

# Writing in the Era of ChatGPT: Exploring the Use of ChatGPT by EFL Saudi University Students

Reem Dhafer Alamri (Corresponding author)

English Language Institute (ELI)

King Abdulaziz University KAU, Jeddah, Saudi Arabia

E-mail: rtalamri@kau.edu.sa

Dr. Turki Alsolami

The Applied College, King Abdulaziz University KAU, Jeddah, Saudi Arabia

E-mail: tgalsolami@kau.edu.sa

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## Abstract

This study investigates Saudi EFL university students' perceptions of ChatGPT as a writing supportive tool, and examines the factors that influence its acceptance and use in academic writing. The study is centered on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) framework (Venkatesh et al., 2012), with Learning Autonomy theory (Benson, 2013) employed as a complementary interpretive lens.

An explanatory sequential mixed-methods design was employed. In the quantitative phase, a UTAUT2-adapted questionnaire was administered to 119 Saudi EFL foundation-year students at King Abdulaziz University in Jeddah, Saudi Arabia. Descriptive statistics and independent samples t-tests were used to analyze responses across seven UTAUT2 constructs. In the qualitative phase, semi-structured interviews were conducted with four students to explore their experiences in greater depth. Quantitative results indicated generally positive perceptions, with effort expectancy ( $M = 3.52$ , 88.0%) and facilitating conditions ( $M = 3.46$ , 86.5%) emerging as the strongest dimensions. Social influence ( $M = 2.75$ , 68.8%) was the weakest construct, suggesting that adoption is primarily self-directed rather than institutionally encouraged.

Five themes were identified through deductive thematic analysis of the interview data: writing support and quality improvement, time-saving and ease of writing, increased

confidence and positive writing experience, limitations and trust concerns, and dependence and responsible use. Methodological triangulation revealed convergence across core UTAUT2 constructs, complementarity in behavioural intention and habit, divergence in social influence, and extension through emergent limitations not captured by the questionnaire. The findings suggest that ChatGPT is perceived as a useful, accessible, and emotionally supportive writing tool, while students demonstrate critical awareness of its limitations and articulate strategies for responsible use. The study contributes to the growing body of research on AI in EFL education and offers practical implications for integrating ChatGPT into writing pedagogy in Saudi higher education contexts.

**Keywords:** ChatGPT, EFL writing, Saudi university students, UTAUT2, Technology acceptance, Mixed methods, Thematic analysis, Generative AI, Academic writing, Learning autonomy

## 1. Background of the Study

Over the past decade, artificial intelligence (AI) has moved from the margins of educational research to its center. Universities all over the world are experimenting with AI-driven systems not only as administrative tools, but as instruments that directly shape how students learn, write, and engage with knowledge (Kasneci et al., 2023; UNESCO, 2023). Rasul et al. (2023) states that this shift reflects a wider transformation in higher education, where digital competence and AI literacy are increasingly perceived as key graduate attributes. AI technologies assist with tasks including language processing, content generation, and personalized feedback. Verdegem (2021) and Haque (2023) argue that their integration into academic contexts has the potential to boost learning experiences and productivity.

In Saudi Arabia, this trend intersects with the national transformation agenda. Vision 2030 places AI at the heart of the Kingdom's goals for innovation, digital transformation, and the development of a knowledge-based economy (SDAIA, 2020). To achieve these ambitions, the Saudi Data and Artificial Intelligence Authority (SDAIA) was established alongside the National Strategy for Data and Artificial Intelligence (NSDAI), to set ambitious targets for developing a skilled national workforce in data science and AI. In the higher education system, such initiatives have encouraged universities to explore advanced technologies that support academic excellence and digital literacy.

One area where this need is particularly visible is EFL writing instruction. Saudi universities have extensively incorporated digital tools into their EFL programs (Othman, 2023; Alhalangy & Abdalgane, 2023), yet academic writing continues to present significant challenges for many students. As Hyland (2019) notes, university-level writing demands not only grammatical accuracy but also coherent argumentation, disciplinary awareness, and an appropriate academic register. Wahdah et al. (2025) identifies difficulties with idea development, text organization, and academic language as among the most frequently reported barriers to writing performance in second-language university contexts.

It is against this backdrop that ChatGPT, developed by OpenAI, has attracted considerable attention. As a generative AI tool capable of producing human-like text in response to user prompts, it has been seen as a potential support resource for EFL academic writing (Haque, 2023). Barrot (2023) and Mogavi et al. (2023) suggest that ChatGPT can assist students with generating ideas, drafting paragraphs, revising written work, and receiving immediate language feedback. Despite these affordances, its use raises important pedagogical and ethical concerns. Thorp (2023) cautions against dealing with AI-generated text as equivalent to student-self authored work, while Perkins (2022) and Alammam and Amin (2023) identify academic integrity and the risk of overreliance as challenges institutions must address proactively.

## 2. Research Problem

Although scholarship on ChatGPT in higher education has expanded considerably, Mogavi et al. (2023) and Mohamed and Alian (2023) observe that much of the existing literature focuses on the tool's technical capabilities or on instructors' perspectives, leaving a notable gap in

understanding of how students themselves perceive and experience its use. This gap is particularly pronounced in EFL academic writing contexts, where the interaction between language proficiency, writing development, and AI assistance introduces distinct challenges not captured in more general adoption studies.

In Saudi higher education, the gap is even more specific. Alammar and Amin (2023) and Sobaih et al. (2024) note that empirical research examining Saudi university students' perceptions of ChatGPT as a writing support tool remains limited, despite the rapid growth of AI use on campuses. Without a learner-centered understanding of how students evaluate ChatGPT's usefulness, ease of use, and social acceptability, universities may struggle to develop pedagogical practices and guidelines that are contextually appropriate. This study therefore investigates Saudi EFL university students' perceptions of ChatGPT, and the factors influencing its acceptance and use in academic writing.

Moreover, the rapid pace at which generative AI tools are being adopted by students has created an urgency that existing research has not yet fully addressed. Students are forming habits and developing practices around ChatGPT use in real time, often without seeking institutional guidance or benefiting from pedagogical frameworks. Understanding how students currently perceive and use ChatGPT is therefore not merely an academic question but a practical necessity for educators and policymakers who must make decisions about curriculum design, assessment practices, and academic integrity policies in the near term. The present study addresses this need as it provides timely, empirically grounded evidence from a specific and underexamined Saudi EFL university context.

This study contributes to research on AI in higher education by focusing on student perspectives in EFL writing, a context that presents distinct linguistic and pedagogical challenges. By applying the UTAUT2 framework (Venkatesh et al., 2012), it offers a structured approach to understanding students' engagement with generative AI tools. In the Saudi context, the study addresses an empirical gap aligned with Vision 2030 digital transformation goals (SDAIA, 2020), providing practical insights for educators and policymakers on integrating ChatGPT in ways that support learning outcomes while maintaining academic integrity and ethical considerations.

This paper is structured into six chapters. Chapter One presents the background of the study, the research problem, objectives, research questions, and its significance. Chapter Two provides a review of the relevant literature, including artificial intelligence in education, the use of ChatGPT in EFL writing contexts, students' perspectives on AI tools, and the theoretical frameworks guiding the study. Chapter Three outlines the research methodology, detailing the mixed-methods design, participants, instruments, data collection procedures, and analysis techniques. Chapter Four reports the quantitative and qualitative findings. Chapter Five discusses these findings in relation to the UTAUT2 framework and the broader literature. Finally, Chapter Six concludes the study by summarizing the key findings, identifying limitations, and offering recommendations for future research and EFL writing pedagogy.

### 3. Purpose of the Study and Research Questions

This study seeks to examine Saudi EFL university students' perspectives on the use of ChatGPT as a writing support tool. Instead of focusing on the tool's technical features, this study seeks to understand how students perceive and engage with ChatGPT within their academic writing practices. To meet this objective, the study adopts the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) framework (Venkatesh et al., 2012), which provides a structured approach to examining the factors that influence technology adoption in voluntary settings.

The study is guided by the following research questions:

- 1) *What are the perspectives of Saudi university students towards the use of ChatGPT?*
- 2) *What are the perceived benefits of utilizing ChatGPT for enhancing writing among Saudi university students?*
- 3) *What are the challenges and limitations associated with the use of ChatGPT in writing?*

### 4. Research Objectives

This study aims to investigate Saudi EFL university students' perceptions of ChatGPT as a writing support tool and to examine the factors influencing its acceptance and use in academic writing. More specifically the study seeks to:

- Explore students' general attitudes toward using ChatGPT for academic writing tasks.
- Identify students' perceptions of the usefulness and ease of use of ChatGPT.
- Examine perceived benefits and challenges associated with using ChatGPT in EFL writing contexts.
- Analyse the influence of social and institutional factors on students' adoption of ChatGPT.
- Apply the UTAUT2 framework (Venkatesh et al., 2012) to explain the factors shaping students' acceptance and continued use of ChatGPT.

### 5. Literature Review

#### 5.1 Artificial Intelligence in Education

Artificial intelligence (AI) has become a central force in reshaping higher education, as universities increasingly adopt AI-driven systems to enhance both administrative processes and teaching practices (Kasneci et al., 2023). AI refers to computational systems capable of performing tasks that require human-like cognitive abilities, such as reasoning, language processing, and decision-making (Saleh, 2019). Recent developments, particularly adaptive and data-driven models, have enabled more personalized and context-sensitive learning experiences compared to earlier rule-based systems (Mukhamediev et al., 2022). These advancements have expanded opportunities for adaptive feedback, personalized content delivery, and language support (UNESCO, 2023). In EFL contexts, generative AI has transformed traditional tools by moving beyond surface-level correction to actively

supporting writing processes, though concerns remain regarding reliability, authorship, and learner dependency (Wahdah et al., 2025; Kasneci et al., 2023). Since AI outputs rely on statistical patterns rather than true understanding, they may include inaccuracies or biases, creating challenges for learners and educators (Shahriar & Hayawi, 2023). Therefore, the educational value of AI depends largely on how it is used, perceived, and integrated within institutional contexts.

