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Students' learning in the time of Artificial Intelligence (AI): Students' perceptions of using AI tools to improve their language learning in Kuwait

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Research Article

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Abstract

Background/purpose. There is an ongoing debate on the potentiality of using AI for educational purposes, ranging from some optimistic views that anticipate AI to continue changing the interface of language education on one side, to a more cautious camp questioning the efficacy of the issue. As a significant group of stakeholders in the educational enterprise, students should be considered central to this debate, as any potential changes in the educational plans and policies will have a direct impact on their learning outcomes.

Materials/methods. This study examines how students perceive tools of artificial intelligence to guide their language learning experiences in the Kuwaiti context. The quantitative approach was employed in this research, where students from the Public Authority of Applied Education and Training (PAAET) in Kuwait participated in the study by completing a questionnaire concerning what they think of AI as a learning toolkit. Findings indicate that inferences about learners' technological aptitudes should not readily be accepted by members of academic institutions and that learners' perceptions provide valuable insights in this matter.

Results. The study uncovers some interesting findings on the realms of the importance of learner technological readiness, reliance on AI as an exclusive source of education, the social aspects of the learning process, and some ethical issues concerning trust and security.

Conclusion. The study attracts attention to the value of learners' perceptions in the transition to a digitally geared educational environment. It underscores the need for a prudent approach to integrating AI in teaching and learning experiences. This is why decision-makers need to engage in a careful appraisal of the role AI currently plays and can play in the future.

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1. Introduction and Literature Review

The use of AI tools has been widely introduced in myriad life aspects, including business, industry, and health (Baker & Smith, 2019; Kelly et al., 2023), and the educational field provides no exception to this argument (Annamalai et al., 2025; Baker & Smith, 2019; Luckin et al., 2016; Pedró, 2020). In the field of education, the way AI is changing the interface of teaching and learning can hardly be contested. Methods of employing AI in education have been identified in the literature in relation to the three groups of stakeholders in the educational setting: 'learner-facing, teacher-facing, and system-facing' (Baker & Smith, 2019, p. 11). More and more educators are currently incorporating AI into the configuration and implementation of their teaching plans to facilitate greater language exposure opportunities for their learners. From using advanced grammar-correcting and paraphrasing tools to using chatbots as a form of language practice tools and smart applications to generate educational texts, educators worldwide are exploring how they can make their instruction more effective and less time- and effort-consuming. In relation to the regulation and management of education, AI uses tools and analysis of human biometrics for purposes of identity certification and geolocation tracking, while some contexts, such as Taiwan, go the extra mile of using smart eye-tracking devices during online examination periods (Bax & Chan, 2019; Southgate, 2020). With the help of AI, virtual assistants can also help in providing efficient administrative services to larger numbers of students. The easier access to shared databases additionally facilitates easier research collaborations and makes data more accessible to members of different departments in academic settings.

Adopting AI for educational purposes can be seen as advantageous in multiple ways. As stated by Zhu (2022, p. 2), AI-generated media has the potential to 'create teaching situations' that can cater to the fundamental tenets of language instruction in more practical ways. First, AI contributes to the establishment of a more inclusive educational environment (White, 2022). Using features such as voice-activating commands, electronic dictation, image and lip-reading recognition and smart control systems, AI can help people with visual, sensory, hearing, and physical challenges to attain the maximum amount of autonomy in their learning journeys and ensure higher levels of inclusivity and engagement (Trewin et al., 2019; White, 2022). Such a surge in the adoption of diverse technological channels for educational purposes mandates teachers and institutional managers, being 'technological immigrants', to strive towards incorporating technology in ways that align with the propensities of learners of younger generations, who are mostly seen as 'technological natives' (Kirovska-Simjanoska, 2021). This is also because the modern scenarios in which learners may find themselves after graduation are very likely to involve using some forms of smart technologies in the professional contexts in which learners would potentially find themselves.

