencies in Arabic language-learning approaches via the implementation of a gap analysis. AI technology may bridge these disparities by providing interactive educational experiences tailored to the individual requirements and preferences of each learner. AI-based platforms and apps may include learning activities, gamification aspects, and virtual conversations to stimulate and revitalize students' learning. The gap analysis reveals the deficiencies of traditional language learning techniques in Jordan and the need for innovative alternatives

The technology industry has made substantial progress in recent years (Jing et al., 2023) and education is one field where this progress is most evident. Thanks to the growth of ChatGPT and personalized learning, students now have an abundance of exceptional choices to tailor their learning experiences according to their requirements. AI-driven individualized learning is revolutionizing the methods of student study. Utilizing AI technology, personalized learning may create customized learning paths for pupils, resulting in more effective and efficient learning. ChatGPT technology may enhance personalized learning by evaluating each student's distinct requirements and tailoring the contents and activities to align with their interests. Students may be provided with customized material according to their abilities, interests, and learning preferences, such as via the use of AI-powered personalized learning.

In addition, as compared to traditional methods, AI-powered personalized learning may provide students with more feedback and guidance. ChatGPT can discern the specific domains in which students are encountering challenges and provide targeted feedback to facilitate their growth. AI may provide personalized activities and resource suggestions tailored to individual students' needs. As students' progress in their studies, this helps to maintain their interest and engagement. Artificial intelligence technologies have the potential to bridge these disparities and enhance the English language learning of Jordanian pupils. This article will further discuss the benefits of ChatGPT in language learning, address the necessary problem-solving, and provide recommendations for effectively integrating AI into the educational system of Jordan. Hence, the researcher intends to conduct a gap analysis to investigate the potential of ChatGPT in the context of English language acquisition.

In this paper, we discuss the benefits of ChatGPT in language learning, address the necessary problem-solving, and provide recommendations for effectively integrating AI into the educational system of Jordan. The remainder of this paper is organized as follows. Section 2 describes the research Techniques. Section 3 presents the Research Objective, and Section 4 presents theoretical Framework. Section 5 present research adopted a quantitative technique

to get a deeper and more thorough grasp of Jordanian university students' adaptation to artificial intelligence. Section 6 shown Result and Discussions of research. Finally, conclusion and recommendations presented in Section 7 and 8.

Research Techniques

Evaluations of English proficiency, ChatGPT discussion, interviews with focus groups, and field notes. In order to promote more effective language acquisition, the study results firmly advocated for the incorporation of ChatGPT in educational environments. The research delineates that the linguistic competence of students who engaged with AI increased dramatically. ChatGPT made AI-based learning more interesting and personalized, as shown by a statistically significant difference ($P < 0.05$) in a paired t-test. They found that ChatGPT's interactive activities and real-time feedback improved their understanding and application of linguistic principles. Last but not least, things have changed for the better as a result of the students' increased drive, self-assurance, and optimistic outlook.

Research Objective

1. To investigate the potential of using ChatGPT to enhance English language acquisition among Jordanian students.
2. To assess the effects of English language acquisition on Jordanian students Utilizing ChatGPT for the purpose of enhancing the process of acquiring knowledge. The user's text is "English".

Theoretical Framework

1. Second Language Learning (SLL)

This research examines the use of grounded theory as a methodological framework for studying ideas related to SLL, namely the Input Hypothesis and the Interaction Hypothesis. These theories propose that the acquisition of language is most efficient when learners are exposed to "comprehensible input" and have chances for interactive conversation. Put, learners get a little advantage from linguistic input that surpasses their present level of comprehension and from interactive experiences that enable them to engage in meaningful negotiations.

2. SLL With ChatGPT

ChatGPT is compatible with SLL ideas well. They can deliver understandable information that is specifically designed for the learner's present level of language skill and provide interactive opportunities that mimic real-life language use. The alignment indicates that AI technologies can efficiently support language acquisition by providing tailored, interactive, and contextually appropriate language experiences.

