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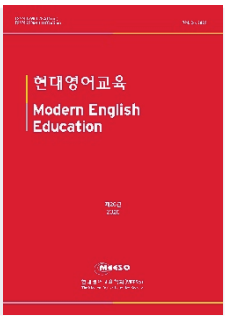

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Perceptions of ChatGPT's Reliability and Efficacy for Academic Tasks Among Saudi University Students

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ChatGPT, 학문적 영향, 학생들의 인식, 사우디아라비아, ChatGPT 효용성

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Abstract

Using an explanatory sequential mixed-methods design based on quantitative surveys and qualitative interviews, this study explores students' perceptions of ChatGPT's reliability and efficacy as an academic instrument among Saudi university students. Forty-four participants from different Saudi Arabian universities with varying academic levels participated in the study. The study findings show ChatGPT is generally perceived as a credible, highly user-friendly academic tool with benefits, including enhanced academic performance, effective time management, and an increased ability to perform various educational tasks. Female students demonstrated greater trust in ChatGPT's reliability and effectiveness compared to their male counterparts, shaping future directions for the study on the influence of demographic factors on the perception of ChatGPT. The study also revealed concerns about ChatGPT's interference in critical thinking and academic integrity, over-reliance on ChatGPT as an academic tool, and ethical plagiarism-related issues. The study findings are specifically relevant for Saudi Arabia's educators and policymakers since AI integration into education aligns with the nation's Vision 2030 educational goals. With particular relevance for English language instruction in Saudi universities, recommendations include developing AI literacy programs and policies on ethical concerns. The study can be used as the basis for informed decision-making on adopting ChatGPT and other AI tools in higher education without compromising academic principles.

INTRODUCTION

Saudi Vision 2030 recognizes technological advancements overall and artificial intelligence (AI) as a prominent aspect of technological development in all of its programs since "out of 96, 66 of the direct and indirect goals of the vision are related to data and AI" (SDAIA, 2025). For instance, promoting and supporting the culture of innovation and entrepreneurship is one of the strategic objectives of the Human Capacity Development Program (HCDP), a part of the countrywide initiative. HCDP aims "to build an ambitious national strategy to develop citizens' capabilities, starting from early childhood stages, through general education, university education, technical and vocational training" (Saudi Vision 2030, 2024). The new Saudi Arabian Vision 2030 emphasizes the requirement to know how students learn within Saudi Arabia.

Now, recent AI technologies like Generative Pre-Trained Transformer (ChatGPT) are used and perceived by universities to perform academic work. The research is founded on the Technology Acceptance Model (TAM) to gain more light on student perception of ChatGPT's utility along with adoption ease that announces the decision to accept new academic tool. Within the educational setting, TAM functions as an effective methodology for analyzing user adaptation and utilization patterns of innovations such as ChatGPT. It uses TAM as part of this comprehensive framework to yield solid theoretical perspectives on how the use of ChatGPT is going to work in the Saudi academic context. Thus, literature review deals with surveyed educational advantages and their associations to prior studies (Gokcearslan et al., 2024; U.S. Department of Education, 2023) but does not yield merely reproduced findings. This paper explores how specifics of ChatGPT operation mesh within Saudi Arabian educational goals and how it is used by university students.

There are many positive impacts that AI will bring into the education's reality. This can be done both for the teachers and for the students. To assist teachers with creating lesson plans, AI frees up time for them to interact with students (U.S. Department of Education, 2023). By utilizing AI, the activities and tasks that are created for students will be on a class level and each student will get personalized learning experiences (Gokcearslan et al., 2024). With AI, routine work on testing and assessment is reduced and creativity and diversity are given in different educational environments. AI's benefits cannot be argued; however, there are several factors that have to be dealt with in the process of integrating AI. There are several barriers to be considered: ethical concerns, overreliance on technology, and under development in the critical thinking. ChatGPT is one of the most innovative AI tools that produce text closely resembling human beings. ChatGPT aims to generate complex texts using neural networks and works like the human brain (Naureen & Kiani, 2024). Since its inception by Open AI, ChatGPT has gained wide applications, the education sector being one of them.

Integrating AI into Saudi Arabia's higher education processes conforms to Saudi Vision 2030 since AI tools, including ChatGPT, add potential to education. However, limited research has examined how Saudi students actually perceive ChatGPT, particularly when applied to discipline-specific tasks such as English writing or comprehension. ChatGPT has already gained popularity as a supplementary educational tool in Saudi Arabia. Yet, AI's integration faces challenges due to the unwillingness to replace traditional learning methods that still persists, showing that the process requires caution (Alqahtani, 2024). Additionally, one of the challenges of using AI in learning is the feeling of satisfaction. Aljabr (2023) reported that the satisfaction level for students using ChatGPT was lower than when interacting with physical tutors. Using ChatGPT in learning also sparks debates on causing overreliance on technology and compromising critical thinking which is critical because one of education's primary objectives is instilling independent thinking and enhancing cognitive skills (Abdaljaleel et al., 2024). However, integrating ChatGPT in higher education has proven to enhance the learning process and make the students more creative (Sobaih et al., 2024).

All 44 participants were enrolled in academic programs within three primary disciplines: English language, computer science, and education. The research aimed to provide a comprehensive perspective on students' experiences with ChatGPT across different academic subjects.

While scholarship in the selection and application of ChatGPT in worldwide educational settings has been overwhelmingly present, little research has been done in the Middle Eastern university student perceptions regarding ChatGPT's reliability particular in the usage with English as a Foreign Language (EFL). However, disciplinary studies use segmentation while existing studies hardly use TAM. This research paper is important to have on record regarding the reliability and usefulness of ChatGPT for the purpose of learning English as an academic skill for Saudi university students.

The study makes its base in TAM theory while operating within EFL contexts of Saudi Arabia for the generation of knowledge that is beneficial for the integration of AI policies, as well as EFL teaching practices and the technologies and language learning models in Saudi higher education.

There are different studies about ChatGPT's common use in educational settings. Nevertheless, very limited efforts have been made to comprehend how students perceive AI tools in Saudi universities. Based on the above, this study will fill this gap by examining the reliability and usefulness of ChatGPT from the Saudi students' point of view. It will be about how

ChatGPT impacts their academic experience, whether there would always be a positive interaction with it, and this can be applied across any type of school. The study addresses these issues to provide hints as to what can be done to integrate ChatGPT in Saudi Arabia's higher education and what may be the challenge in doing that.

Overall, the study applies TAM to explore how students interpret and interact with ChatGPT in their academic activities. Specifically, it addresses: How does Saudi university students perceive and experience the learning process with ChatGPT? To further unpack this, the research also investigates: (RQ1) what do Saudi university students think about ChatGPT's reliability and usefulness for performing different academic tasks? and (RQ2) what are the prospects or impacts of ChatGPT on the learning experience of Saudi university students?

LITERATURE REVIEW

The understanding of the rise of AI, its application in education, the effect of AI on the learners' experience and the acceptance of technology in educational setting is pertinent for this research. This literature review presents the appropriate theoretical background for answering research questions on how university students in Saudi Arabia perceive the reliability and helpfulness of ChatGPT for completion of their academic tasks.