Researchers such as Pedró (2020) have similarly highlighted the benefits of incorporating AI into the educational context. By targeting learners' differing needs and expectations, AI can chiefly contribute to preparing learners for their future professional careers (Fang et al., 2021). In general, AI can contribute to facilitating more learning opportunities by making learning more accessible to more significant numbers of learners (Baker & Smith, 2019). Similarly, Annamalai (2025) found a strong positive relationship between students' use of generative AI tools and the enhancement of their sense of autonomy.

Additionally, AI can help address different levels of goal achievement by sketching personalized learning pathways that suit their proficiency levels, ultimately mitigating the impact of the challenge of mixed ability classes and reduced outcome quality. In models of personalized learning, intelligent digital systems are used to categorize learners according to their proficiency levels and assign suitable tasks to allow them to achieve intended outcomes at their own pace (Luckin et al., 2016). AI also has strong potential in forecasting educational scenarios for learners and, consequently, proposing ways to improve. Using features of data analytics and mining, as explained by Southgate (2020), AI can

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guide the learners' academic journeys and avoid potential pitfalls that might risk their learning outcomes. Nonetheless, this must be guided by 'human judgement to interpret and act on analytics in teaching contexts' (Southgate, 2020, p. 6), adding a sense of rational evaluation to individual situations.

Despite the aforementioned benefits, the success of AI use in education is often contingent on some important factors, amongst which are the teachers' and learners' level of competency in technology and language. As proposed by Raffaghelli et al. (2022, p. 11), 'While AI might generate high expectations, its role and integration within the educational practice (in particular) and human activity (in general) might be overestimated. ' As further explained by Southgate (2020), AI can be used as a knowledge-providing, scaffolding, and assessing tool. For teachers, AI can be used to accelerate and enhance their learners' knowledge attainment experience. For learners, AI can be seen as an open and accessible platform for learning, knowledge search, and language practice. If teachers and/or learners are not competent enough in using technology such as in the examples of Raffaghelli et al. (2022) and Wang et al. (2023), AI can be a hindering, rather than being an assisting factor. According to Wang et al. (2023) for example, being a generally digitally literate user does not mean being AI-literate by default; therefore, treating such scenarios as aligned, whether by teachers or learners, can lead to problematic assumptions during its application in the classroom. This explains the multiple calls from researchers such as Jin et al. (2025, p.9) for a 'structured approach to understanding and harnessing the benefits and challenges', in which crucial factors like 'institutional infrastructures and staff skills' are critically appraised and addressed.

Despite their staggering popularity in educational contexts nowadays, AI still lacks significant aspects that cannot fully replace conventional educators yet. Technological application is now rapidly growing in the field of education (such as the human-like tutor discussed by Luckin et al. (2016) and Wang et al. (2024). Although some might think that the use of AI can pragmatically mitigate some problematic issues such as the growing number of students, burden on classes, campus facilities and infrastructure, as well as the consequential financial burden, it is probably still too soon to envision the educational context as solely operated and run by the means of AI. Norton & Toohey (2011, p. 414) state that learners are 'situated in a larger social world' which is complex, fluid, and everchanging. According to Chan & Tsi (2023), the emotional and cultural aspects seminal to the social world described by Norton & Toohey are still lacking in the AI world, which poses a serious challenge when relying exclusively on it as a sole source of learning. In other words, 'Education is too complex to be reduced solely to data analysis and algorithms' (Pedró, 2020, pp. 72-73). Therefore, it is difficult to think that solutions to predicaments related to the complexity of the teaching and learning environments, including its interrelated cognitive, social, psychological, and interactive aspects, can simplistically be reduced to sets of fixed data and their interpretations. The fact that AI still lacks these aspects limits its ability to empower its users and enable them to attain necessary skills to successfully interact with other individuals while using the language. Schroeder and Gotch (2015) state that AI is still used as a source to offer information to its users. This, as extended by Schroeder & Gotch, needs to be supported by higher-order thinking skills such as critical thinking and problem-solving to achieve up-to-date learning outcomes. As such, it is wisely logical to consider AI tools as a helping factor or a 'learning companion' (Southgate, 2020, p. 5) rather than a domain that will take over the educational enterprise and replace human teachers. Additionally, and as implicated by Francis et al. (2025), despite the numerous advantages of using AI for educational purposes, educators' attempts to integrate it into their educational experiences should not come at the cost of important factors to consider such as innovation and integrity.