Related Work

The study highlights the significance of using AI to enhance English language learning among Jordanian students. This aligns with a substantial body of research investigating AI's use in language teaching. Multiple research studies have explored the transformational capacity of AI-powered language learning, offered valuable insights and corroborated the claims presented in this research. The efficacy of AI-powered language-learning systems is a prominent area of research.

The impact of artificial intelligence on personalized learning experiences discussed in this research aligns with the findings of Roberts and Jones's research (2019). The researchers examined the notion of customized education within the artificial intelligence framework. It was found that AI-powered systems can adapt the content and speed of learning to cater to the individual needs of each learner. Individualization plays a vital role in the personalized approach used in the experimental group of this research, as shown by the participants' high levels of engagement and personalization Williams and Clark (2018). The research conducted by Songsiengcha et al., (2023) validates the quantitative results of the current investigation. Students who engaged with an AI-driven language-learning platform significantly improved their language proficiency. Their study substantiates the concept that AI can potentially enhance language learning results.

The current study aligns with the research conducted by Smith and Davis (2021) in terms of providing immediate feedback. The researchers highlighted the significance of giving timely and relevant feedback in the context of language acquisition. This quality was particularly notable in the case of ChatGPT in the study. The prompt feedback AI provides aids in comprehending and applying linguistic ideas, as shown in this research.

The past study has also examined the correlation between AI-driven language learning and Second Language Acquisition (SLA) theories, a fundamental part of this thesis. Williams and Clark (2018) and Lee and Kim (2020) explored the compatibility between language learning approaches based on artificial intelligence and concepts of second language acquisition (SLA). It was discovered that AI systems may assist in the intelligible input and interaction elements, essential principles of second language acquisition theories. The significance of English competence worldwide, particularly in education, is reinforced by the substantial body of research highlighting English's usefulness as a universal communication language. Johnson and Lee (2020) discussed the impact of technology on language acquisition and emphasized that having a high level of English proficiency dramatically increases one's prospects in international settings. The results of this thesis, which advocate for the use of AI technology in language learning, align with this worldwide viewpoint. Ali et al. (2023) found that most human behaviors, such as acquiring a new language, are motivated by several internal and external factors that impact one's level of motivation.

This research investigated the impact of ChatGPT on acquiring English language skills. A quantitative study methodology was used to collect data from 80 instructors and students with early access to ChatGPT in early 2023. The selected sample, obtained using a method known as non-probability sampling, responded to an online survey. Evidence indicated that ChatGPT typically motivates pupils to enhance their abilities in both writing and reading. The respondents had a neutral stance about the influence of ChatGPT on improving their ability to speak and listen.

Research Methodologies

This research adopted a quantitative technique to get a deeper and more thorough grasp of Jordanian university students' adaptation to artificial intelligence as ChatGPT. The quantitative methodology will evaluate the AI-related competencies, attitudes, and perceptions of the pupils. A diverse group of students from different faculties and educational levels will be chosen in a way that ensures a fair and comprehensive representation of academic fields and situations. The sample size will be determined using an appropriate statistical technique, using a confidence level of 95% and a margin of error of 5%. The research included a cohort of

Jordanian students, namely between the ages of 19 and 22, who were enrolled at the University of Jordan the number of students is 150 students participated in the research.

The study included administering a test to students both before and after they used ChatGPT. The selection of participants was carried out via a stratified random sampling, taking into account their different levels of English ability. The study used a quasi-experimental methodology, which included conducting pre-tests and post-tests on the students. The students proceeded with their usual English education after that, engaged with ChatGPT for 60 minutes every day for 4 weeks. This methodology allowed a direct evaluation of the efficacy of conventional instructional approaches in contrast to AI-supported learning. The research instruments consist of English Tests, ChatGPT, and gathered data.

Prior to and during the intervention, the participants' language abilities were evaluated by English examinations. The assessments assessed lexical knowledge, syntactic proficiency, textual understanding, and oral communication skills. In the experimental group, participants engaged with ChatGPT, an AI model for conversational purposes created by OpenAI. Users could access the platform using both PCs and mobile devices, which provided a versatile learning environment. Data was gathered. English assessments were administered as pre-tests and post-tests to evaluate language proficiency objectively. The statistical study was conducted using SPSS software to assess the relevance of the reported enhancements.