TAM and Technology Adoption in Education

TAM studies individual technology adoption behaviors through Perceived Use of (PU) and Perceived Ease of Use (PEU) (Davis, 1989) psychological details but technology adoption in education expands the analysis to institutional boundaries as well as pedagogical frameworks and infrastructure systems (UNESCO, 2023). TAM makes up a portion of educational technology adoption discussions which integrates user perspectives but the wider models examine educational policy together with curriculum strategy and teacher training. The technology adoption in education model helps explain student acceptance of tools like ChatGPT in addition to its investigation into educational system implementation and tool sustainability. The research is based on TAM as a theoretical ground that explains user technology acceptance behavior by using PU and PEU. Studies that have evaluated learning tool adoption by students for academic purposes have proven that the models work. Assessment by students within the framework of ChatGPT evaluation indicates that PU is a tool that enhances academic achievements, while PEU indicates that the tool is easy to use and accessible. Research within the higher education institutions has shown the usefulness of TAM because PU and PEU consistently serve to predict how students behave and how students use the technology (Davis, 1989). Although the model has been proven effective in previous empirical works, little is known regarding the usage of ChatGPT by Saudi university students and EFL classrooms, especially by applying the assumptions of TAM. The aim of this work is to fill this gap.

ChatGPT in General Education Contexts

Education has experienced considerable technological development over the last decades. The intersection of technology and education can be traced to the 1950s when the first human cognition simulation was made using computers. From Computer-Based Instruction Systems and Intelligent Tutoring Systems in the 1970s-1990s to Adaptive Learning Platforms and AI-driven tools of today technology has become an integral element of educational processes (Young, 2024). AI's ability to process large datasets and offer personalized responses makes it an increasingly integral part of academic support. However, introducing AI to education has advantages and disadvantages, which necessitates detailed studies on what benefits the use of ChatGPT can bring and what steps should be taken to eliminate possible risks related to academic integrity, plagiarism, and ethical concerns over using and protecting personal data, among others.

According to Paek and Kim (2021) AI has been used as an essential driver of transformation in personalized online education due to its ability to process and analyze big data and use it for customized learning. Educational institutions increasingly adopt AI technologies for teaching and learning purposes (Hwang et al., 2020). In EFL contexts, ChatGPT is commonly used for writing support, grammar correction, vocabulary enrichment, and translation. For instance, ChatGPT has grown in popularity in EFL education for providing real-time feedback on grammar, syntax, and composition (Allen & Mizumoto, 2024). An increased use of smartphones also contributes to the growing popularity of various AI tools. The rise of AI in education is largely driven by its multifunctionality. AI tools can be used in adaptive assessment, intelligent content creation, language translation, predictive analytics, and administrative efficiency, thus encompassing different spheres of the educational process and the parties to it (Young, 2024). As far as Saudi Arabia is concerned, the research by Alqasham

(2023) explores the use of ChatGPT in Saudi universities for EFL programs and reveals that the focus on an adaptive curriculum justifies extensive use of AI tools in teaching and learning among Saudi Arabian educators and students.

ChatGPT in EFL/ESL Settings

Various researchers have investigated the impact of AI and ChatGPT within academic setups. Frieder et al. (2023) note that AI is limited in tackling mathematics-related concepts and mostly handles simple questions related to student queries. An experiment by Kung et al. (2023) on medical education revealed that ChatGPT performs close to the minimum requirements in an exam, even with no support and guidance. ChatGPT has also proved to assist in decision-making in clinical setups meaning that it can perform well in disciplines that do not require many calculations but just information generation.

Unlike Kung et al. (2023) who highlight ChatGPT's shortcomings in technical disciplines, Teng (2024) shows its value in improving EFL writing skills. EFL students use ChatGPT for proofreading, content generation, and enhancing writing cohesion and clarity. According to Boudouaia et al. (2024) ChatGPT contributes to enhanced collaborative learning and self-efficacy in EFL students in Saudi universities. Similarly, they argue that ChatGPT contributes to collaborative learning and boosts student self-efficacy in Saudi university EFL contexts.

Ali (2023) explores how Saudi university faculty members perceive ChatGPT's usefulness in teaching EFL in the early stages. Most educators report a positive attitude toward ChatGPT's value in EFL learning. On the other hand, educators express dissatisfaction over plagiarism issues and overreliance on educational chatbots.

Ibrahim and Ajlouni (2024) investigates the difference between the results from ChatGPT-generated exercises and tasks based on traditional vocabulary acquisition. Study findings show no considerable difference in relevant vocabulary gains. Students perceive ChatGPT as beneficial, but its capacity to help students remember vocabulary requires further study, which demonstrates its unclear impact on knowledge retention.

The study carried out by Jamshed et al. (2024) investigates the challenges that Saudi EFL learners have when using ChatGPT for language learning. The study was conducted on 235 respondents from different stages of undergraduate program at two Saudi universities. Respondents report engaging in positive perspectives of AI usage in learning, and they hold common reservations regarding the influence ChatGPT has on their thinking and the limitations of AI to meet the need for replacement of broader social context. Furthermore, the study has proved that the infrastructure of Saudi Arabia realises substantial pedagogical and educational implications for the use of ChatGPT in Saudi EFL classes.

Overall, the research indicates that students think that ChatGPT is an efficient tool in EFL education, however, their trust in the tool is related to task complexity levels (Teng, 2024). Allen and Mizumoto (2024) research also finds that ChatGPT is well appreciated as a student-friendly tool for basic writing assistance while Al-Garaady and Mahyoob (2023) point out that it does not have the capacity to handle sophisticated linguistic rules. The results show that the matching PU based on the PEU may not be true in the case of students performing language learning tasks.

Gaps in Saudi Context and EFL Implications

Students view ChatGPT as an effective academic tool that they find straightforward to use while enabling time optimization for their tasks, according to research findings. The detection capabilities of ChatGPT for EFL writing errors mainly focus on surface-level problems, according to Al-Garaady and Mahyoob (2023). The ChatGPT system usually has difficulty handling intricate linguistic problems. The problem with reliability becomes evident when using this tool.

Little academic attention has been paid to how Saudi university EFL students utilize and assess AI tools such as ChatGPT. TAM serves as an important theoretical model for studies, but studies evaluating these programs rarely adopt it. This research evaluates the writing, translation, and reading comprehension functions of ChatGPT from the standpoint of Saudi Arabian English majors because existing studies currently fail to clarify these practices. The study uses mixed-methods research to investigate previously underexamined zones of ChatGPT in Saudi EFL teaching, which generates fresh perspectives regarding its perceived usefulness alongside ease of use and academic impact.

How Students Perceive ChatGPT's Usefulness and Reliability

Teng (2024) explores how EFL students use ChatGPT for language acquisition in terms of its usefulness and reliability. Forty-five participants of this study reported positive results, specifically in the writing area, motivation, and engagement.

Allen and Mizumoto (2024) examine how Japanese EFL students perceive ChatGPT's usefulness for writing. The study findings show that students name ChatGPT as a reliable tool for proofreading and editing. Getting immediate, effective

feedback, helping them enhance the cohesion and clarity of their writing, also contributes to ChatGPT's usefulness.

Boudouaia et al. (2024) evaluate ChatGPT's use in writing and learning for EFL students. The study results show that when using ChatGPT, students report the benefits it carries and its ease of use. Furthermore, Yan (2023) notes that students using ChatGPT for writing support show higher motivation and improved language skills.

Punar and Yangın (2024) case study shows ChatGPT's impact on acquiring register knowledge across different writing tasks. The study also explores how students deal with its benefits and challenges. The study results show that students report ChatGPT as useful in acquiring register knowledge while questioning ChatGPT's efficiency in teaching neutral register knowledge.

According to Su et al. (2023) ChatGPT is beneficial in helping with tasks related to post-writing reflection, proofreading, content revision, and outline preparation. ChatGPT's Automated Essay Scoring (AES) in EFL writing shows significant reliability and accuracy through automated corrective feedback (Mizumoto and Eguchi, 2023).