Another angle in this realm is related to the field of assessment and feedback. The literature highlights the virtue of using AI as an automated assessment tool to save teachers' time and effort and to involve learners in peer assessment and grant them the opportunity to actively engage and

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learn from their peers' errors as well as theirs. Use of AI to detect plagiarism is growing among academic staff in higher education (Steponenaite & Barakat, 2023). On the other hand, the affective aspect of assessment and feedback providing, which lies in the 'hidden messages' examined by Hyland (2013, p. 180) in the provided feedback, is still limited in this domain and cannot be used for all kinds of assigned learning tasks. Although such hiatus has motivated the emergence of emotional AI which studies the emotional aspects of the teaching and learning experiences through methods such as eye and head tracking or study of facial gestures, all compared to large stored data sets, this field is still seen as being at its inception stages and requires further and critical consideration of ethical and feasibility matters (Liu, 2024; McStay, 2020).

Additionally, critical issues of ethics, trust, and discrimination should also be tapped into when discussing the use of AI in education. First, and ascribed to generational purposes, there is a high tendency among younger generations to trust the 'human-like' capacities of AI (Amoozadeh et al., 2024; Choung et al., 2023). However, as explained by Southgate (2020, p. 15), 'Too often there is too much trust in technology', and this trust should be contended, critically reflected upon, and directed by educators towards what brings benefit to the learning outcomes. However, the teachers' readiness to successfully incorporate technology into their teaching is debatable (Milad & Fayez, 2024). If educators themselves lack the technological literacy that enables them to safely and effectively guide their learners' learning experiences, then the learning process becomes at risk of misinformation and/or oversimplification of knowledge. Therefore, and as expressed by Kanber et al. (2025), providing the channels and resources through which teachers and learners can develop their technological experiences is seminal to the transition to a digital educational environment.

Additionally, due to its prevalence in all sectors of today's life, ethical guidelines should be introduced to the teachers' awareness to ensure that the use of AI does not come at the expense of safety and fairness (Choung et al., 2023). This is because, on the one hand, the current global scenario considers technology to be a mandate rather than a luxury. On the other hand, while AI adoption promises more inclusivity and a fair chance of better education attainment by providing 'an Eton quality teacher for all', there are still doubts about whether people of better economic capital hold better chances of exposure to AI resources (Reiss, 2021; Southgate, 2020). This issue is persistent because although governments are trying to establish a solid infrastructure to facilitate the use of AI in a way to maintain fairness in its attainment and use, the fast-paced, constantly changing interface of the global technological scenario is proposing a challenge to achieve this mission, making governmental policies in constant need for update and review (Choung et al., 2023; Southgate, 2020). This poses a challenge for governmental and institutional policies to guarantee that accessibility and awareness raising to AI is fair to all societal sectors and that no sectors are being marginalized in this domain. In order to reap maximum benefit from an AI-driven educational experience, it is compulsory that all active members in such experience, whether teachers or learners, receive necessary training to deal with the advent and complexity of technology (Raffaghelli et al., 2022).

The Kuwaiti educational context is not far from the abovementioned advantages and challenges. A quick look at the AI in this context provides an important inference; most of the research conducted on this topic was concerned with the views of the teachers. Ultimately, research in this area highlighted some key points hindering the AI incorporation in teaching and learning: equal access to necessary resources, lack of teacher and learner training opportunities, as well as the learners' tendencies to over rely on teachers as an exclusive source of knowledge providing (Alenezi, 2024; Alshammari & Al-Enezi, 2024; Al Shuraiaan et al., 2024; Milad & Fayez, 2024). Chiefly, researchers in this realm argue that the inadequate technological aptitudes of teachers make the transition to the incorporation of AI a difficult task for both themselves and their learners. This, in turn, requires the academic administrations to be more mindful of introducing constant technological training to facilitate this transition.