### *5.2 ChatGPT as a Generative AI Tool*

Among generative AI tools, ChatGPT has gained significant attention due to its accessibility and ability to produce coherent, contextually relevant responses. Powered by large language models, it generates text by predicting word sequences, enabling it to perform a wide range of tasks effectively (Mogavi et al., 2023). Its conversational nature allows iterative interaction, where users can refine outputs and request modifications, offering greater flexibility than earlier technologies (Shahriar & Hayawi, 2023). This highlights the evolving role of generative AI as an integrated system capable of personalization, adaptation, and dynamic content generation in educational settings.

ChatGPT offers EFL students dynamic support by generating full paragraphs, reformulating ideas, and suggesting alternative expressions, which helps reduce difficulties in starting writing tasks. However, its outputs are based on probabilistic patterns rather than true understanding, meaning fluency may conceal inaccuracies or limited perspectives (Strzelecki, 2023). As a result, whether it functions as effective scaffolding or a substitute for independent writing depends on student use and institutional guidance.

### *5.3 ChatGPT in EFL Language Learning and Academic Writing*

Academic writing remains a complex skill requiring organization, argumentation, and appropriate academic style beyond grammatical accuracy (Hyland, 2019), often creating pressure for EFL learners (Meniado, 2023). In this context, students increasingly use ChatGPT for tasks such as brainstorming, paraphrasing, and language modelling (Barrot, 2023). Studies indicate that it can provide flexible, immediate feedback and expose learners to diverse academic structures (Mogavi et al., 2023; Haque, 2023; Shahriar & Hayawi, 2023). It also creates a low-pressure environment that encourages experimentation and engagement, supporting writing development (Meniado, 2023), while improving performance and efficiency, though concerns about long-term skill dependency remain (Yan, 2023). Despite these benefits, ChatGPT cannot replace critical thinking, source integration, or original argument construction, making guided use essential to avoid overreliance. The literature highlights a key tension between support and substitution, emphasizing the importance of pedagogical framing. Additionally, usage varies by proficiency level, with advanced learners using it for refinement and less proficient students relying on it for basic structure and grammar, increasing the risk of dependency among those who most need skill development (Mogavi et al., 2023).

### *5.4 Benefits and Limitations of Using ChatGPT for EFL Writing*

The use of ChatGPT in higher education has led to increased scrutiny of its pedagogical value,

highlighting both its benefits and limitations. A major advantage is its ability to provide immediate, on-demand support, which helps EFL learners overcome difficulties in initiating and organizing writing tasks. It facilitates idea generation, language modelling, and interactive feedback, allowing students to refine their understanding in real time while also reducing writing-related anxiety (Barrot, 2023; Meniado, 2023).

However, these benefits are accompanied by notable limitations. ChatGPT can generate fluent yet inaccurate or misleading content, raising concerns about reliability and academic integrity (Thorp, 2023; Perkins, 2022). These risks are particularly significant for EFL learners who may struggle to identify errors and may internalize incorrect language use (Meniado, 2023). Additional concerns include issues of trust, misinformation, and the mismatch between AI-generated output and students' actual proficiency levels, which can affect both learning and assessment (Tlili et al., 2023; Mogavi et al., 2023). Overall, the effectiveness of ChatGPT depends on its critical use, appropriate pedagogical integration, and clear institutional regulation.

### *5.5 Student Perspectives on ChatGPT for EFL Writing*

Students' perceptions of ChatGPT significantly influence its adoption, with perceived usefulness and ease of use driving engagement (Mogavi et al., 2023). While many students value its support for idea generation and language development (Barrot, 2023), concerns remain about accuracy, reliability, and appropriate use within academic integrity frameworks (Shahriar & Hayawi, 2023). Usage also differs by proficiency level, with lower-proficiency learners more prone to overreliance.

In the Saudi context, awareness is increasing but remains mixed due to institutional, cultural, and digital factors (Alammar & Amin, 2023; Mohamed & Alian, 2023). International research shows similar patterns of positive attitudes alongside concerns about overdependence and the need for AI literacy and institutional guidance (Chan & Hu, 2023). Overall, the literature highlights a complex interplay between benefits and concerns, with a notable gap in understanding how students manage these tensions in the Saudi EFL context.

### *5.6 Factors Influencing the Adoption of ChatGPT*

Students' adoption of ChatGPT in academic writing is influenced by a combination of interrelated factors. Perceived usefulness is a primary driver, as students are more likely to use the tool when they believe it enhances performance and efficiency, while doubts about reliability or academic appropriateness limit engagement (Mogavi et al., 2023). Ease of use also plays a key role, consistent with the Technology Acceptance Model (Davis, 1989), though effective use requires critical skills in prompting and evaluating outputs (Meniado, 2023).

Social and institutional factors, such as peer influence, instructor attitudes, and policies, further shape adoption, alongside individual differences like digital literacy and language proficiency. Overall, ChatGPT adoption is a dynamic process rather than a fixed decision, varying across tasks and evolving over time. This complexity highlights the importance of mixed-methods approaches to capture both general trends and individual experiences.

5.7 Theoretical Frameworks: UTAUT2 and Learning Autonomy

To examine the determinants of ChatGPT adoption systematically, this study draws on two complementary theoretical frameworks. The primary framework is the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), which provides the analytical structure guiding the design of the research instrument and the interpretation of quantitative findings. A secondary framework, Learning Autonomy theory, is incorporated as an interpretive lens during the qualitative discussion phase, addressing the pedagogical dimensions of ChatGPT use that adoption theory alone cannot fully explain.

5.7.1 UTAUT2 as the Primary Theoretical Framework

The Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), developed by Venkatesh et al. (2012) (fig. 1), provides a comprehensive framework for explaining technology adoption in voluntary contexts and is therefore appropriate for examining ChatGPT use among Saudi university students. In this study, Price Value was excluded due to the free nature of ChatGPT, while the remaining seven constructs were retained. These include performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, habit, and behavioral intention, all of which align with patterns identified in the literature and collectively explain students’ engagement with ChatGPT in EFL writing contexts.

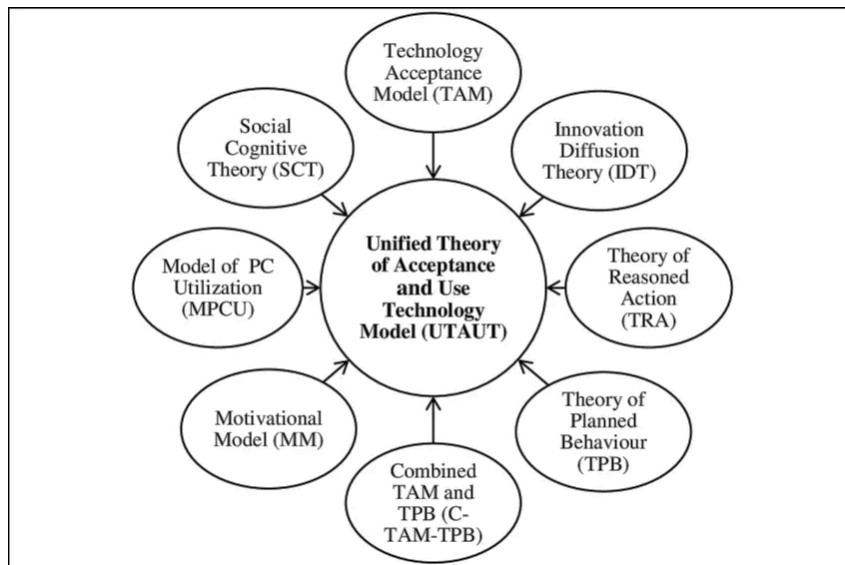


Figure 1. UTAUT2 model (Venkatesh et al. (2012)).

Several recent studies have applied the UTAUT2 framework to ChatGPT adoption, demonstrating its relevance in higher education contexts. Strzelecki (2023) identified performance expectancy and effort expectancy as key predictors of use, while Sobaih et al. (2024) provided supporting evidence within the Saudi context. Similarly, Wahdah et al. (2025) confirmed the model’s applicability across diverse educational settings. Building on this work, the current study extends UTAUT2 to the Saudi EFL writing context, addressing a specialized

area that has not been previously examined.

Table 1. UTAUT2 Studies on ChatGPT in Education

| Year | Study                               | Context & Sample                             | Key Contribution to This Study   |
|------|-------------------------------------|--|--|
| 2023 | Strzelecki                          | University students, international context   | One of the earliest empirical UTAUT2 studies on ChatGPT in higher education; establishes performance and effort expectancy as key predictors |
| 2024 | Sobaih, Elshaer & Hasanein          | Saudi Arabian university students (N=520)    | Strong contextual precedent for the present study; directly applicable Saudi UTAUT2 framework  |
| 2025 | Wahdah, Syahara, Kurniawan & Irawan | Indonesian higher education students (N=340) | Confirms global applicability of UTAUT2 for modelling ChatGPT acceptance across diverse contexts   |

### 5.7.2 Learning Autonomy as a Supporting Framework

While UTAUT2 explains why students adopt ChatGPT, it does not address how its use affects learning processes. To account for this, the study incorporates Learning Autonomy theory (Benson, 2013) as a complementary lens in the discussion phase. This theory emphasizes self-direction, critical reflection, and responsible engagement in learning. In EFL writing, autonomous students are more likely to use ChatGPT as a scaffold by evaluating and integrating its outputs, whereas less autonomous learners may rely on it as a substitute for independent work. This perspective is particularly relevant for interpreting qualitative findings, especially students' reflections on balancing convenience with the risk of overdependence.