Mizumoto et al. (2024) note that ChatGPT is effective as a companion for L2 writing accuracy assessment, with a correlation coefficient (ρ) of 0.79 between ChatGPT and assessment in EFL. ChatGPT also strongly correlates with error detection and human coding ($\rho = 0.97$) (Pfau et al., 2023).

The studies show that students do not perceive ChatGPT as difficult to use. Instead, they find it to be a useful and reliable tool for academic tasks. They also value its efficiency and ease of use. Al-Garaady and Mahyoob (2023) state however, that ChatGPT is only accurate at detecting errors in EFL writing at a surface-level. Therefore, it is hard for ChatGPT to handle complex linguistic problems. It may be a reason why we doubt the reliability of this.

The Impact of ChatGPT on Learning Experiences

Such benefits and drawbacks of ChatGPT affect learning experience. In addition, Faisal (2024) states that ChatGPT can help students achieve more innovative learning experiences as well as personalized help. On the other hand, ChatGPT raises ethical concerns, including overreliance and issues related to academic integrity (Dwivedi et al., 2023). ChatGPT's duality also discloses why this study is needed, which is to assess the impact of ChatGPT on the learning of Saudi Arabian students.

Faisal (2024) notes that higher education institutions in Saudi Arabia can harness AI technology to offer learners personalized and innovative learning experiences. ChatGPT's integration contributes to the development of new skills through innovative research approaches (Brown et al., 2020). Incorporating ChatGPT helps enhance learners' academic performance by improving their creativity, adaptability, and critical thinking (Faisal, 2024). ChatGPT helps educators conduct research. It is helpful in creating lesson plans or making them more interesting and engaging. In such a way, ChatGPT enhances students' learning experience. Students can use ChatGPT to solve complex problems (Rahman & Watanobe, 2023). ChatGPT helps understand queries made through natural language. In complex situations, learners can decompose them into simpler components and ask ChatGPT about separate components until they get the final solution. ChatGPT can be used at all levels of education, including universities and colleges.

ChatGPT aids in group discussions. Learners can consult ChatGPT to understand specific points necessary in a group discussion or debate. It offers an accommodating group discussion environment since it can help learners with disabilities gauge other learners by offering text-to-speech and speech-to-text services (Rahman & Watanobe, 2023). All learners, irrespective of their capabilities, can have a personalized interaction with ChatGPT at any given time, improving their learning quality.

Through ChatGPT, learners get quality responses from their tutors. ChatGPT addresses the common issues of forgetting the question or sending an irrelevant response if done in some time since with ChatGPT. Tutors can give a quick reaction (Rahman & Watanobe, 2023). Thus, ChatGPT is a promising tool to motivate learners, engage them, and enhance their learning experience.

In Boudouaia et al.'s (2024) experimental study, students randomly assigned to the ChatGPT group demonstrated statistically significant improvements in writing and learning in EFL compared to students who did not have access to ChatGPT. The benefits of ChatGPT in EFL include providing feedback that promotes improved student learning (Allen & Mizumoto, 2024). Additionally, Song and Song (2023) investigated ChatGPT's role in enhancing writing in EFL students by conducting an experimental study with students randomly assigned to either an experimental (use of ChatGPT) or a control (no use of ChatGPT) group. The study findings demonstrated that students using ChatGPT had significantly improved motivation and writing skills compared to the other students. They exhibited improved proficiency in vocabulary, grammar, coherence, and organization in their writing.

ChatGPT also has applications as a writing assessment tool. It has been shown to effectively evaluate EFL students' writing using predefined rubrics and prompts (Bucol & Sangkawong, 2024; Shin & Lee, 2024). As an assessment tool,

ChatGPT supports nearly all aspects of feedback literacy in these students, particularly "feedback processing" (Gozali et al., 2024), generating much more feedback compared to that from teachers and concentrating on issues associated with not only language but also content (Guo & Wang, 2024). ChatGPT maximizes writing efficiency through its automatic workflow (Mahapatra, 2024). ChatGPT's scalability, efficiency, consistency, and human-like interface have been proven to promote student learning in EFL (Bucol & Sangkawong, 2024).

The most common concern about using ChatGPT in education is ethical. The primary ethical issues include using personal data and associated bias. ChatGPT relies heavily on personal data to generate human-like tests, raising concerns over data breaches (Baskara, 2023). Additionally, ChatGPT may discourage learners from becoming critical thinkers (Yuan et al., 2024). Using ChatGPT in assignments can deprive an individual of their academic engagement. However, the outcome of using ChatGPT depends on the learners in most cases. Liu et al. (2023) report that students with a positive attitude toward using ChatGPT in EFL also demonstrate a positive intention for their behavior.

METHOD

Research Design

This study uses an explanatory sequential mixed-methods research design, combining quantitative research, which collects objective, numerical data, with qualitative research, which explores subjective narratives and experiences (Ponce & Pagán-Maldonado, 2015). The rationale for this research design is based on the greater degree of triangulation from multiple data sources. The weaknesses in quantitative data are supplemented by the strengths in qualitative data and vice versa. Data collected from quantitative research instruments are abbreviated with little chance for research subjects to enter voluntary responses to close-ended questions typically accompanied by multiple-choice answers from which to choose. Qualitative research makes up for this shortfall because research instruments are open-ended, requiring voluntary input and allowing flexibility. Big sample sizes in quantitative research complement the shortage in size in qualitative research. First, quantitative data was collected and analyzed, followed by qualitative data collection for deeper insights into the quantitative findings. Quantitative research enables measuring general perceptions and trends in a diverse sample, ensuring statistical validity and generalizability. Qualitative research explores contextual factors and nuanced perspectives that numerical data cannot capture. This combination best matches the chosen complex phenomena for exploration. Broad trends and individual experiences are equally crucial in evaluating students' perceptions of ChatGPT. Both stages of this research used TAM to analyze how users perceive the PU and PEU of ChatGPT. The chosen research design aims to quantify perceptions of ChatGPT's usefulness and reliability and examine the contextual factors determining its influence on academic experiences.

The quantitative phase involved a structured survey of 44 male and female participants from five universities across different regions of Saudi Arabia. Their familiarity with ChatGPT, usage patterns, and perceptions were measured. The survey included directly derived items that represented the core concepts of TAM. Users stated two PU aspects of ChatGPT: "saving academic time" and "better academic results." At the same time, PEU contained statements regarding "easy academic functionality" and "reliability of received information." Semi-structured interviews comprised the qualitative phase to explain the main quantitative findings. Research interview questions built upon survey results to investigate new themes and purposes related to TAM. Combining qualitative and quantitative methods created comprehensive knowledge about ChatGPT's purposes for Saudi university learners.

Participants

A simple random sampling technique was used to choose participants from different academic contexts. Students from five universities in other regions of Saudi Arabia participated, including "University A," "University B," "University C," "University D," "University E,". Similar sample sizes from each university and each region were selected with minimal sample size differences. Students were contacted by email or telephone and asked to sign a consent form, which included an explanation of the study, the participants' identity protection, and their rights. Students from different fields of study were chosen to ensure diverse experiences and opinions, including computer science, education, and English language majors, ranging from first-year undergraduates to graduate students.