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Bearing in mind this astounding impact of technology on the educational enterprise, it is crucial to gauge the expectations, views, and extent of acceptance of the relevant actors in these scenarios to stand on the points of strength for reinforcement and weakness for rectifying. Therefore, the effects of the abovementioned arguments will be scrutinized by exploring the views of the learners towards the use of AI to boost their educational endeavours in the yet-to-be-explored Kuwaiti context to provide insight into its contextual intricacies and stand on points where learners' views correspond or diverge with their counterparts in other contexts.

2. Theoretical Framework

The Unified Theory of Acceptance and Use of Technology, UTAUT (Venkatesh, 2003), was employed in the current research for several reasons. This theory has proved its usefulness in multiple disciplines, amongst of which is the field of teaching and learning (Hoi, 2020). User acceptance can be understood as 'the behavioural intention or willingness to use, buy, or try a good or service'. (Kelly et al., 2023, p. 2). As indicated by Kelly et al. (2023), the construct of acceptance can be a crucial 'predictive measure' that can facilitate their acquisition, decision to adopt certain technologies, and consistency in using these technologies to improve their learning.

Drawn from a systematic appraisal of eight previous models of user acceptance, the theory consists of four main constructs: performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC). As interrelated constructs, they all contribute to the determination of a person's readiness to accept and use AI technologies in their learning journeys. These constructs are regulated by four other factors which are considered as significant shapers of individuals' acceptance in this theory: age, gender, experience, and voluntariness of use. The latter four factors exert influence on all four theoretical constructs of UTAUT. Each of the four main theoretical constructs refers to the following:

1. Performance Expectancy (PE): stands for the extent to which an individual believes that AI can help them achieve the intended mission or task. In the context of the current research, it depicts the learners' beliefs about the relationship between their use of AI tools and improvements in their English language proficiency levels.

2. Effort Expectancy (EE) stands for the extent to which an individual believes that using AI is easy for them to achieve the intended mission or task. In the current research, EE refers to learners' beliefs about their ability and degree of ease in dealing with AI tools while learning English.

3. Social Influence (SI): stands for the extent to which an individual believes that the surrounding important others (i.e. on academic or personal levels) value AI to achieve a specific goal. In the current research, SI seeks to explore whether the significant others surrounding learners influence their intention and actual use of AI, and whether they encourage them to use these tools while learning English.

4. Facilitating Conditions (FC): stands for the extent to which an individual believes that they have the relevant resources and support to use AI for their intended mission. In the current study, this construct refers to the learners' beliefs of whether they have the resources and support they need to achieve their learning improvement, whether this support is institutional or personal.

The theory of UTAUT has been used significantly in the field of education. For example, Abbad (2021) explored students' intentions and actual use of E-learning resources in their Jordanian context, which provided valuable insights that benefit institutional policymakers regarding the integration of E-learning in their context. In the platform of LMOOCs, Hsu (2023) found that beliefs about effort, ease of use, and motivation were more significant than beliefs about performance expectancy. Exploring the degree of acceptance of the use of ChatGPT for learning English among university

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students, Strzelecki (2023) and Tu and Hwang (2023) pinpointed positive views of exploiting such tools for language learning for features of consistency, accessibility, flexibility, and diversity of tasks.

Surprisingly, in the study of Huang et al. (2023), the facilitating conditions were not found to be a significant factor directly impacting technology adoption amongst Chinese teachers of ethnic minority backgrounds. As proposed by Huang et al. (2023), when teachers realized the significance of using technology to equip their students with the necessary knowledge of successful communication and were guided by their management to do so, teachers demonstrated readiness to deal with the obstacles imposed by their current realities. As further explained by the authors, this occurs in light of teachers' acknowledgement of the institutional endeavours to incorporate more technological tools to help them achieve their mission, even if it meant using the most basic forms of technology.