This section reviewed the literature on AI in education and the role of ChatGPT in EFL writing, highlighting both its pedagogical benefits—such as immediate feedback, language modelling, and reduced anxiety—and its limitations related to accuracy, overreliance, and academic integrity (Barrot, 2023; Thorp, 2023). It also showed that student perceptions are shaped by factors such as proficiency, peer influence, and digital literacy (Alammar & Amin, 2023; Mogavi et al., 2023; Mohamed & Alian, 2023), and introduced UTAUT2 (Venkatesh et al., 2012) alongside Learning Autonomy theory (Benson, 2013) as guiding frameworks.

Despite growing research, key gaps remain, including limited focus on EFL-specific writing challenges (Hyland, 2019), insufficient application of UTAUT2 in this context—particularly in the Arabian Gulf (Sobaih et al., 2024)—and a lack of integration between adoption models and learning-oriented theories. This study addresses these gaps by examining Saudi EFL students' perceptions through UTAUT2 while incorporating Learning Autonomy theory to interpret qualitative insights.

## 6. Research Design

This study employs an explanatory sequential mixed-methods design, where quantitative data are collected and analyzed first, followed by qualitative interviews to explain and contextualize the findings (Creswell & Plano Clark, 2018). The quantitative phase is guided by UTAUT2 (Venkatesh et al., 2012), while Learning Autonomy theory is used as an interpretive lens in the discussion rather than in data collection. Semi-structured interviews provide deeper insights into students' experiences and complement survey results, enabling methodological triangulation to enhance validity (Creswell & Plano Clark, 2018; Patton, 2002).

The study adopts a cross-sectional approach to examine relationships between constructs at a single point in time (Cohen et al., 2018). The explanatory sequential design was chosen to first identify patterns through quantitative data and then use qualitative data to interpret these patterns, ensuring a more comprehensive understanding of students' engagement with ChatGPT (Creswell & Plano Clark, 2018).

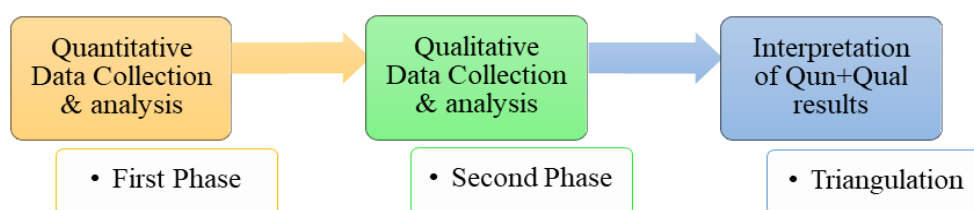


Figure 2. An Explanatory Sequential Mixed-Method Design

### 6.1 Research Context

The study was conducted at King Abdulaziz University (KAU) in Jeddah, Saudi Arabia, one of the largest public universities in the Kingdom, within the English Language Institute (ELI), which provides compulsory EFL instruction to undergraduate students from a wide range of academic faculties. Academic writing forms a central component of the ELI curriculum, with students expected to produce structured paragraphs and essays demonstrating coherence, grammatical accuracy, and appropriate academic tone. Written assignments are formally assessed and contribute to course progression.

KAU has actively integrated digital technologies into its teaching and learning infrastructure, and within this environment, awareness and informal use of generative AI tools such as ChatGPT have increased markedly among students (Kasneci et al., 2023; Dwivedi et al., 2023). Although use is not institutionally mandated, ChatGPT is readily accessible, creating a context in which engagement is largely voluntary and shaped by individual perceptions — making KAU an appropriate setting for examining student adoption of ChatGPT.

### 6.2 Participants

Participants were undergraduate Saudi EFL students enrolled in writing courses at the ELI,

King Abdulaziz University. Participation was voluntary throughout, and a convenience sampling strategy was employed due to institutional access considerations (Cohen, Manion, & Morrison, 2018). Students from both First-Year tracks — ELIS and ELIH–MoD — were invited to participate.

For the quantitative phase, the research was implemented in two stages. In the first stage, a pilot study was conducted with 24 students drawn from the same target population to examine item clarity, internal consistency, and instrument reliability (Creswell, 2014). As no substantial modifications were required, pilot responses were retained and included in the final dataset. In the second stage, the questionnaire was distributed to an additional 95 students. The combined final quantitative sample consisted of 119 students ( $N = 119$ ), which is considered adequate for descriptive and inferential analysis in social science research, where samples exceeding 100 participants are generally sufficient to produce stable statistical estimates (Field, 2018).

For the qualitative phase, four females Saudi EFL students from the same target population were selected for semi-structured interviews, reflecting the gender-segregated educational context of Saudi higher education.

### 6.3 Instrumentation

The quantitative instrument was adapted from the UTAUT2 framework (Venkatesh et al., 2012). It consisted of two sections: the first collected demographic information (First-Year track, age, gender), and the second contained 25 items measured on a four-point Likert scale. The use of a four-point scale without a neutral midpoint is recommended in survey research contexts where researchers wish to encourage directional responses (Boone & Boone, 2012; Chyung et al., 2017). Cut-off ranges of 0.75 intervals were calculated to interpret mean scores consistently: 1.00–1.75 = Strongly Disagree; 1.76–2.50 = Disagree; 2.51–3.25 = Agree; 3.26–4.00 = Strongly Agree. The 25 items were distributed across the seven UTAUT2 constructs: performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, habit, and behavioral intention.

Table 2. Alignment of Questionnaire Items with Research Questions

| Item Numbers | Construct               | Research Question Addressed                     |
|--------------|-------------------------|---|
| 1–4          | Performance Expectancy  | RQ1 & RQ2 (perspectives and perceived benefits) |
| 5–8          | Effort Expectancy       | RQ1 (student perspectives)                      |
| 9–11         | Social Influence        | RQ1 (student perspectives)                      |
| 12–15        | Facilitating Conditions | RQ1 (student perspectives)                      |
| 16–18        | Hedonic Motivation      | RQ1 & RQ2 (perspectives and perceived benefits) |
| 19–22        | Habit                   | RQ1; indirect insight into RQ3 (limitations)    |
| 23–25        | Behavioral Intention    | RQ1 & RQ2                                       |

### 6.3.1 Questionnaire Adaptation

The study adapts the UTAUT2 model by excluding Price Value due to the free availability of ChatGPT, consistent with Strzelecki (2023), and retains seven constructs: Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Hedonic Motivation, Habit, and Behavioral Intention. The instrument was contextually modified to reflect ChatGPT use in academic writing, with items reworded accordingly (Dörnyei, 2007). A four-point Likert scale was employed to encourage decisive responses (Boone & Boone, 2012; Chyung et al., 2017), and the questionnaire was administered in both Arabic and English, ensuring semantic equivalence (Brislin, 1970).

### 6.3.2 Pilot Testing

A pilot study was conducted with 24 Saudi EFL university students from the same target population. Participants completed the questionnaire and provided feedback on item clarity and comprehensibility (Creswell, 2014). Minor linguistic adjustments were made; no structural changes were introduced, and no items were removed. As no substantial modifications were required, pilot responses were retained and combined with those from the main data collection phase.

### 6.3.3 Construct Validity

Pearson correlation analysis was conducted to assess item–total relationships within each dimension, a procedure used to examine internal construct validity by determining how individual items correlate with their respective construct scores (Field, 2018). Correlation coefficients ranged from 0.615 to 0.929, all positive and statistically significant ( $p < 0.01$ ), providing evidence of satisfactory construct validity. No items were removed, as deletion did not substantially improve reliability coefficients and retaining all items preserved theoretical alignment with UTAUT2.

### 6.3.4 Reliability

Reliability was assessed using Cronbach's Alpha coefficients to evaluate internal consistency. Values for individual dimensions ranged from 0.658 to 0.885, while the overall coefficient for the full questionnaire was 0.922, exceeding commonly accepted thresholds and indicating satisfactory to excellent internal consistency (Tavakol & Dennick, 2011). No items were deleted, in order to preserve theoretical alignment with the UTAUT2 framework and maintain construct completeness.

### 6.3.5 Final Sample

Following pilot testing, the questionnaire was distributed to an additional 95 students at the ELI. Pilot and main-phase responses were combined, resulting in a final quantitative sample of 119 students ( $N = 119$ ). All responses were screened for completeness prior to analysis.

### 6.3.6 Final Sample

Following pilot testing, the questionnaire was distributed to an additional 95 students at the ELI. Pilot and main-phase responses were combined, resulting in a final quantitative sample

of 119 students (N = 119). All responses were screened for completeness prior to analysis.

#### *6.4 Semi-Structured Interviews*

Four semi-structured interviews were conducted with female Saudi EFL students from the same target population, including two participants from the Science track and two from the Health track to ensure representation within the First-Year program. This method was selected for its balance between structured guidance and flexibility, allowing in-depth exploration of participants' experiences (Cohen, Manion, & Morrison, 2018; Kallio et al., 2016). The interview protocol included seven open-ended questions aligned with the UTAUT2 constructs, with neutral wording to avoid bias, alongside prepared follow-up probes to encourage elaboration. The questions were reviewed by two applied linguistics experts, and a pilot interview was conducted and retained, as no modifications were necessary.