Forty-four students participated in the study. It is an appropriate sample size for exploratory mixed-methods research, where gaining initial insights is the primary objective. The qualitative phase compensates for the small sample size by providing detailed explorations into individual experiences. The sample size aligns with recommendations for mixed-

methods research involving interviews, where smaller samples are standard due to the intensive nature of qualitative data collection and analysis (Onwuegbuzie & Collins, 2007). The study findings can serve as a solid basis for future research on the perceptions of ChatGPT in different academic settings.

Data Collection

Quantitative Data Collection

Quantitative data collection is based on a structured 26-item questionnaire measuring perceptions of ChatGPT, patterns of usage, and perceived reliability of this AI tool. The participants received the questionnaire online or in person at five chosen Saudi universities. TAM was used to formulate the questions. The choice of TAM is justified by its worldwide recognition as the most applicable theoretical framework to measure the acceptance and usefulness of new technologies according to PU and PEU. Whereas the primary objective of this study is the evaluation of ChatGPT's usefulness and reliability as perceived by Saudi Arabian students, these two aspects of ChatGPT's perception closely correlate with PU and PEU. Of the 26 items, 18 were mapped directly to TAM constructs 9 to PU and 9 to PEU with the remainder gathering demographic data or usage context. A 5-point Likert scale for agreement statements, multiple-choice, and open-ended questions was used to measure responses.

The questionnaire pre-testing used a sample of five Saudi university students to verify clarity and ensure cultural sensitivity. The survey gathered data on participants' demographic information, the time and frequency of using ChatGPT, attitudes toward ChatGPT, academic activities involving ChatGPT, and ChatGPT's influence on the learning experience.

The internal consistency of the survey instrument was measured using Cronbach's Alpha ($\alpha = 0.136$), which results in low internal consistency. To resolve these concerns, principal axis factoring and varimax rotation were used for an exploratory factor analysis. The analysis identified three essential factors that matched well with the domains of usefulness, ease of use, and ethical concerns. Some items within the survey displayed low factor loadings, which suggested possible changes for the future. The study retained all items in this research phase for construct diversity purposes. This limitation is acknowledged. Research starting points in exploration studies face limitations regarding reliability because their broad questions typically need refined instruments that future studies could focus on solving this issue. The subsequent iterations of the instrument should either simplify or delete complex items mainly connected to either abstract subject matter or overlapping themes.

Qualitative Data Collection

Qualitative data collection consists of semi-structured interviews and open-ended survey questions. Semi-structured interviews balance flexibility and consistency, allowing participants to elaborate on key themes and address all research objectives. Professionals developed the interview protocol regarding TAM principles while making changes according to findings from the initial survey. The findings of participants with lower PU scores resulted in supplementary interview queries regarding "The ways ChatGPT fell short of their academic support requirements." The interview questions were based on preliminary quantitative results following TAM framework and were designed to assess students' perceptions of ChatGPT's reliability and efficacy. The examples of interview questions are as follows:

"How has ChatGPT affected your study productivity?"

"Can you describe a situation where ChatGPT was particularly helpful or unreliable?"

"What do you think about ethical considerations of using AI tools in education?"

Interviews were conducted via video conferencing and audio-recorded with participant consent. Then, transcripts were generated for analysis. Open-ended survey questions supplemented interviews, focusing on participants' experiences with ChatGPT, the benefits of using ChatGPT, and possible challenges.

The study rigorously followed all ethical protocols. Participants provided written informed consent, with detailed information on the study's purpose, voluntary participation, and the right to withdraw at any time. Confidentiality was ensured by anonymizing responses and securely storing data on password-protected devices. Potential risks, such as discomfort from sensitive questions, were mitigated by allowing participants to skip any question they found uncomfortable.

Data Analysis

The thematic analysis utilized Braun and Clarke's six step framework (Braun & Clarke, 2006). Thorough reviews were undertaken of transcripts and of open ended responses. Inductively, codes were developed with occurrences of recurring

patterns. Data was generated, organized and coded using the NVivo software. Participants perceived and experienced codes in order to group them into common themes. The themes were based on TAM constructs, namely PU, PEU and Perceived Ethical Risks (PER). Direct quotes were synthesized into the themes, which were then supported by these new narratives. To enhance the validity of the thematic analysis, the coding process was independently reviewed by two additional researchers with graduate-level training in qualitative methodology. Both researchers received prior instruction in Braun and Clarke's six-step framework and independently analyzed a subset of interview transcripts.

To use and perception of ChatGPT by Saudi university students theme-by-theme, they were blended quantitatively and qualitatively. Firsthand account of students showing improvement in efficiency and dependence were supported through survey data on PU. The student driven accounts on systems accessibility and ease of use was verified by the survey data on PEU. It was subsequently analyzed qualitatively and quantitatively post hoc to determine what differences the groups existed in after collection and analysis.

SPSS was used to analyze quantitative data. Data were summarized through descriptive statistics their demographic information as well as perceptions. Group differences, such as year of study (whether a student was a Child or Youth) and gender were compared using t-tests and ANOVA. Specific group differences were also explored in the results of ANOVA using post hoc tests (e.g., Tukey HSD). These varying results are for example for the time-saving benefit, as graduate students rated the time saving benefit of using ChatGPT higher than the undergraduates. The students' workload and familiarity with academic tools were taken as basis to interpret these findings. Assumptions for parametric tests, such as normality tests (Shapiro-Wilk test) were conducted because the sample sizes in some groups such as 8 fourth year students, 2 graduate students are very small. Non parametric alternatives such as the Mann-Whitney U and Kruskal Wallis tests were used when normality was violated. Then, the quantitative and qualitative data analyses results were supplemented with a post hoc analysis conducted on a comparison basis between results obtained from each one of those data. The integration aimed to enhance the explanatory power of the research and that TAM constructs were in line with identified themes.

Ethical Considerations and Reliability

Ethical Considerations

The participants maintained both privacy and anonymity during the research because their personal information remained non-disclosed throughout. The researcher implemented secure data storage methods which kept all study-related information limited to their access only.

Reliability

The researcher ensured that the collected data were not subject to compromise by storing it on a secure, password-protected computer with the researcher's access. Additionally, the researcher maintained a paper trail of all the steps taken while collecting data.

The interviews were set up in neutral places at convenient times. The researcher ensured a welcoming, safe, and trustworthy atmosphere during the interviews. Member check was used to address uncertainty or confusion. Additionally, the researcher checked verbal and non-verbal cues and took notes during the interviews.

ANALYSIS AND FINDINGS

The study aimed to determine the perception, participation, and interaction with ChatGPT among university students in Saudi Arabia. It was guided by the main research question: What is the attitude toward using ChatGPT, and how does it impact Saudi university students' learning? Two sub-research questions were used to direct the study: What are the perceptions of ChatGPT's reliability and usefulness for various academic tasks among Saudi university students? How does ChatGPT influence the learning experience of Saudi university students?

The following sections present the description and discussion of the collected data using quantitative research and thematic analysis of the qualitative data. First, the sample's demographic characteristics are presented, followed by the detailed answers to research questions. This section includes tables, charts, and narrative descriptions. The conclusions can be used as the basis for further discussion on ChatGPT's use in academic settings.

Sample Characteristics

The target sample includes students from 5 universities, University (A), University (B), University (C), University (D), University (E). Questionnaires and surveys were administered in hard copy and online. The survey targeted 50 participants, of whom 44 responded validly. The respondents were between 18 and 25 years old, with a mean age of 20.41 and *SD* = 1.957. Gender distribution was 54.5% males and 45.5% females. The fields of study included computer-related majors (18.9 %), education (8.4 %), and English Language (10.5%). The study year was as follows: 27.3% first year, 22.7% second year, 27.3% third year, 18.2% fourth year, and 4.5% graduate students.