Using AI as a predictive tool, Raffaghelli et al. (2022) used the UTAUT model to explore the students' views of the interventionist early warning system in their academic institution, both before and after using the system. Used for tracking the conceptional and behavioural changes in these two phases, the researchers detect the discrepancies in the pre and post usage phases, meaning that while students in the pre-usage phase held positive beliefs about the role and influence of the system in their academic journeys, these beliefs were less positive after their actual exposure to the system. The researchers ascribe this to reasons such as the lack of technological readiness and lack of students' interactive engagement with the system. This study also unfolds an interesting finding; while the social influences construct was a significant factor impacting students' acceptance of technology in their educational experiences in studies such as Abbad (2021), Hoi (2020) and Strzelecki (2023), this factor appeared to be insignificant in the study of Raffaghelli et al. (2022) which was ascribed by the researchers for reasons such as the mode of instruction (a fully online instruction), leading to less interaction with peers and teachers.

The UTAUT theory offers valuable potential for exploring learners' perspectives on AI use for language learning. As such, this study employs its key constructs to delve into the perceptions of Kuwaiti learners and pinpoint the factors directing their engagement with AI tools for educational purposes.

3. Methodology

Based on the review of the literature of the investigated domain, this research is conducted to explore the following research questions:

- How do students in the investigated context perceive using AI tools for language learning purposes?
- What factors influence the adoption and use of AI tools for language learning among students in the investigated context?

Sampling

The research employs a quantitative approach to address large numbers of the targeted population, strengthening generalizability and comparability of the generated data. This is in addition to the suitability of the selected approach to the posed research questions. The survey was set up on surveymonkey.com and sent to students from the Public Authority of Applied Education and Training (PAAET) in Kuwait, and a total of 545 students returned answered surveys across the summer course of 2023-2024 and the first semester of 2024-2025. A total of 436 students returned completed surveys, making an 80.0% completion rate. A total of 501 returned partially completed surveys, constituting a 91.9% response rate. Therefore, 44 surveys were removed entirely from the data set. With this response rate, the completion rate becomes 87.0% (436/501).

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3.1. Sampling

Convenience sampling was adopted for recruiting participants with no required selection criteria except being a student at PAAET at the time of data collection. The research sought to recruit only PAAET students to examine their acceptance of the use of AI in a more contextualized manner. More specifically, the differing conditions and individual natures of PAAET students from students in other contexts, such as their peers in private vocational colleges, were considered when deciding to determine the targeted population for this research (Norton & Toohey, 2011). As such, any student at PAAET qualifies as a potential participant in the study, and they are all given a fair chance to participate based on their preference and willingness.

The students attempted to complete the questionnaire electronically through their mobile phones. They were given A brief explanation about the idea of the research, and their approval to participate was obtained. Participation was utterly anonymous to maintain a comfortable experience for the participants while attempting the questionnaire.

3.2. Data collection and analysis

The questionnaire comprises six sections: Demographics, Effort Expectancy, Performance Expectancy, Social Influences, Attitudes toward AI, and Facilitating Conditions, comprising 36 items in total. A 5-point Likert scale was used.

The model introduced by Venkatesh (2003) was used for data collection after a thorough study of the research employing this model in different contexts. An open-ended space was added to some items as an optional space for participants to further clarify. The tool has been modified to suit the conditions of the current context. In the section of the social influences for example, rather than the general questions such as “People who influence my behaviour think that I should use the system”, the questionnaire in the current study provides more detailed questions about the different groups of stakeholders surrounding the learners such as peers, senior students, teachers and the general academic institution. This modification came after a comment made in the piloting phase, questioning the groups of people who might influence one’s behaviour. The students’ approvals for participation were obtained, and they were given the chance to withdraw from participating at their own convenience. This is in addition to obtaining the approval of the head of the department at the college where the investigation is being conducted.

4. Results and discussion

As shown in Figure 1, the UTAUT model used in this research consists of four main constructs: performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC). To address the research questions, the current research measures one more factor; namely, attitudes towards using AI (ATT). See Figure 1.