Each interview lasted approximately 12–15 minutes and was conducted individually in a private university setting to ensure confidentiality. Interviews were audio-recorded with informed consent, conducted in Saudi colloquial Arabic, transcribed verbatim, and then translated into English while preserving meaning and tone. Credibility was enhanced through member checking, where participants reviewed summaries of their responses (Lincoln & Guba, 1985). The qualitative sample, though small, was intended to provide depth and explanatory insight rather than generalization, consistent with explanatory sequential mixed-methods designs (Creswell & Plano Clark, 2018). Data saturation was considered achieved, as the interviews revealed consistent themes alongside sufficient variation for meaningful analysis (Guest, Bunce, & Johnson, 2006).

#### *6.5 Data Collection Procedures*

Data were collected in two sequential stages consistent with the explanatory sequential mixed-methods design (Creswell & Plano Clark, 2018). In the first stage, the questionnaire was distributed electronically via Google Forms. The survey link was shared through official class communication channels with instructors' permission. Participants received an information statement outlining the study's purpose, confidentiality assurances, and confirmation that participation was voluntary. In the second stage, four students who expressed interest were contacted via email or phone and invited for semi-structured interviews, conducted either online via Teams or in person according to participant preference. Verbal consent for audio recording was obtained before each session.

#### *6.6 Data Analysis*

Quantitative data were analyzed using SPSS Statistics (Version 24) and Microsoft Excel for visualization. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize demographic data and responses across the seven UTAUT2 constructs (Field, 2018). Assumptions for parametric testing were checked prior to analysis, and independent samples t-tests were conducted to examine differences between Foundation Year tracks at a significance level of  $\alpha = 0.05$ .

Qualitative data were analyzed using Braun and Clarke's (2006) six-phase thematic analysis,

involving familiarization, coding, theme development, review, definition, and reporting. A deductive approach was applied, guided by UTAUT2 constructs while allowing for emerging themes (Braun & Clarke, 2006). This alignment supported methodological triangulation, with integration of quantitative and qualitative findings occurring during interpretation to identify convergence, complementarity, and divergence (Patton, 2002; Greene et al., 1989).

### 6.7 Validity and Reliability

The quality of the study was ensured through complementary strategies across both quantitative and qualitative phases. In the quantitative phase, construct validity was established using Pearson item–total correlations, confirming appropriate alignment between items and their respective UTAUT2 constructs (Section 3.4.3). Reliability was verified through Cronbach’s Alpha, with coefficients ranging from 0.658 to 0.885 and an overall value of 0.922, indicating strong internal consistency (Section 3.4.4). Content validity was supported by adapting established UTAUT2 items (Venkatesh et al., 2012) and conducting pilot testing with 24 students from the target population (Section 3.4.2).

For the qualitative phase, trustworthiness was addressed following Lincoln and Guba’s (1985) criteria. Credibility was enhanced through member checking, allowing participants to verify the accuracy of their responses. Dependability was ensured through a consistent semi-structured interview protocol aligned with UTAUT2 constructs and supported by planned follow-up probes (Appendix A). Confirmability was strengthened through verbatim Arabic transcription, careful English translation, and the inclusion of original quotes alongside translations (Appendix B). Although transferability is limited by the small sample and single context, it is supported through detailed descriptions of the setting, participants, and procedures. Finally, methodological triangulation (Greene et al., 1989) provided an additional layer of validation by integrating quantitative and qualitative findings, allowing examination of convergence, complementarity, divergence, and extension across data sources.

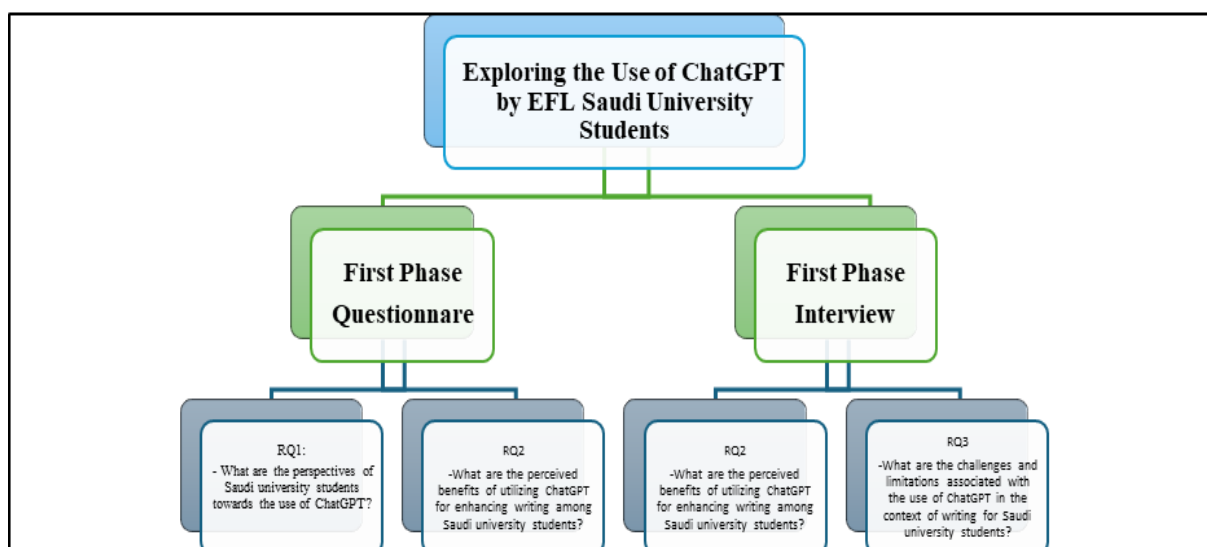


Figure 3. Mind Map of the Research Tools and Questions

### 6.8 Ethical Considerations

Ethical approval was obtained from the ELI Ethics Committee at King Abdulaziz University. Participation was voluntary, and informed consent was obtained prior to both the survey and interviews. No personal identifiers were collected, and participants were assured of confidentiality and that data would be used solely for academic purposes. Participants were informed they could withdraw at any time without penalty (Creswell, 2014).

## 7. Data Analysis and Results

This study employs an explanatory sequential mixed-methods design, where quantitative data are collected and analyzed first, followed by qualitative interviews to explain and contextualize the findings (Creswell & Plano Clark, 2018). The quantitative phase is guided by UTAUT2 (Venkatesh et al., 2012), while Learning Autonomy theory is used as an interpretive lens in the discussion rather than in data collection. Semi-structured interviews provide deeper insights into students' experiences and complement survey results, enabling methodological triangulation to enhance validity (Creswell & Plano Clark, 2018; Patton, 2002).

### 7.1 Introduction

This part presents the findings of the study examining Saudi EFL university students' perceptions of ChatGPT as a writing support tool. The analysis is guided by the UTAUT2 framework (Venkatesh et al., 2012). The chapter begins with participant demographics, followed by quantitative findings across the seven UTAUT2 constructs. An independent samples t-test examines differences between First-Year tracks. Qualitative findings from semi-structured interviews then provide contextual depth. Detailed theoretical interpretation is reserved for Chapter Five.

### 7.2 Quantitative Results

#### 7.2.1 Demographic Characteristics

Table 3. Frequency Distribution by First- Year Track

| Foundation Year Track | N   | %      |
|-----------------------|-----|--------|
| ELIS                  | 55  | 46.2%  |
| ELIH – MoD            | 64  | 53.8%  |
| Total                 | 119 | 100.0% |

As shown in Table 3, 53.8% of participants were enrolled in the ELIH–MoD track and 46.2% in the ELIS track.

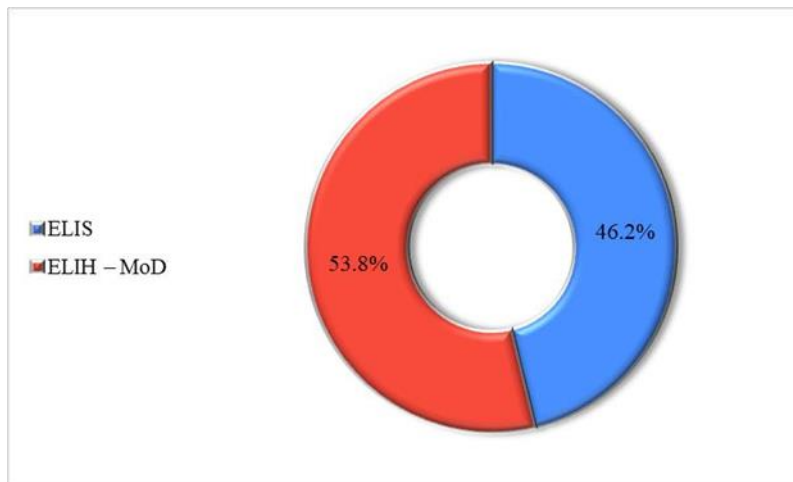


Figure 4. Frequency distribution of participants according to First-Year track

Table 4. Frequency Distribution by Age Range

| Age Range   | N   | %      |
|-------------|-----|--------|
| 18–20 Years | 115 | 96.6%  |
| 21–23 Years | 4   | 3.4%   |
| Total       | 119 | 100.0% |

As shown in Table 4, the overwhelming majority of participants (96.6%) were aged between 18 and 20 years, reflecting the typical demographic profile of foundation-year undergraduate students at King Abdulaziz University.