TABLE 1
Demographic Characteristics

		Age of participant	Gender of participant	University name	Field of study	Year of study
	Valid	44	44	48	48	44
	Missing	4	4	0	0	4
Mean		20.41	1.45			2.50
Median		20.00	1.00			2.50
Mode		18[a]	1			1[a]
SD		1.957	.504			1.210

TABLE 2
University Levels

		Frequency	Percent	Valid percent	Cumulative percent
Valid	1st year	12	25.0	27.3	27.3
	2nd year	10	20.8	22.7	50.0
	3rd year	12	25.0	27.3	77.3
	4th year	8	16.7	18.2	95.5
	Graduate student	2	4.2	4.5	100.0
	Total	44	91.7	100.0	
Missing	System	4	8.3		
	Total	48	100.0		

ChatGPT's Perception and Reliability

The analysis of RQ1 focused on students' perceptions of ChatGPT's reliability and usefulness for academic tasks. Descriptive statistics were analyzed. Reliability analysis and group comparisons were performed.

TABLE 3
Descriptive Characteristics of Responses

	N	Minimum	Maximum	*M*	*SD*
Familiar with ChatGPT	44	1	2	1.07	.255
Frequency of ChatGPT use	42	1	5	3.50	1.110
Time spent using ChatGPT per week	42	1	4	2.71	.891
ChatGPT is reliable	42	2	5	3.55	.861
ChatGPT's information is accurate	42	2	5	3.52	.862
ChatGPT improves academic performance	42	3	5	3.81	.740
ChatGPT saves time on academic tasks	42	3	5	3.86	.751
ChatGPT improves critical thinking skills	42	1	5	3.10	.983

	N	Minimum	Maximum	*M*	*SD*
ChatGPT's information is trustworthy	42	3	5	3.69	.643
ChatGPT's ease of use for academic purposes	42	3	5	4.12	.739
I can recommend ChatGPT to others	42	3	5	3.79	.717
Valid *N*	42				

The sample consisted of 44 participants, with 42 providing valid responses for most items. Most students were familiar with ChatGPT ($M = 1.07$, $SD = 0.255$), with the results indicating a moderate frequency of use ($M = 3.50$, $SD = 1.110$) and time spent ($M = 2.71$, $SD = 0.891$). Students perceived ChatGPT as moderately reliable ($M = 3.55$, $SD = 0.861$) and accurate ($M = 3.52$, $SD = 0.862$). Positive perceptions regarding ChatGPT's value to improve academic performance constituted $M = 3.81$, $SD = 0.740$, and time-saving capacity constituted $M = 3.86$, $SD = 0.751$. ChatGPT's ease of use for educational purposes was $M = 4.12$, $SD = 0.739$. The likelihood of recommending ChatGPT to others constituted $M = 3.79$, $SD = 0.717$.

Reliability tests

The low Cronbach's Alpha score ($\alpha = .136$) suggests that the items may not measure a single construct effectively, indicating that the research questions measure diverse aspects of using and perceiving ChatGPT rather than a single construct. Poor internal consistency and reliability may result from the small sample size. Therefore, inter-item correlations should be assessed to determine reliability. A factor analysis may help investigate the dimensionality of the items and identify potential subscales that might explain the poor internal consistency for further research.

Gender Differences

ChatGPT's reliability significantly varies depending on gender (t (40) = -2.525, $p = .016$), with females rating ChatGPT as more reliable ($M = 3.89$) as compared to male opinions ($M = 3.26$). However, other variables showed no significant gender differences on other questions ($p > .05$). It is possible to assume that gender differences regarding the reliability of this AI tool arise from cultural, educational, and technological factors.

TABLE 4

Independent Samples t-Test: Gender Differences in ChatGPT Reliability Perceptions

Variable	Gender	*N*	*M*	*SD*	*t*	*p*
Perception of reliability	Male	24	3.26	0.85	-2.525	.016
	Female	20	3.89	0.64		

Specifically, the long-term patriarchal political structure strengthened by profound religious influence across the country used to result in fewer women having access to the same educational opportunities when compared to men, including technological innovations. As such, males report using ChatGPT for extended periods since they have had more years of university attendance. More prolonged exposure to various technological novelties contributed to men's better and more justified judgments regarding the benefits and shortfalls of new programs, devices, and platforms. This gender difference will likely change since the HCDP aims to "Improve equal access to education" (Saudi Vision 2030, 2024), among other objectives. This gender gap is likely to shorten under countrywide Vision 2030. Consequently, women's higher and longer frequency of ChatGPT with more trust in it can transform into a more balanced approach to AI.

ChatGPT's user-friendly design and time efficiency proved attractive to women participants according to studies of TAM framework's PEU construct. The user feels more confident using ChatGPT than professor judgments because this tool avoids judgment and remains available for easy access. The notion that ChatGPT does not behave judgmentally creates more trust and reliability confidence in female users. Male students maintained a somewhat positive level of trust in the tool, but their assessments centered on its precision and operational boundaries. According to a male participant, “the data sometimes contains too general or unclear information. I keep checking whatever information it presents to me”. Different gendered life experiences create opposing views regarding users' evaluation of AI tools, particularly when assessing their reliability and functionality.

The low Cronbach's Alpha value ($\alpha = 0.136$) primarily emerges from the instrument measuring various constructs across various components. TAM indicates students found ChatGPT beneficial and straightforward to operate, yet multiple

elements, such as gender, educational background, and assignment variations, influence their acceptance patterns. Future research should refine TAM-based measurement model by reducing items that increase scale correlation to enhance internal consistency.

Differences in the Year of Study

The one-way ANOVA results showed no difference in the groups regarding most of the variables analyzed. The only statistically significant result related to "ChatGPT saves time on academic tasks" was $F(4, 37) = 3.431$, $p = .018$. This means that ChatGPT's time-saving capacity differed across the groups. It may be a sign of different experiences with ChatGPT or varying expectations.

TABLE 5

One-Way ANOVA: Differences in "ChatGPT Saves Time" across Year of Study

Source of variation	SS	*df*	MS	*F*	*p*
Between groups	6.612	4	1.653	3.431	.018
Within groups	17.814	37	0.481		
Total	24.426	41			

No significant differences were found regarding perceived familiarity, frequency of use, perceived reliability, perceived accuracy, perceived improvement in academic performance, and perceived enhancement of critical thinking skills ($p > .05$). This shows a common perception of ChatGPT among students of different years of study.

ChatGPT's Usage

The statistical evidence and qualitative answers showed the following patterns and perceptions of ChatGPT. Students use ChatGPT for different academic purposes, with the most frequent being problem-solving (98% of the respondents), brainstorming (95%), and research (88%). The highest percentage of use refers to tasks involving critical and creative thinking. It illustrates a concurrent concern about ChatGPT substituting the development of critical thinking skills, analytical skills, and reasoning since students often resort to AI when dealing with complicated tasks and assignments that require out-of-the-box thinking. Other academic tasks where ChatGPT was used the most include writing essays and reports (76%) and comprehending concepts (86%).