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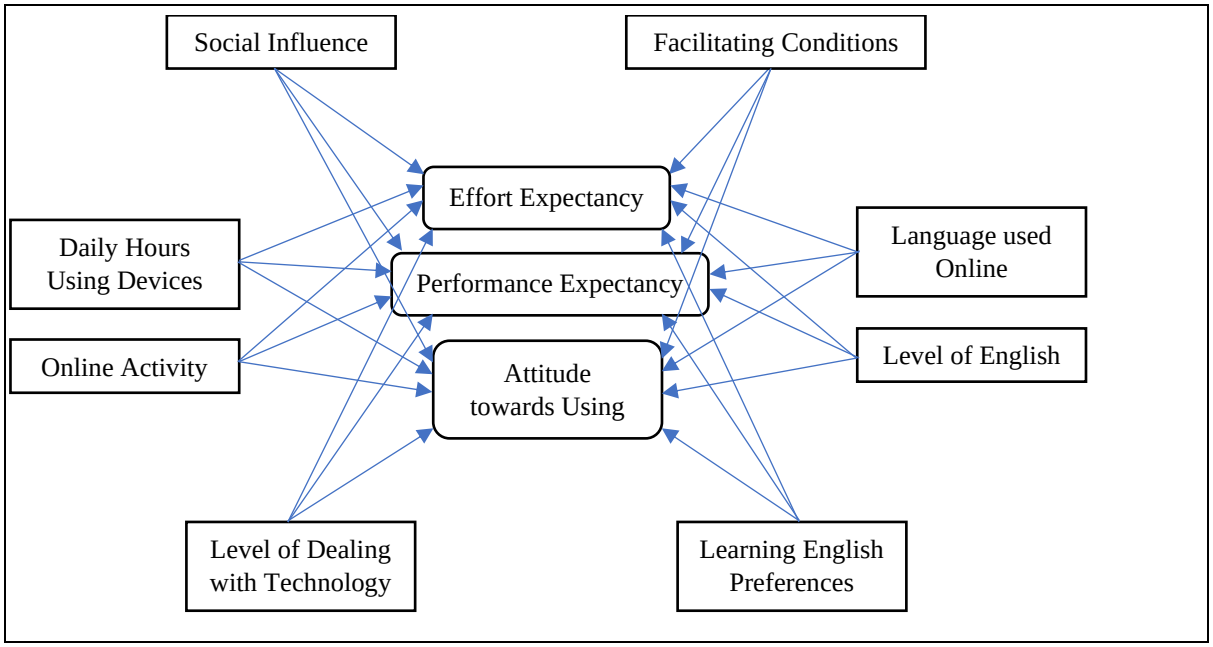
Figure 1. Theoretical Framework (Created by the Researcher)



A multivariate analysis approach was employed to test the hypothesized theoretical framework. The analysis begins with an evaluation of the psychometric properties of the research instrument, by conducting reliability analysis and confirmatory factor analysis (CFA). Descriptive statistics will be presented to provide an overview of the sample characteristics, including demographic information, as well as sample key variables. Statistical tests were conducted using IBM SPSS Statistics 27 software, and SPSS AMOS 24 was used to perform the validity procedure using CFA.

4.1. Reliability and Validity of the UTAUT

The CFA was used to assess the reliability and validity of the UTAUT model. Two measurement models were evaluated: first order and second order models. The first-order model includes the five components of the UTAUT connected with covariates (Figure 2), while the second-order model includes the five UTAUT components connected to the latent variable UTAUT (Figure 3). As shown in Table 1, the first and second models indicated acceptable model fit ($\chi 2/df = 2.329$; RMSEA = 0.052, IC 90% [0.047–0.056]), and ($\chi 2/df = 2.329$; RMSEA = 0.051, IC 90% [0.047–0.056]), respectively. Hence, both versions of the UTAUT model can be used confidently (Niemand & Mai, 2018; Sousa & Rojjanasrirat, 2010); however, the second model has a better fit.