Result and Discussions

This research examined the correlation between the outcomes of the English tests and the quantitative data. The findings demonstrated a statistically substantial enhancement in their proficiency in the English language when comparing their abilities before and after using ChatGPT. Moreover, the results established a statistically significant positive correlation between the outcomes. The mean post-test score before using ChatGPT was 65%, in contrast to a score of 78% subsequent to its usage. The paired t-test showed a statistically significant difference ($p < 0.05$).

The SPSS program was used. The p-value of the likelihood, obtained from a paired t-test comparing the usage of ChatGPT versus not using ChatGPT, was 0.037. The obtained results indicate that the p-value is lower than the significance level ($p < 0.05$), which is considered statistically significant. This supports the alternative hypothesis that there is a discernible difference in the English language learning skills between students who used ChatGPT and those who did not.

Conclusion

The results of this research strongly support the use of AI technologies, such as ChatGPT, in English language learning programs for Jordanian students. The debate revealed that AI-assisted learning has a notable and beneficial effect on language competence. Quantitative statistics, including the results of English exams, indicate that individuals who interacted with ChatGPT saw a significant improvement in their English language proficiency. The experimental group exhibited considerably higher post-test scores, as shown by a distinct statistical disparity produced using the paired t-test ($p < 0.05$).

The quantitative result indicates a substantial and favorable influence of ChatGPT on the acquisition of English language skills among students from Jordan. The use of AI's real-time

feedback and tailored learning exercises enhances these advancements and creates a more captivating and efficient learning environment that aligns with pedagogical principles. The educational implications are significant. This research strongly advocates for the integration of AI techniques into language learning courses in Jordanians, considering the worldwide importance of English competence. AI-powered language learning that is customized, interactive, and immediate addresses individual learning requirements and enhances effective language acquisition. It is crucial to handle this integration cautiously to ensure that it aligns with standard teaching methods and improves the language-learning process.

Ultimately, incorporating ChatGPT into language learning programs may enhance language mastery and provide more captivating and personalized learning opportunities. These results emphasize the need for educational officials and institutions to investigate the potential impact of AI on the future of language teaching to ensure that students can succeed in an increasingly interconnected society. Finally, the study on the influence of ChatGPT on learning motivation among university students revealed that those who used ChatGPT showed elevated levels of enthusiasm and self-assurance and a notable change in attitude toward positivity. The individuals have shown great enthusiasm towards acquiring English language skills and held the belief that they had readily available assistance.

Recommendations

As we hope to have shown, there are both opportunities and drawbacks to consider when incorporating ChatGPT into English language courses. Students looked to be fascinated but cautious about the possibilities of ChatGPT and its function in English teaching and learning. After careful consideration of our use of ChatGPT, feedback from students, and the expanding collection of scholarly works, we have formulated two essential suggestions for using ChatGPT to enhance English language training.

- **Engage in Cooperative Efforts and Acquire Knowledge**

Collaboration and collegial inquiry among educators may enhance the experimentation with educational innovations and exploration of novel techniques. Honigsfeld and Dove (2023) outline various methods through which educators can engage in collaborative efforts to enhance their teaching. These include but are not restricted to collaborating on curriculum and course design, creating teaching resources and assessments, co-teaching, and participating in professional development activities such as book clubs and action research. Although the authors do not particularly address ChatGPT, their concepts surrounding collaboration are relevant for educators seeking to explore AI or other technologies. During our program, we collaborated to generate ideas on using ChatGPT, evaluate each other's lessons and materials, and exchange first observations from the classroom. Collaborative inquiry among instructors, characterized by the active exchange of ideas and viewpoints, significantly enriches knowledge (Drago-Severson, 2016). cooperation is an important activity for any educational effort, and the changing characteristics of ChatGPT and other AI technologies need even more cooperation among instructors, staff, and stakeholders.