TABLE 6

Descriptive Statistics of ChatGPT Usage across Academic Activities among Saudi University Students

Usage Categories	Writing essays and reports	Problem solving	Brainstorming	Research assistance	Exam preparation	Understanding complex concepts	Language translation	Proofreading and editing
N (Valid)	42	42	42	42	42	42	42	42
Missing	6	6	6	6	6	6	6	6
Mean	1.24	1.02	1.05	1.12	1.69	1.14	1.67	1.69
Median	1.00	1.00	1.00	1.00	2.00	1.00	2.00	2.00
Mode	1	1	1	1	2	1	2	2
SD	0.431	0.154	0.216	0.328	0.468	0.354	0.477	0.468

The open-ended responses showed that students reported ChatGPT's benefits: improved communication, analysis, and problem-solving. Students also noted ChatGPT's quick assistance and help with mastering language skills, such as grammar, writing, and translation. ChatGPT's availability is an additional bonus since it can be used for self-learning at any time of the day, both inside and outside the classroom.

The issues of academic dishonesty and over-dependency on ChatGPT can be analyzed through a low percentage of students concerned about reduced efficiency and decreased ability to reason. This evidence shows that students are more concerned about getting quick results than mastering a skill that will positively affect the future. Only 31% of the respondents

used ChatGPT for exam preparation and proofreading, preferring to use it for more complicated tasks. It also shows that students risk becoming too dependent on this AI tool.

Overall, students show a positive attitude toward ChatGPT as an auxiliary tool in education. It helps them understand the learning materials, adapt teaching content to their needs, and encourage creativity.

ChatGPT's Influence on Learning Experiences

The study shows that ChatGPT positively and negatively influences students' learning experiences. The respondents note ChatGPT's role in improving interactivity and productivity. Interactive learning is what most students name as one of ChatGPT's most essential benefits since it improves the entire educational process and makes it more engaging and enjoyable. On a one-to-ten scale, where 10 represents the highest benefit, students rated interactivity with 8, indicating strong approval. No significant drawbacks were reported in this area.

Many respondents believe that ChatGPT's most significant advantage is personalized learning support. One of the students wrote, "For the first time, I felt that my learning needs were not an obstacle but a basis for a reasonable request to receive more explanation and feedback." While it takes time and effort for teachers to adjust the materials to individual needs, ChatGPT can cope with this task quicker and more effectively, thus supporting teachers and students.

When ChatGPT assists students with simple tasks, it acts as an additional encouragement. Many respondents note that it is sometimes easier for them to work with AI than with a human teacher because they feel more relaxed and are not stressed about being judged for mistakes or misunderstandings. One student wrote, "ChatGPT helps me feel smart. I can quickly find and access information, brainstorm ideas, and solve problems. I feel that I can achieve more when ChatGPT is at hand." ChatGPT's motivating ability often helps students of different years of study succeed in their academic tasks, irrespective of their majors.

ChatGPT's time efficiency is another key benefit, as it can deliver information quickly and accurately. This aspect was scored with 7. The same score goes for information accessibility. ChatGPT quickly provides necessary information on demand. Yet, students reported several adverse outcomes of this function, the most meaningful being their concern over the superficial understanding of complex topics.

Most respondents noted that ChatGPT helped them improve their critical thinking and problem-solving skills. Integrating ChatGPT into their studies as a facilitative tool allowed students to approach problems more strategically. Consequently, this aspect earned a 6, with no reported disadvantages.

Students value ChatGPT for its ability to provide consistent learning assistance. It acts as an always-available virtual tutor tailored to individual needs. Respondents also showed marked improvement in language-related skills, with a score of 5 and no significant drawbacks. They noted ChatGPT's value in language-related tasks, including reading, writing, grammar, and translation. Overall, ChatGPT has proven to be valuable and reliable in language development. One of the students majoring in English noted, "With ChatGPT, my vocabulary acquisition does not feel like a burden anymore. It has become a fun activity I can practice whenever I want without the need to be in a classroom."

ChatGPT's advantages assist students in managing their assignments and often lead to improved academic performance, as the study shows. However, ChatGPT also presents several drawbacks, with academic dishonesty being a primary concern. As Dwivedi et al. (2023) note not only do teachers believe that AI can facilitate cheating, but many students also view ChatGPT as a form of cheating, even if their intention is not to deceive. ChatGPT can swiftly produce high-quality text, which heightens the risk of plagiarism. It undermines the principles of academic integrity and hampers the development of critical thinking skills, analytical reasoning, and problem-solving abilities. As ChatGPT advances, the likelihood that AI-generated text will be mistaken for human-written content increases. ChatGPT could evade plagiarism detection software if it generates unique responses for each query. One student expressed, "I fear that I cannot write as beautifully as ChatGPT, so the more I use it, the lower my self-confidence as a writer becomes. Sometimes, I wish I had never turned to ChatGPT, as it makes me feel small and incompetent." This statement sharply contrasts with another student's comment about gaining confidence from using ChatGPT. Nevertheless, these perspectives represent two sides of the same coin regarding using AI in education. While it may boost motivation and confidence in one individual, it can undermine another person's self-belief.

Cheating, identified as ChatGPT's most immediate adverse outcome, received the highest concern score of 8. Respondents shared their worries about plagiarism and the overall decline of ethics in education when influenced by technology. Productivity emerged as another issue, with respondents fearing that using ChatGPT could lead to low productivity, indicated by a score of 4 for advantages compared to 6 for disadvantages. While students find access to helpful information, they remain skeptical of the credibility of ChatGPT's responses. Some noted that ChatGPT's explanations can sometimes be superficial, limiting a deeper understanding of the subject matter. This aspect earned a drawback score of 3, with no benefit

score assigned.

Relying too heavily on ChatGPT poses a significant disadvantage. One student expressed, "Sometimes, I fear that if anything happens to ChatGPT, I won't be able to perform the simplest tasks. I've become so accustomed to it that it frightens me." This concern is widespread among students, regardless of their age, gender, or year of study. Many acknowledge that an excessive reliance on ChatGPT undermines their confidence. They often choose to seek AI-generated solutions instead of engaging in independent problem-solving. This reliance can lead to a lack of profound learning. Students prioritize completing tasks quickly over grasping the fundamental concepts. Utilizing ChatGPT for writing also hampers students' ability to hone their language and composition skills. They miss the chance to practice writing a thesis, developing supporting arguments, and addressing counterarguments. They overlook the essential components of essay composition, irrespective of their majors, and depend on a constantly available, helpful AI tool. This often leads to superficial knowledge without real-world applications.