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Figure 2. 1st Order Measurement Model of UTAUT. **Figure 3.** 2nd Order Measurement Model of UTAUT

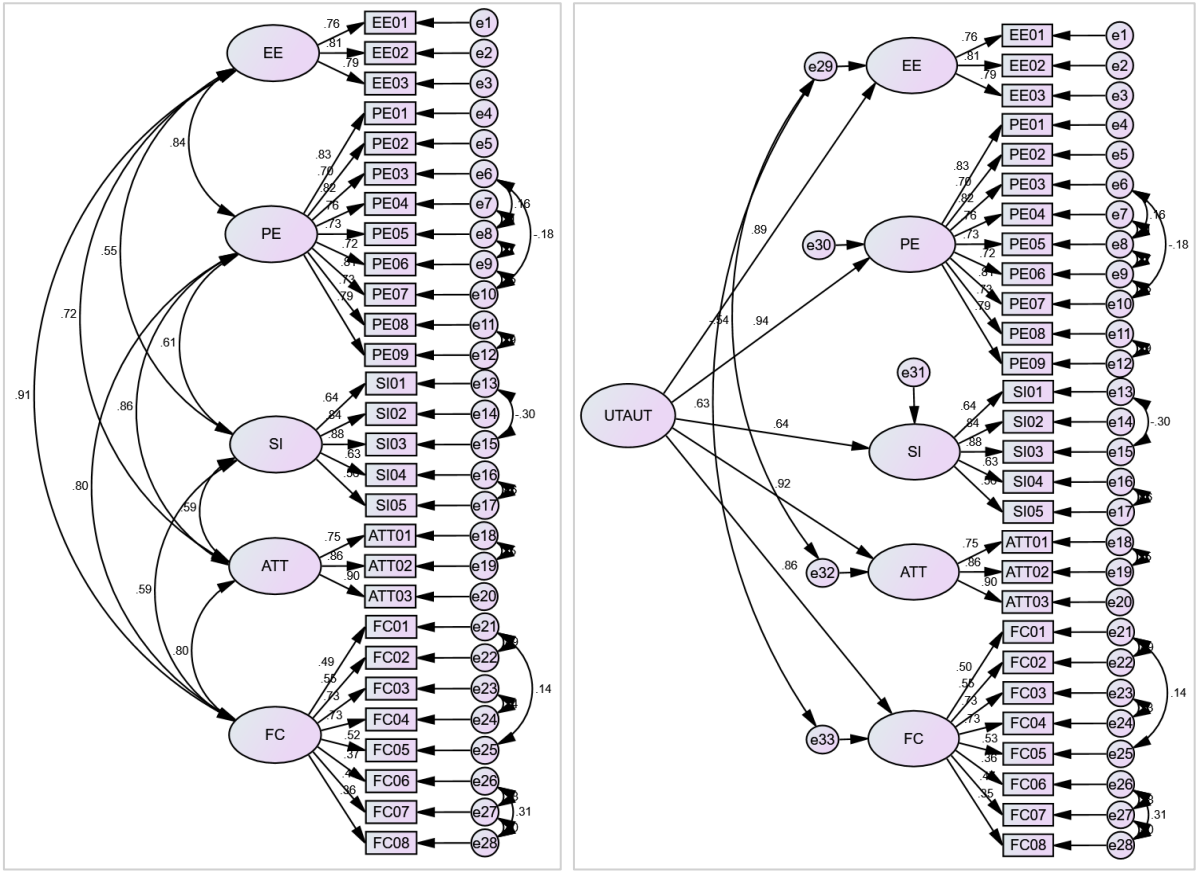

Table 1. Fit Indices of UTAUT Model Scale

Fit Index	Recommended Value	1st Order Model	2nd Order Model
χ^2	Lower value is better.	756.80	762.40
χ^2/df	[2; 5] – Poor fit	2.329	2.324
CFI	[0.9; 0.95] – Good fit, ≥0.95 – Very good fit	.949	.949
TLI	[0.9; 0.95] – Good fit, ≥0.95 – Very good fit	.941	.941
RMSEA	≤ 0.05 – Perfect fit	.052	.051
SRMR	Values ≤ 0.08 are recommended	.049	.051