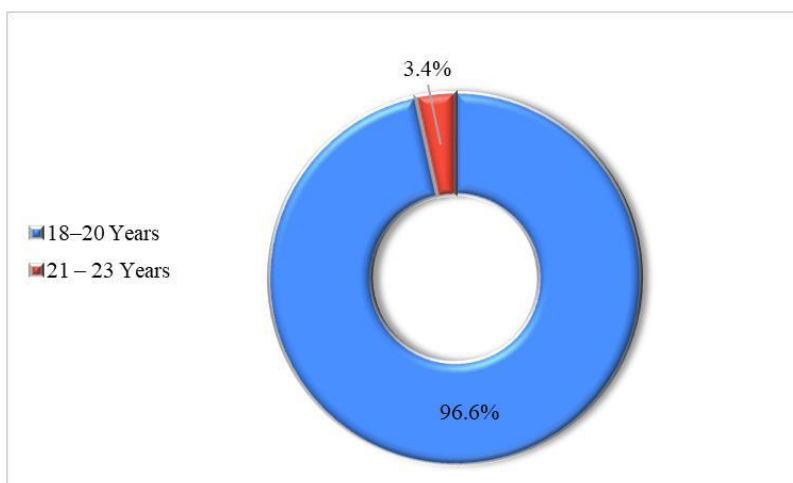


Figure 5. Frequency distribution of participants according to First-Year track

### 7.2.2 Demographic Characteristics

To address Research Questions 1 and 2, mean scores, standard deviations, and agreement

percentages were calculated for participants' responses across the seven UTAUT2 dimensions.

Table 5. Performance Expectancy

| No. | Item  | Mean | SD   | %     | Level          | Rank |
|-----|---|------|------|-------|----------------|------|
| 3   | ChatGPT helps me finish writing tasks more quickly                          | 3.45 | 0.63 | 86.3% | Strongly Agree | 1    |
| 1   | I find ChatGPT useful for improving my academic writing                     | 3.44 | 0.50 | 86.0% | Strongly Agree | 2    |
| 2   | Using ChatGPT increases my chances of submitting higher-quality assignments | 3.34 | 0.63 | 83.5% | Strongly Agree | 3    |
| 4   | Using ChatGPT increases my productivity in academic writing                 | 3.33 | 0.65 | 83.3% | Strongly Agree | 4    |
|     | Overall   | 3.39 | 0.60 | 84.8% | Strongly Agree |      |

The overall mean for Performance Expectancy was 3.39 (SD = 0.60, 84.8%), falling within the Strongly Agree category. Students perceive ChatGPT as enhancing writing efficiency, assignment quality, and productivity. The highest-rated item was “ChatGPT helps me finish writing tasks more quickly” (M = 3.45, 86.3%).

Table 6. Effort Expectancy

| No. | Item   | Mean | SD   | %     | Level          | Rank |
|-----|--|------|------|-------|----------------|------|
| 1   | Learning how to use ChatGPT for writing is easy for me                 | 3.66 | 0.57 | 91.5% | Strongly Agree | 1    |
| 2   | Using ChatGPT while writing is clear and understandable                | 3.50 | 0.65 | 87.5% | Strongly Agree | 2    |
| 4   | It is easy for me to become skilled at using ChatGPT for writing tasks | 3.46 | 0.66 | 86.5% | Strongly Agree | 3    |
| 3   | I find using ChatGPT to support my writing easy                        | 3.45 | 0.55 | 86.3% | Strongly Agree | 4    |
|     | Overall  | 3.52 | 0.61 | 88.0% | Strongly Agree |      |

Effort Expectancy recorded the highest overall mean ( $M = 3.52$ ,  $SD = 0.61$ , 88.0%), indicating that students strongly perceive ChatGPT as easy to learn and clear to use for writing tasks.

Table 7. Social Influence

| No. | Item  | Mean | SD   | %     | Level    | Rank |
|-----|---|------|------|-------|----------|------|
| 3   | People whose academic opinions I value recommend using ChatGPT in writing                                       | 3.01 | 0.81 | 75.3% | Agree    | 1    |
| 1   | Important people in my life (e.g. family and friends) think I should use ChatGPT                                | 2.80 | 0.79 | 70.0% | Agree    | 2    |
| 2   | People who influence my academic behavior (e.g. professors, supervisors) encourage me to use ChatGPT in writing | 2.45 | 0.79 | 61.3% | Disagree | 3    |
|     | Overall   | 2.75 | 0.80 | 68.8% | Agree    |      |

Social Influence recorded the lowest overall mean ( $M = 2.75$ ,  $SD = 0.80$ , 68.8%). Peer-related influence was moderate, while encouragement from university professors or supervisors fell within the Disagree category ( $M = 2.45$ , 61.3%), indicating limited institutional endorsement.

Table 8. Facilitating Conditions

| No. | Item   | Mean | SD   | %     | Level          | Rank |
|-----|--|------|------|-------|----------------|------|
| 1   | I have the tools and resources I need to use ChatGPT                 | 3.59 | 0.57 | 89.8% | Strongly Agree | 1    |
| 2   | I have the knowledge required to use ChatGPT effectively for writing | 3.53 | 0.61 | 88.3% | Strongly Agree | 2    |
| 4   | I can get help from others when I face problems using ChatGPT        | 3.39 | 0.67 | 84.8% | Strongly Agree | 3    |
| 3   | ChatGPT is compatible with the platforms I use for writing           | 3.35 | 0.68 | 83.8% | Strongly Agree | 4    |
|     | Overall  | 3.46 | 0.63 | 86.5% | Strongly Agree |      |

Facilitating Conditions recorded a strong overall mean ( $M = 3.46$ ,  $SD = 0.63$ , 86.5%), reflecting students' perceptions of adequate technical access, knowledge, and support for using ChatGPT effectively.

Table 9. Hedonic Motivation

| No. | Item  | Mean | SD   | %     | Level          | Rank |
|-----|---|------|------|-------|----------------|------|
| 2   | I enjoy exploring writing ideas with ChatGPT                    | 3.49 | 0.61 | 87.3% | Strongly Agree | 1    |
| 3   | I find that using ChatGPT in writing is an enjoyable experience | 3.35 | 0.62 | 83.8% | Strongly Agree | 2    |
| 1   | Using ChatGPT makes the writing process more enjoyable          | 3.24 | 0.77 | 81.0% | Agree          | 3    |
|     | Overall   | 3.36 | 0.67 | 84.0% | Strongly Agree |      |

Hedonic Motivation showed a strong overall mean ( $M = 3.36$ ,  $SD = 0.67$ , 84.0%), indicating positive emotional engagement with ChatGPT during academic writing tasks.

Table 10. Habit

| No. | Item  | Mean | SD   | %     | Level | Rank |
|-----|---|------|------|-------|-------|------|
| 4   | Using ChatGPT in writing has become natural to me                         | 3.06 | 0.73 | 76.5% | Agree | 1    |
| 1   | Using ChatGPT in writing has become a regular part of my academic routine | 3.02 | 0.86 | 75.5% | Agree | 2    |
| 3   | I feel the need to use ChatGPT when I write                               | 2.96 | 0.79 | 74.0% | Agree | 3    |
| 2   | I feel that I rely on ChatGPT when completing writing tasks               | 2.87 | 0.81 | 71.8% | Agree | 4    |
|     | Overall   | 2.97 | 0.80 | 74.3% | Agree |      |

Habit recorded a moderate overall mean ( $M = 2.97$ ,  $SD = 0.80$ , 74.3%), indicating that while ChatGPT is becoming integrated into students' writing practices, habitual dependence remains moderate.

Table 11. Behavioral Intention

| No. | Item  | Mean | SD   | %     | Level | Rank |
|-----|---|------|------|-------|-------|------|
| 3   | I plan to use ChatGPT frequently to improve my academic writing       | 3.10 | 0.75 | 77.5% | Agree | 1    |
| 1   | I intend to continue using ChatGPT for academic writing in the future | 3.08 | 0.83 | 77.0% | Agree | 2    |
| 2   | I will regularly use ChatGPT to support my writing tasks              | 3.08 | 0.77 | 77.0% | Agree | 3    |
|     | Overall   | 3.08 | 0.78 | 77.0% | Agree |      |

Behavioral Intention showed a moderate overall mean ( $M = 3.08$ ,  $SD = 0.78$ , 77.0%), indicating a generally positive but moderate intention to continue using ChatGPT for future writing tasks.

Table 12. Comparative Summary of All UTAUT2 Dimensions

| Rank    | Dimension               | Mean | SD   | %     | Level          |
|---------|-------------------------|------|------|-------|----------------|
| 1       | Effort Expectancy       | 3.52 | 0.61 | 88.0% | Strongly Agree |
| 2       | Facilitating Conditions | 3.46 | 0.63 | 86.5% | Strongly Agree |
| 3       | Performance Expectancy  | 3.39 | 0.60 | 84.8% | Strongly Agree |
| 4       | Hedonic Motivation      | 3.36 | 0.67 | 84.0% | Strongly Agree |
| 5       | Behavioral Intention    | 3.08 | 0.78 | 77.0% | Agree          |
| 6       | Habit                   | 2.97 | 0.80 | 74.3% | Agree          |
| 7       | Social Influence        | 2.75 | 0.80 | 68.8% | Agree          |
| Overall |                         | 3.22 | 0.70 | 80.5% | Agree          |

The overall mean of 3.22 ( $SD = 0.70$ , 80.5%) indicates generally positive perceptions toward ChatGPT. Effort Expectancy and Facilitating Conditions were the strongest dimensions, while Social Influence was the weakest, suggesting that ChatGPT use remains primarily self-directed rather than institutionally encouraged.