Thematic Analysis of ChatGPT's Influence

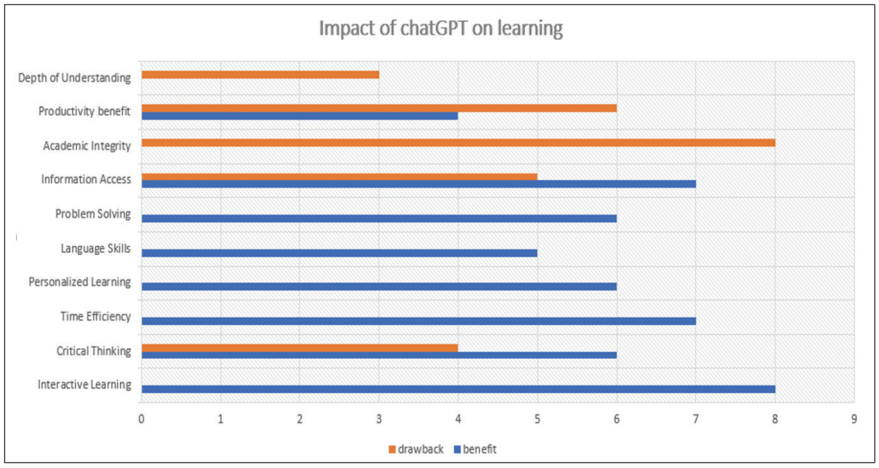

FIGURE 1
ChatGPT's Influence on Different Aspects of the Learning Process

A thematic analysis of open-ended responses helped identify key impact areas, shown in Figure 1. The open-ended responses were analyzed thematically, and ten key impact areas were identified. These areas and their perceived benefits and drawbacks are visualized in Figure 1. A thematic diagram in Figure 1 illustrates the benefits and negatives students feel ChatGPT brings to their academic practice according to survey and interview results. Students evaluated various aspects of ChatGPT using a predefined 10-point scale in which level 10 indicated maximum advantage or disadvantage. The analysis scored each thematic area by the number of student responses during data collection sessions and their degree of intensity. The thematic areas included interactivity, time efficiency, information accessibility, critical thinking, and language improvement. Students assessed the benefits and drawbacks of ChatGPT features, including real-time feedback, writing support, and productivity benefits. Students who gave ChatGPT scores of 8 and 7 found it particularly effective at keeping students engaged and helping them save time when doing their academics. Many students marked 8 as their highest drawback score in the cheating category, demonstrating grave worries about academic dishonesty and misuse. The students gave ChatGPT's speedy information retrieval a 7-benefit rating, yet they determined the dependency on unreliable information depth to be 5 points of drawback. The survey results structured the student evaluations using numbers that unite quantitative data with qualitative information and support the concepts detailed in TAM.

RESULTS

Perception of the Students as the Learning Experience with ChatGPT

To address the first research question regarding students' perceptions of ChatGPT's reliability and usefulness, both quantitative and qualitative data were analyzed.

Quantitative Findings

The students demonstrated moderate to strong trust in the reliability and usefulness of ChatGPT. Participants evaluated ChatGPT's accuracy and reliability at a moderate level, with scores of $M = 3.55$ and $M = 3.52$, respectively. The perception of students revealed that ChatGPT enhances academic results ($M = 3.81$), saves time ($M = 3.86$), and remains easy to operate ($M = 4.12$). The students showed positive opinions about recommending the tool to their peers by rating the tool at ($M = 3.79$). The low critical value of Cronbach's Alpha ($\alpha = 0.136$) shows users see different features of ChatGPT differently, which fits TAM's concept of divided user perceptions.

Qualitative Insights

Students rated the usefulness of ChatGPT significantly positively because the tool provided assistance with grammar correction and helped generate ideas in their academic work. Multiple respondents mentioned that ChatGPT assists them with their thought organization during writing when they lack start-up ideas for assignments.

Users mentioned to researchers that ChatGPT provided answers that sounded correct but proved inaccurate sometimes. ChatGPT receives conditional trust from users since it performs well on surface tasks but poorly on complex academic assignments. According to TAM, the distinction in behavioral intentions occurs when students select ChatGPT for more straightforward responsibilities but avoid using it in reliable situations.

Most academic institutions employed problem-solving applications to the greatest extent at 98% while also using brainstorming and research tools at 95% and 88%, respectively. Students used the application for task completion, such as writing essays 76% of the time and understanding concepts 86% of the time, with translation 68% and proofreading 68%.

Many students reported that ChatGPT generated significant benefits when writing English as a foreign language. The participant noted that "ChatGPT simplifies writing tasks, mainly when translating English and paraphrasing. The tool helps me verify my assignment grammar before submission dates". The collected qualitative results validate the high level of PU in writing, editorial, and translation activities, constituting essential components of English academic studies.

Students praised the accessibility of ChatGPT on various platforms along with its quick responses, which led them to develop a higher intention to use it for repetitive tasks.

Impact of ChatGPT on the Learning Experience of Saudi University Students

To explore the second research question, which examined the impact of ChatGPT on students' academic experiences, both statistical and thematic data were considered.

Quantitative Findings

Most students found that using ChatGPT improved their productivity and academic achievement, whereas their views were balanced regarding its effect on critical thinking ($M = 3.10$). Graduate students showed a higher positive perception towards time-saving benefits than other student categories, as identified through statistical analysis ($F(4, 37) = 3.431$, $p = .018$).

Qualitative Insights

Necessary improvements in language skills along with higher productivity levels were both attested to by students through their interactions with ChatGPT. Students expressed multiple worries about depending on this tool excessively. The student expressed that they felt their laziness was increasing. Some students merely duplicate the system responses without further verification. One participant admitted they benefitted from using it to pay less attention to their thoughts, which they believed was not a positive outcome. The dual outcomes of ChatGPT become evident when students recognize its helpful nature for academic achievements PU. At the same time, it creates obstacles to independent learning, which links to the attitude toward use dangers in TAM.

Gender and Cultural Factors and TAM-Driven Interpretation

The results showed substantial interest in ChatGPT utility, yet analysts should analyze these results while considering Saudi Arabian cultural practices alongside gender-based social behaviors. Within this context, technology adoption, particularly

among female students, often intertwines with socio-cultural expectations around academic excellence and resourcefulness. The elevated trust levels of female students in using ChatGPT likely stem from their greater desire to find scholarly resources that bridge educational deficiency gaps. Research shows that Saudi female students depend on digital tools for educational help because their classroom contact is minimal due to cultural segregation (Dwivedi et al., 2023).

How female students view ChatGPT matches the construct definitions of PU and behavioral intention from TAM. The features of ChatGPT, which enhance academic writing, promptly serviced female students because they needed help with grammar, content organization, and vocabulary development while studying English as a foreign language. The students utilize ChatGPT consistently and with a directional focus that demonstrates their solid commitment to using it for academic preparation.

The reliability skepticism scale among male students was higher than that of their female counterparts. Students demonstrate this behavior because they have more self-confidence in independent learning methods or follow traditional cultural approaches toward informal exploration. While their PU rating indicates low behavioral intent, the frequency of their ChatGPT use remains comparable.

This divergence raises pedagogical implications. The design of AI literacy teaching programs must incorporate different learning behaviors and patterns between male and female students. Higher-level training on AI content evaluation should be offered to female students, and structured AI productivity training should be delivered to male students.

Implications for EFL Instruction

The research outcomes substantially affect teaching EFL. Students can use ChatGPT to effectively support academic writing by obtaining idea generation, grammar correction, and vocabulary enhancement services that present their texts more organized. Users cited their experience with this platform in developing topics, making sentence complexities more manageable to understand, and checking grammatical correctness, which presents challenges for EFL students. Through its instant feedback mechanism, students can enter several stages of the revision process, which makes ChatGPT a strong support tool compared to scarce teacher feedback. Students become more motivated and fluent writers through AI-supported practice because they understand writing processes better.

Implementing AI requires EFL teachers to build educational plans that use ChatGPT as a support system instead of replacing traditional teaching methods. Teachers should use ChatGPT to assist students before writing assignments and as a tool for reviewing their peers' work and vocabulary development. Still, the students should analyze the AI-provided text. Remember that AI literacy education should become part of writing curriculum instruction because students need to learn how to analyze AI-generated text without automatically accepting its content without question. Addressing academic integrity is essential. The deployment guidelines for ChatGPT need to become explicit under instructor supervision, especially during assessment times. Educational assessment improvements through in-class tasks, oral presentations, and gradual project work allow institutions to restrict AI dependency while protecting student creations.

Methodological Limitations

This research offers essential discoveries about student viewpoints regarding ChatGPT but also contains certain disadvantages. The evaluation of the survey instrument revealed poor internal consistency because Cronbach's Alpha scored 0.136 (Tavakol & Dennick, 2011). Some survey items may be broad to the degree they captured various ChatGPT usage elements that did not align into a single cohesive measurement structure. Future research can improve the instrument by performing factor analysis to logically group items into individual components or reducing the measurement to select constructs such as PU or ethical concerns alone (Knekta et al., 2019).