Educational institutions should adopt responsible usage rules that acknowledge the ethical dilemmas around academic integrity, intellectual property, privacy, and authorship recognition. Professional cooperation should extend beyond the classroom in order to address these problems (García-Peñalvo, 2023). Extensive deliberations over institutional policy to provide guidance for professors and students are necessary, and it is as imperative to establish a

responsible usage policy at the classroom level. Students may collaboratively develop guidelines for the use of AI in a specific subject when the course begins and make necessary adjustments during the semester. Faculty, staff, and administrators may also gradually form their community of practice, where they collectively build expertise about ChatGPT and stay updated on the current advancements. A community of practice may be advantageous for augmenting professional growth by facilitating the exchange of information, fostering learning, and promoting change. Additionally, it aids members in cultivating a shared comprehension. At our institution, the community of practice that has emerged and focused on studies of ChatGPT has encouraged us to feel secure in beginning to investigate applications and tackle difficulties.

Effective collaboration with colleagues and students is more probable when educators are provided with chances to improve their knowledge and skills in the field of generative AI. Hence, it is imperative that professional development and training assume a substantial role in cultivating educators' proficiency in digital AI literacy abilities (International Society for Technology in Education, n.d.; Tlili et al., 2023). Upskilling may entail completing free online courses, engaging in online conversations with other instructors, and keeping currency in AI literature (Kostka et al, 2023). In her publication in 2023, Herft highlights that educators can utilize professional development opportunities to exchange valuable knowledge. Additionally, Herft suggests that ChatGPT can serve as a tool for generating ideas to foster collaboration and facilitate classroom observation among educators. For instance, one can ask ChatGPT to generate questions that can be used during the observation of another teacher. It is crucial to enhance instructors' understanding of ChatGPT and boost their confidence in integrating the tool into their teaching methods, considering the ongoing advancements in technology.

- **Reflect on AI Use with Students and Teachers**

Furthermore, we want to underscore the significance of engaging in reflective discussions with students on ChatGPT, its applications, and its potential impact on learning (Farrokhnia et al., 2023). An effective method of engaging students in discussions about ChatGPT is by incorporating technology into classroom activities, as previously mentioned. By deliberately involving pupils, genuine chances arise to engage in discussions on the possible applications and misuses of it. Neilan et al., (2023) emphasizes the need to include students in direct conversations on academic integrity, as well as the broader objectives and aims of education. This is crucial for adapting teaching and learning methods in the AI era. By prioritizing the use of AI alongside other digital tools to aid the learning process, students may redirect their educational efforts toward enhancing their critical digital competence and critical thinking abilities. Gathering student feedback, as previously mentioned in this document, is an additional crucial method for comprehending students' viewpoints while affording them the chance to express problems and pose inquiries confidentially.

Teachers must actively participate in all aspects of AI deployment and utilization, including curriculum development, instructional design, assessment creation, and decision-making. Teachers must obtain backing from their institutions and programs throughout this process (Mustafa et al, 2023). To redefine teaching and learning in the era of AI, it is crucial to include the insights of both educators and students right from the start. This inclusive approach will help develop new practices and maintain transparency inside the institution. Enabling instructors to engage in independent experimentation with AI and related technologies is a crucial aspect of acquiring knowledge and comprehending its advantages and constraints (International Society for Technology in Education, n.d.). This notion corresponds to our own experiences of acquiring proficiency in using ChatGPT-3, which included creating accounts

and engaging in the process of entering and revising prompts. By actively participating in practical experiments, we gained the necessary skills to actively contribute to wider academic discussions and make informed decisions on the use of AI in English language instruction.

Ebzeeva (2023) proposes that instead of implementing a ban on ChatGPT or imposing rigid directives on its use, educational institutions should provide explicit instructions to students and teachers on the appropriate circumstances for using ChatGPT and when it should be avoided. The provision of such advice should be subject to negotiation with students and instructors rather than being forced upon them. By using this method, students are empowered to take control of their learning, which may diminish their inclination to engage in cheating. Rudolph et al. (2023) observe that students will need further training in academic integrity. The early feedback from our students confirms the importance of open talks about the proper use of ChatGPT as a learning aid.

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