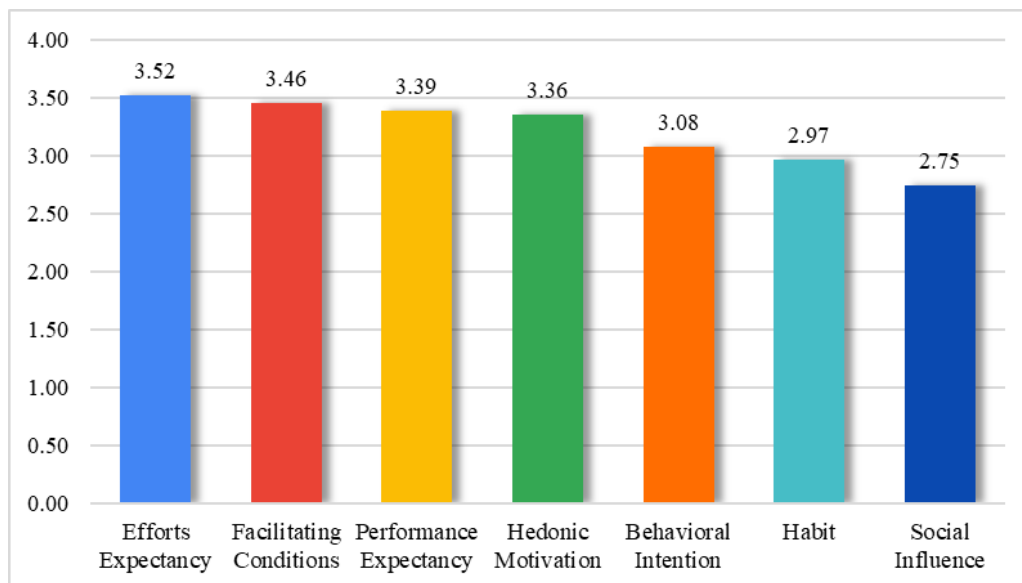


Figure 6. Comparison between dimension according to means

### 7.2.3 Differences between Tracks: Independent Samples t-Test

Table 13. Independent Samples T-Test Results by Foundation Year Track

| Dimension                | Track      | N  | Mean | SD   | t      | Sig.   |
|--------------------------|------------|----|------|------|--------|--------|
| Performance Expectancy   | ELIS       | 55 | 3.43 | 0.47 | 0.885  | 0.378  |
|                          | ELIH – MoD | 64 | 3.36 | 0.47 |        |        |
| Effort Expectancy        | ELIS       | 55 | 3.51 | 0.56 | -0.248 | 0.805  |
|                          | ELIH – MoD | 64 | 3.53 | 0.41 |        |        |
| Social Influence         | ELIS       | 55 | 2.75 | 0.68 | -0.125 | 0.900  |
|                          | ELIH – MoD | 64 | 2.76 | 0.61 |        |        |
| Facilitating Conditions* | ELIS       | 55 | 3.58 | 0.47 | 2.326  | 0.022* |
|                          | ELIH – MoD | 64 | 3.37 | 0.51 |        |        |
| Hedonic Motivation       | ELIS       | 55 | 3.41 | 0.54 | 0.788  | 0.433  |
|                          | ELIH – MoD | 64 | 3.32 | 0.59 |        |        |
| Habit                    | ELIS       | 55 | 3.10 | 0.69 | 1.825  | 0.071  |
|                          | ELIH – MoD | 64 | 2.87 | 0.65 |        |        |
| Behavioral Intention     | ELIS       | 55 | 3.11 | 0.78 | 0.371  | 0.711  |
|                          | ELIH – MoD | 64 | 3.06 | 0.58 |        |        |
| Overall Questionnaire    | ELIS       | 55 | 3.29 | 0.47 | 1.191  | 0.236  |
|                          | ELIH – MoD | 64 | 3.20 | 0.38 |        |        |

Table 13 presents t-test results with significance set at  $\alpha = 0.05$ . No statistically significant differences were found between ELIS and ELIH–MoD students across most UTAUT2 dimensions (all  $p > 0.05$ ). The only significant difference was in Facilitating Conditions ( $t = 2.326$ ,  $p = 0.022$ ), with ELIS students reporting stronger perceptions of access and support ( $M = 3.58$ ) compared to ELIH–MoD students ( $M = 3.37$ ). Overall, students' perspectives toward ChatGPT are largely consistent across Foundation Year tracks.

### 7.2.4 Summary of Quantitative Results

The quantitative analysis conducted on 119 Saudi EFL university students indicates generally positive perceptions toward ChatGPT. Effort Expectancy ( $M = 3.52$ , 88.0%), Facilitating Conditions ( $M = 3.46$ , 86.5%), Performance Expectancy ( $M = 3.39$ , 84.8%), and Hedonic Motivation ( $M = 3.36$ , 84.0%) all fell within the Strongly Agree category. Behavioral Intention ( $M = 3.08$ , 77.0%) and Habit ( $M = 2.97$ , 74.3%) showed moderate agreement, while Social Influence ( $M = 2.75$ , 68.8%) was the weakest dimension. The overall mean of 3.22 (80.5%) reflects general acceptance, with ease of use and facilitating conditions emerging as

primary drivers.

### *7.3 Qualitative Results*

#### 7.3.1 Introduction

This section presents a thematic analysis of semi-structured interviews with four Saudi EFL first-year students (two from the Science track and two from the Health track), conducted to explore students' perceptions of ChatGPT as a writing support tool in depth, particularly regarding its benefits, challenges, and usage patterns, in relation to Research Questions 2 and 3. Each interview lasted approximately 12–15 minutes, was conducted in Saudi colloquial Arabic, and later translated into English, with full transcripts provided in Appendix B. The data were analyzed using Braun and Clarke's (2006) six-phase thematic analysis, guided deductively by the UTAUT2 framework (Venkatesh et al., 2012).

#### 7.3.2 Data Analysis Method: Thematic Analysis

The six phases of Braun and Clarke's (2006) thematic analysis were followed:

- Familiarization with the data through repeated reading of all four transcripts.
- Systematic generation of initial codes capturing both frequently mentioned concepts and distinctive individual perspectives.
- Searching for themes by grouping related codes, guided by the UTAUT2 constructs while remaining open to emergent patterns.
- Reviewing candidate themes for internal coherence and meaningful distinction.
- Defining and naming each theme with reference to the relevant UTAUT2 construct where applicable.
- Producing the final report with supporting evidence from participants' responses.

The deductive orientation ensured alignment with the quantitative phase, facilitating methodological triangulation.

#### 7.3.3 Coding Process

The coding process involved systematic, line-by-line analysis of all four transcripts to identify recurring patterns alongside distinctive individual insights. Both descriptive codes, which summarized the content, and interpretive codes, which captured underlying meanings, were applied. Key codes included idea generation, paraphrasing, grammar and vocabulary support, organization of writing, learning through corrections, time efficiency, reduced procrastination, emotional support, and increased confidence. At the same time, several challenges were identified, such as overly verbose responses, advanced vocabulary beyond students' proficiency, uncertainty about accuracy, lack of topic specificity, and unnatural tone. Additional concerns included overreliance, copying without understanding, the need for institutional guidelines, the desire for eventual independence, and the continued importance of teachers. These codes were then organized into five overarching themes.

### 7.3.4 Identified Themes

Five themes were identified through deductive thematic analysis, corresponding to the UTAUT2 constructs measured in the quantitative phase while also capturing emergent concerns not addressed in the questionnaire. Table 14 presents the thematic structure. The following sections present each theme with interpretive commentary and representative evidence from the interview data.

Table 14. Themes and Subthemes from Semi-Structured Interviews

| Theme  | Description   | Subthemes  |
|--|---|--|
| Performance Expectancy: Writing Improvement  | Students described ChatGPT as improving writing quality and efficiency. | Grammar correction; improved vocabulary; organizing ideas; higher-quality work                                   |
| Effort Expectancy: Ease of Use               | ChatGPT was perceived as easy to learn and use while writing.           | Quick idea generation; reduced effort; faster task completion; ease of starting                                  |
| Hedonic Motivation: Enjoyment and Confidence | Students reported positive emotional engagement and reduced anxiety.    | Enjoyment in exploring ideas; reduced writing stress; feeling supported  |
| Habit: Routine Integration                   | ChatGPT has become a regular part of students' writing process.         | Regular use; feels natural; emerging sense of reliance   |
| Challenges and Concerns                      | Students reflected on reliability issues, overreliance, and integrity.  | Uncertainty about correctness; overly general responses; concern about dependency; awareness of integrity issues |

#### 7.3.4.1 Theme 1: Writing Support and Quality Improvement (Performance Expectancy)

All four participants described ChatGPT as a valuable tool that enhances the quality of their academic writing through grammar correction, vocabulary improvement, sentence structure enhancement, and paragraph organization. This aligns directly with the performance expectancy construct, where 84.8% of questionnaire respondents agreed that ChatGPT improves their writing performance. Importantly, the interview data revealed that students engage actively with ChatGPT's feedback rather than passively accepting corrections. Student 1 described using ChatGPT's corrections as a learning mechanism, reviewing her errors and attempting to understand the underlying grammar rules. Student 2 reported asking ChatGPT to explain grammar rules — such as the distinction between “which” and “that” — rather than merely requesting corrections, suggesting a deliberate learning orientation. Student 3 highlighted how interaction with ChatGPT helped her understand the structural requirements of academic paragraphs, including topic sentences and supporting details. These accounts indicate that students use ChatGPT as a learning tool rather than simply a correction service:

- “□□□□□ □□□□□□ □□□□□ □□□□□ □□□□□□□□□□ □□□□ □□□□  
(1 tnedutS) ”□□□□□ □□□□□□—  
*“I have it correct my paragraph and I see my mistakes and learn from them.”*
- “□□□□□ □□□□□ □□ □□ □□ □□□□□ □□ □□□□□□ □□□□□□□□ □□□□□□” (Student  
2) —  
*“I asked ChatGPT to explain the difference and give me examples.”*
- “□□□□□□ □□□□□ □□ □□□□□□□ □□□□□□ □□□□□ □□□□□□□□ □□□□□□□□  
(3 tnedutS) ”□□□□□□□ □□□□□□ □□□□□□—  
*“Now I understand that a paragraph needs a topic sentence, supporting details, and a concluding sentence.”*

#### 7.3.4.2 Theme 2: Time - Saving and Ease of Writing (Effort Expectancy)

All participants emphasized that ChatGPT makes writing tasks easier and less time-consuming, corresponding with the effort expectancy construct (88.0% agreement in the questionnaire). The qualitative data revealed multiple dimensions of this perceived ease. Student 1 emphasized the speed of writing production, noting that she now completes paragraphs much faster than before. Student 2 highlighted the value of receiving immediate feedback, contrasting it with the delayed cycle of waiting for teacher corrections. Student 3 described a reduction in procrastination, explaining that knowing she can access ChatGPT for a starting point makes her more likely to begin assignments early. Student 4 emphasized how instant access to feedback reduces the overall cognitive burden of writing. These accounts suggest that effort expectancy extends beyond simple usability to encompass a broader reduction in the cognitive and emotional barriers to writing:

- “ □□□□□ □□□□□□ ...□□□□□ □□□□□ □□□ □□□□□ □□□□□ □□□□ □□□ □□□□  
(1 tnedutS) ”□□□□□ □□□□□—  
*“Before I would spend an hour on one paragraph... Now I can write faster.”*
- “□□□□□□□□ □□□□□□□□ □□□□□□. □□ □□□□□□ □□□□□□□□□□ □□□□□□  
(2 tnedutS) ”□□□□□—  
*“The feedback is immediate. I do not need to wait for the teacher to correct my work.”*
- “□□□□□□ □□□□□ □□□ □□□□□ □□□ □□□□□□□ □□□□□ □□□□□□□□ □□□□□□  
(3 tnedutS) ”□□□□□ □□□□□□□□—  
*“Now I know I can get help with the starting point, so I start my assignments earlier.”*

#### 7.3.4.3 Theme 3: Increased Confidence and Positive Writing Experience (Hedonic Motivation)

Participants reported increased confidence and reduced anxiety when using ChatGPT for writing tasks, reflecting the hedonic motivation construct (84.0% agreement). The interview data revealed that the positive emotional experience went beyond mere enjoyment to

encompass a fundamental shift in students’ relationship with English writing. Student 4 provided a particularly vivid comparison, likening ChatGPT to training wheels on a bicycle — a metaphor suggesting that the tool provides safety while the student remains the active agent. Student 1 described it as having a private tutor available at all times. Student 2 reported feeling less nervous and more confident knowing she could check her work before submitting. These metaphors and descriptions indicate that students view ChatGPT as a source of emotional support that enables them to engage with writing tasks they might otherwise avoid:

- “ □□□□□□ □□ □□□□□□ □□□□ □□□— □□□□ □□□□ □□ □□□□  
(4 tnedutS) ”□□□□□□ □□□□—  
*“Like training wheels on a bicycle – you feel safer, but you are still the one cycling.”*
- “□□□□ □□□□ □□□□□□ (1 tnedutS) ”□□□□□□ □□□ □□□□□□ □□□□□□—  
*“It is like having a private tutor available all the time.”*
- “رثكأ ققثب سح... لقا رتوتب سحأ ينيلخي” (Student 2) —  
*“It makes me feel less nervous... I feel more confident.”*

#### 7.3.4.4 Theme 4: Limitations and Trust Concerns

Despite generally positive perceptions, all participants reported notable limitations in using ChatGPT, complementing the quantitative findings by revealing concerns not fully captured in Likert-scale responses. Several categories of challenges emerged. First, students indicated that ChatGPT often produces responses that are overly long, too formal, or include vocabulary beyond their proficiency level, leading to a mismatch with their academic context; for example, Student 4 described a situation where a teacher recognized that a sentence did not match her level. Second, participants expressed doubts about accuracy, with Student 1 identifying factual errors in a science-related response and Student 2 noting that some grammar suggestions sounded unnatural. Third, Student 3 pointed out that ChatGPT can generate overly general content that does not always align with specific assignment requirements:

- “ (2 tnedutS) ”%001 □□□□ □□□□□□ □□□ □□□□□□ □□□□ □□ □□□□—  
*“Sometimes I am not sure if what it says is 100% correct.”*
- “□□□□□□ □□□□□□ □□□□ □□□□ □□□□□□□□ □□□ □□□□ □□□□□□ □□ □□  
(4 tnedutS) ”□□□□□□□□ □□□□□—  
*“It gave me a sentence structure that the teacher said was correct but not appropriate for our level.”*
- “□□□□□□□□ ”□□□□□□ □□□ □□□□□□ □□ □□□□ □□□□□□□□ □□□□  
(Student 3) —  
*“Sometimes it gives general information not exactly related to my topic.”*



evident across key UTAUT2 constructs, where high scores for Performance Expectancy ( $M = 3.39$ , 84.8%), Effort Expectancy ( $M = 3.52$ , 88.0%), Hedonic Motivation ( $M = 3.36$ , 84.0%), and Facilitating Conditions ( $M = 3.46$ , 86.5%) were supported by qualitative insights highlighting improvements in writing skills, reduced effort, increased confidence, and ease of access.

Complementarity emerged for Behavioural Intention ( $M = 3.08$ , 77.0%) and Habit ( $M = 2.97$ , 74.3%), where moderate quantitative results were enriched by qualitative evidence of students' self-regulated use, indicating that continued use does not necessarily imply uncritical reliance. Divergence was observed in Social Influence ( $M = 2.75$ , 68.8%), where qualitative data showed that while initial exposure came through peers, sustained use was driven more by perceived usefulness than social pressure.

Additionally, the qualitative findings extended the model by revealing limitations not captured quantitatively, including concerns about accuracy, language appropriateness, and lack of institutional guidelines. Together, these findings provide a comprehensive understanding of how Saudi EFL students engage with ChatGPT in writing contexts.

## **8. Discussion**

### *8.1 Introduction*

This part synthesizes the quantitative and qualitative findings presented in Chapter Four and interprets them in relation to the UTAUT2 framework (Venkatesh et al., 2012), Learning Autonomy theory (Benson, 2013), and existing research on AI-assisted writing in EFL contexts. The discussion is structured around the seven UTAUT2 constructs, followed by an examination of qualitative themes that extend beyond the scope of the survey data. The chapter concludes with a critical discussion of the study's limitations.

### *8.2 Performance Expectancy*

Performance expectancy emerged as one of the strongest constructs ( $M = 3.39$ , 84.8%), indicating that students perceive ChatGPT as a meaningful tool for improving their writing. This finding aligns with previous research by Strzelecki (2023) and Sobaih et al. (2024), both of which identified performance expectancy as a key driver of ChatGPT adoption. However, the qualitative data provide deeper insight into how this perceived usefulness is enacted in practice. Rather than using ChatGPT solely for correction, students demonstrated active engagement with its feedback. For example, Student 1 reported reviewing grammar corrections to understand underlying errors, while Student 2 sought explicit explanations of rules—such as the distinction between “which” and “that”—and retained these for future use. Student 3 highlighted improvements in understanding paragraph structure, including topic sentences and supporting details, reflecting patterns also noted by Yan (2023) and Barrot (2023).

From the perspective of Learning Autonomy theory (Benson, 2013), such behaviors indicate emerging self-directed learning, as students critically engage with feedback and integrate it into their developing competence. At the same time, variation in engagement across

participants and the small sample size suggest that these patterns should be interpreted cautiously. Notably, students' examples—such as correcting “I am agree” to “I agree” or learning paragraph organization—point to incidental, context-based learning facilitated by interaction with ChatGPT. This aligns with Hyland's (2019) emphasis on the effectiveness of contextualized feedback in writing development, particularly for foundation-year students who benefit from feedback embedded in their own work.

Overall, performance expectancy in this context reflects more than a general perception of usefulness; it encompasses specific, experience-based improvements in writing practices. Students' ability to articulate learned rules, describe structural changes, and reference saved feedback demonstrates a level of active engagement that extends beyond passive use, offering practical implications for integrating ChatGPT into EFL writing instruction.

### *8.3 Effort Expectancy*

Effort expectancy emerged as the strongest construct in the study (88.0%), confirming its central role in students' acceptance of ChatGPT. This aligns with prior findings by Strzelecki (2023) and Sobaih et al. (2024), as well as the broader technology acceptance literature, where ease of use has consistently been a key predictor of adoption (Davis, 1989). However, the qualitative findings extend this understanding beyond interface usability.