The data collection from 44 participants leads to restricted generalization potential of the research outcomes. Mixed-methods exploratory research calls for this participant size, but more extensive studies with distributed samples would improve statistical analysis accuracy. The study suffers from limitations caused by data subjectivity since participants might unknowingly record inaccurate data about their behaviors and perceptions. Accurate usage logs and performance data should be combined with self-report data to understand the research objectively. This study lays a solid groundwork for researchers to conduct further investigations to support the development of new curricula integrating AI in English education.

CONCLUSION

A research examination studied Saudi university students' opinions about ChatGPT reliability and academic usefulness in teaching EFL context. The study used TAM to show that students considered ChatGPT easy to use yet moderately reliable when supporting writing and grammar functions and developing vocabulary. Research indicates that female university students trust ChatGPT accuracy and usefulness more than male students based on gender differences in educational technology adoption. The validity of TAM for educational AI user attitude and behavior research becomes stronger through this research because students' willingness depends on their PEU and PU of ChatGPT toward academic routines.

The research demonstrates various practical implications stemming from its results. Using ChatGPT for EFL teaching allows students to perform better in their writing tasks and refine their skills in both fluency and accuracy, as well as revision practices. Educational staff should utilize ChatGPT throughout classroom lessons for thought generation, plan development, and document inspection, but they must show students how to check AI outcomes carefully. The support of AI becomes a stepwise system for EFL learners to enhance their independence and grow more confident in their work. However, responsible integration is crucial. Students need educators to create definitions regarding AI usage boundaries in academic writing and lead discussions about AI's academic writing role. When students use AI along with peer assessment and teacher oversight in learning activities, these approaches support students in maintaining ethical conduct while maintaining their interest in the assignment. Curriculum developers must add AI literacy training modules to EFL programs to teach students the necessary skills to assess AI technology, validate sources, and make ethical decisions during academic work.

Educational institutions and Saudi Arabian authorities must establish national guidelines for adequately using generative AI systems in their higher education framework. Academic integrity safeguards should be included in these policies, which support Vision 2030's digital transformation objectives and new technological directions. Educational institutions should modernize their academic misconduct rules to regulate AI assistance while providing training about AI-detecting capabilities to faculty staff and selecting plagiarism detection systems that identify artificial writing. Higher education institutions should collaborate with AI developers to develop AI-based educational platforms that address EFL learners' needs. AI teaching platforms must have integrated transparency systems combined with AI output explanations and personalized help features, which lead to stronger trust between users and platforms.

The initial results from this study need additional research development through various essential methods. Research must follow participants through time to document how students adapt their perceptions and usage of ChatGPT throughout their growing familiarity with the technology as it progresses. Research involving expanded and ethnically diverse participant groups encompassing technical colleges, international student bodies, and specific academic disciplines would enhance the understanding of AI use in Saudi Arabia higher education institutions. Research must focus on studying the particular effects of ChatGPT, specifically on EFL learning results for vocabulary learning, grammar precision, writing ability production, and student motivation. Additional research should develop TAM framework by including trust, perceived risk, and social influence constructs in TAM to provide a complete understanding of AI implementation in language education settings.

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Appendix

Interview Script: Saudi University Students' Perception of ChatGPT

Demographic Information
What is your academic background (university, major, and year of study)?
Probing Questions: How does your major determine your use of ChatGPT?
The Use of ChatGPT and Its Perception
How did you find out about ChatGPT?
What motivated you to use it in academic tasks?
Probing Questions: Did you face an academic problem that prompted you to turn to ChatGPT?
How often do you use ChatGPT?
What academic assignments benefit the most from using ChatGPT?
Probing Questions: Are there any specific areas where you need ChatGPT's help the most?
Perceived Reliability and Perceived Usefulness
How precise and truthful is ChatGPT's information? Can you give an example?
Probing Questions: How do you usually verify ChatGPT's information?
How does ChatGPT affect your academic success and study patterns?
Probing Questions: Did you notice any changes in your critical thinking or problem-solving abilities since you first used ChatGPT?
Scholastic Activities and Outcomes
What major advantages and difficulties have you encountered when using ChatGPT?
Probing Questions: How does the use of ChatGPT change your capability to work self-sufficiently?
Have you noticed any major problems or concerns?

Survey Questionnaire

DEMOGRAPHIC INFORMATION				
Age		Gender	Male	
			Female	
			Prefer not to say	
University				
Field of study				
Year of study	1st year			
	2nd year			
	3rd year			
	4th year			
	Graduate student			

The Use of ChatGPT and Its Perception

1. Are you familiar with ChatGPT?

- ☐ Yes
- ☐ No (If no, skip to question 21)

2. How often do you use ChatGPT for academic purposes?

- ☐ Never
- ☐ Rarely (1-2 times a month)
- ☐ Sometimes (1-2 times a week)
- ☐ Often (3-5 times a week)
- ☐ Very often (Daily)

3. On average, how much time do you spend using ChatGPT for academic purposes per week?

- ☐ Less than 1 hour
- ☐ 1-3 hours
- ☐ 4-6 hours
- ☐ 7-10 hours
- ☐ More than 10 hours

Perceived Reliability and Usefulness

For questions 4-13, please rate your agreement with the following statements on a scale of 1 to 5, where:
1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree
Tick the appropriate box

4. ChatGPT provides reliable information for my academic tasks.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

5. The information provided by ChatGPT is accurate.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

6. ChatGPT is a helpful tool for my academic work.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

7. Using ChatGPT improves my academic performance.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

8. ChatGPT helps me save time on my academic tasks.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

9. ChatGPT enhances my critical thinking skills.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

10. I trust the information provided by ChatGPT.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

11. ChatGPT is easy to use for academic purposes.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

12. Using ChatGPT makes me more productive in my studies.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

13. I would recommend using ChatGPT to other students.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Academic Activities and Impact

14. For which of the following academic activities do you use ChatGPT? (Check all that apply)

- ☐ Writing essays or reports
- ☐ Research assistance
- ☐ Problem-solving
- ☐ Exam preparation
- ☐ Brainstorming ideas
- ☐ Understanding complex concepts
- ☐ Language translation
- ☐ Proofreading and editing
- ☐ Other (please specify): _____

15. How has ChatGPT impacted your learning experience? (Open-ended)

16. What are the main benefits you've experienced from using ChatGPT for academic purposes? (Open-ended)

17. What are the main challenges or concerns you've faced when using ChatGPT for academic purposes? (Open-ended)

18. How do you verify the information provided by ChatGPT? (Check all that apply)

- ☐ Cross-check with textbooks
- ☐ Consult with professors or tutors
- ☐ Compare with other online sources
- ☐ Use academic databases
- ☐ I don't verify the information
- ☐ Other (please specify): _____

19. How has ChatGPT affected your ability to complete academic tasks independently? (Choose one)

- ☐ Significantly decreased
- ☐ Somewhat decreased
- ☐ No change
- ☐ Somewhat increased
- ☐ Significantly increased

20. Overall, how would you rate the impact of ChatGPT on your academic experience?

- ☐ Very negative
- ☐ Somewhat negative
- ☐ Neutral
- ☐ Somewhat positive
- ☐ Very positive

21. Which other AI tools have you heard of or used as academic assistance? What are their benefits, and how do they impact your learning?

Thank you for your participation in this survey!