Students described how ChatGPT reduces the overall burden of writing in multiple ways. Student 1 highlighted increased writing speed, while Student 2 emphasized the advantage of immediate feedback compared to delayed teacher responses. Student 3 noted that access to ChatGPT reduces procrastination by making it easier to begin tasks, and Student 4 explained that instant grammar support allows her to focus more on content rather than worrying about errors. These insights suggest that effort expectancy in an EFL context involves not only ease of use but also reductions in cognitive load, emotional stress, and motivational barriers associated with writing in a second language.

This expanded interpretation indicates that the traditional conceptualization of effort expectancy in UTAUT2 may not fully capture its role in educational settings. In EFL writing, effort encompasses cognitive, emotional, and motivational dimensions, not just technical usability. The findings therefore highlight the need for more context-sensitive measures of effort expectancy in future research, particularly in studies involving AI tools in language learning environments.

### *8.4 Social Influence*

Social influence emerged as the weakest construct (68.8%), with even encouragement from professors falling into the Disagree category (61.3%), indicating that students are not adopting ChatGPT due to external pressure but rather through personal experimentation and perceived usefulness. The interview data reinforced this pattern: while students were initially introduced to ChatGPT through peers, their continued use was driven by individual experience rather than social expectations. This finding contrasts with UTAUT2 assumptions (Venkatesh et al., 2012), which position social influence as a key driver of adoption, but aligns with Mogavi et al. (2023), who similarly found that personal utility outweighs social

pressure in sustained engagement.

Importantly, the low influence of social factors also reflects a lack of institutional guidance. Students reported uncertainty about appropriate use and expressed a clear desire for clearer university policies and support. This highlights not only a gap but also an opportunity: as Chan and Hu (2023) suggest, institutions should develop structured guidance for responsible AI use. The fact that students are actively seeking such direction indicates a critical window for universities to shape effective and ethical ChatGPT use before unproductive habits become established.

### *8.5 Facilitating Conditions*

The strong facilitating conditions scores (86.5%) confirm that students at KAU have the access, knowledge, and technical support needed to use ChatGPT without difficulty. This was also the only construct where a statistically significant difference emerged between Foundation Year tracks ( $p = 0.022$ ), with ELIS students reporting slightly stronger perceptions of access compared to ELIH–MoD students. In the interviews, no participant mentioned any technical barrier, which is consistent with ChatGPT’s free availability and simple conversational interface.

One point worth noting, however, is that these results reflect the context of KAU specifically — a large, well-resourced university in Jeddah where students have good internet access and personal devices. It cannot be assumed that the same would be true at every Saudi university, especially smaller institutions or those in less urban areas. Students at less well-resourced institutions, or those with limited personal access to digital devices and reliable internet connectivity, may face facilitating conditions that significantly constrain their ability to engage with ChatGPT. This is something future research should consider.

### *8.6 Hedonic Motivation*

Hedonic motivation showed a high level of agreement (84.0%), indicating that students associate ChatGPT use with positive emotions. However, the qualitative data reveal a deeper effect beyond simple enjoyment. Students described a shift in their emotional relationship with writing in English. For example, Student 4 likened ChatGPT to “training wheels on a bicycle,” emphasizing support without replacing effort, while Student 1 described it as a “private tutor,” highlighting continuous guidance. These accounts suggest that ChatGPT provides emotional reassurance that reshapes how students approach writing tasks.

This finding is significant given that writing anxiety is a known barrier for EFL learners (Hyland, 2019). Consistent with Meniado (2023), ChatGPT’s non-judgemental nature creates a low-pressure environment for experimentation. The present findings extend this by showing that reduced anxiety leads to observable behavioral changes, such as starting assignments earlier, reducing procrastination, and engaging more willingly with writing tasks, which may positively influence long-term development.

However, a potential limitation arises from the possibility of emotional dependence. If students’ confidence becomes tied to the availability of ChatGPT, their performance in

contexts where it is unavailable, such as exams, may be affected. This issue was not directly examined in the study and represents an important direction for future research.

### *8.7 Habit and Behavioral Intention*

The moderate scores for habit (74.3%) and behavioral intention (77.0%) suggest that, although students hold generally positive attitudes toward ChatGPT, their use is not uncritical or fully habitual. Rather than indicating dependence, these results point to a measured and reflective engagement with the tool.

The qualitative data provide important clarification. All participants demonstrated awareness of the risks of overreliance and described concrete strategies to manage their use. For example, Student 2 reported writing initial drafts independently before consulting ChatGPT, while Student 4 emphasized actively understanding corrections instead of passively accepting them. Student 3 expressed a longer-term goal of achieving independence from the tool, viewing it as temporary support rather than a permanent solution.

From the perspective of Learning Autonomy theory (Benson, 2013), these practices reflect metacognitive awareness and self-regulated learning, as students consciously monitor and direct their use of ChatGPT. At the same time, it is important to acknowledge that interview responses may reflect socially desirable behavior, and actual practices may vary in real contexts.

### *8.8 Limitations and Trust Concerns: Beyond UTAUT2*

This theme, which emerged only from the qualitative data, represents one of the most significant contributions of the study. All participants identified concrete, experience-based limitations of ChatGPT, including the use of overly advanced language, factual inaccuracies, unnatural phrasing, and overly general responses that do not align with specific assignment requirements. For instance, Student 4 described a situation where her teacher recognized that a sentence exceeded her proficiency level, while Student 1 reported encountering factual errors that required external verification. These concerns are consistent with documented limitations of AI chatbots (Tlili et al., 2023).

Importantly, these issues highlight a theoretical gap within the UTAUT2 framework, which does not account for factors such as trust, accuracy, or pedagogical appropriateness. The findings suggest that applying UTAUT2 to educational AI contexts may require extending the model to incorporate these dimensions, supporting arguments by Chan and Hu (2023) for more education-specific adaptations of technology acceptance models.

### *8.9 Limitations of the Study*

This study has several limitations that define its scope. The quantitative sample (N = 119) was drawn from a single institution using convenience sampling, limiting generalizability. The qualitative phase included only four participants, which, while appropriate for an explanatory sequential design (Creswell & Plano Clark, 2018), restricts the diversity of perspectives. Data collection, transcription, and translation were conducted by the researcher, which may affect credibility despite the use of member checking. There is also a potential for

social desirability bias, and the deductive thematic analysis guided by UTAUT2 may have limited the emergence of alternative themes. Additionally, the study relied on self-reported perceptions without incorporating objective measures of writing performance, and the use of a four-point Likert scale may have influenced response patterns.

Finally, the study was conducted during a rapidly evolving stage of AI development, meaning that both the technology and students' perceptions may change over time. This highlights the need for ongoing research to capture developments in AI use within educational contexts.

## **9. Summary of Key Findings**

This study examined Saudi EFL university students' perceptions of ChatGPT as a writing support tool using a mixed-methods design grounded in UTAUT2 (Venkatesh et al., 2012). Survey results from 119 students indicated generally positive attitudes (80.5%), with high ratings for ease of use (88.0%), facilitating conditions (86.5%), performance expectancy (84.8%), and hedonic motivation (84.0%). Behavioral intention (77.0%) and habit (74.3%) were moderate, suggesting balanced use rather than full dependence, while social influence was the lowest (68.8%), indicating self-directed adoption.

Qualitative interviews confirmed these patterns and provided deeper insights. Students reported active learning from feedback, reduced anxiety, increased confidence, and the development of self-regulation strategies. They also identified limitations such as accuracy issues, advanced language, and generic responses, alongside a clear need for institutional guidance. Integration of findings showed convergence across most constructs, complementarity for habit and intention, divergence in social influence, and an extension through limitations not captured by UTAUT2.

The study contributes to the literature by offering context-specific evidence from Saudi EFL learners, employing a robust mixed-methods approach with systematic triangulation, and highlighting the need to extend adoption models to include factors such as trust and pedagogical appropriateness.

## **10. Implications for EFL Pedagogy**

Based on the findings, four key implications emerge for EFL writing pedagogy. First, prohibiting ChatGPT is unlikely to be effective, as students are already using it due to its clear benefits. Instead, programmes should integrate it in a structured way, guiding students to use it as a learning tool—for example, by encouraging explanation-seeking and critical comparison rather than passive reliance. Second, there is a clear need for institutional guidelines. Students expressed uncertainty about acceptable use, highlighting the importance of practical policies that distinguish between appropriate support (e.g., grammar checking) and academic misconduct.

Third, ChatGPT presents an opportunity to foster metacognitive and autonomous learning skills. Students' self-regulation strategies—such as drafting independently, reflecting on feedback, and gradually reducing reliance—can be explicitly supported and modeled by instructors. Fourth, assessment practices need to evolve. Traditional take-home assignments

may no longer accurately reflect student ability; therefore, a combination of in-class writing, process-based assessment, and reflective tasks on AI use can provide a more valid evaluation of learning. Together, these implications emphasize the need for pedagogical adaptation that balances innovation with academic integrity.

## 11. Recommendations for Future Research

Several directions for future research emerge from this study. Longitudinal designs are needed to move beyond the current cross-sectional snapshot and examine how students' perceptions, usage patterns, and self-regulation strategies evolve over time, particularly in response to increased experience and changing institutional policies.

Expanding the sample to include students from multiple Saudi universities and varying proficiency levels would improve generalizability. Experimental studies incorporating objective measures of writing quality—before and after ChatGPT use—are also essential to complement self-reported data and provide stronger evidence of its impact on writing development.

Further qualitative research with larger samples and inductive approaches could uncover themes beyond those captured by UTAUT2. Including instructors' perspectives would add an important dimension currently missing, and cross-cultural comparisons would help distinguish context-specific findings from more universal patterns in EFL students' engagement with AI writing tools.

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