Excellent reliability was achieved through a global Cronbach's alpha of 0.951 (Taber, 2018). Cronbach's alpha for constructs ranged between 0.784 (for FC) and 0.929 (for PE), indicating satisfactory reliability for all constructs (Table 2). Composite reliability (CR) values exceeded the recommended threshold of 0.6 for all constructs, indicating a reliable model (Fornell & Larcker, 1981).

Convergent validity was ensured (factor loadings for constructs and items were all significant and > 0.5). Items 21, 26, and 28 under FC construct had factor loadings below 0.5; however, retained since they are significant and theoretically contributing to FC scale. Convergent validity was also proved by average variance extracted (AVE) values > 0.5, although FC had AVE of 0.296, it was acceptable since CR value for FC exceeded 0.6 (Fornell & Larcker, 1981); see Table 2.

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Table 2. Reliability & Convergent Validity: Factor Loadings (λ), Cronbach's alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE) for UTAUT Model

UTAUT Constructs and Items	λ	α	CR	AVE
UTAUT		.951	.932	.735
Effort Expectancy	.892	.833	.830	.620
1. In general, AI applications are easy to use for me.	.761			
2. It is easy for me to use AI to learn English.	.814			
3. It is easy for me to learn more ways to use AI for learning English.	.787			
Performance Expectancy	.938	.929	.927	.585
4. AI can help me improve my English language level.	.828			
5. AI can help me achieve tasks more quickly.	.696			
6. AI can help me improve my reading skills.	.815			
7. AI can help me improve my writing skills.	.757			
8. AI can help me improve my speaking skills.	.731			
9. AI can help me to improve my listening skills.	.720			
10. AI can help me to improve my vocabulary.	.811			
11. AI can help me to improve my grammar.	.726			
12. AI can help me get better course grades.	.789			
Social Influences	.642	.838	.840	.521
13. People around me use AI to learn English.	.639			
14. Peers in my class encourage me to use AI to learn English.	.845			
15. Older students in my college encourage me to use AI to learn English.	.881			
16. My teachers encourage me to use AI to learn English.	.630			
17. My academic institution supports me in using AI to learn English.	.555			
Attitudes towards Using AI	.917	.892	.877	.705
18. Using AI is to learn English is a good idea.	.749			
19. AI makes learning English more interesting.	.864			
20. I like using AI to learn English.	.899			
Facilitating Conditions	.864	.784	.759	.296
21. I know about AI applications.	.496			
22. I know how to use AI applications.	.552			
23. I think that AI is an important tool to learn English.	.730			
24. I know that I can use AI applications to learn English.	.734			
25. I have the resources I need at home to use AI to learn English.	.525			
26. I have the resources I need at college to use AI to learn English.	.360			
27. When I face difficulties using AI in learning English, I have people to help me at home.	.467			
28. When I face difficulties using AI in learning English, I have people to help me at college.	.348			

Discriminant validity was also assessed according to the Fornell & Larcker (1981) criterion, which is to have all diagonal loadings greater than their vertical counterparts. According to Table 3, discriminant validity was established (Diagonal loadings are the square root of AVE values, while the vertical counterparts are the square of correlation values).

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Table 3. Discriminant Validity

	EE	PE	SI	ATT	FC
EE	.788				
PE	.711	.765			
SI	.299	.372	.722		
ATT	.524	.734	.348	.840	
FC	.834	.640	.353	.643	.544

4.2. Descriptive Analysis

4.2.1. Sample Demographic Profile

A total of 501 provided their demographic information, presented in Table 4. The mean age of respondents is 21.58±4.46 years, ranging from 17 to 50 years old. Female respondents represented the majority of the sample (75.2%), while males represented 24.8%. Spending one to three hours on electronic devices daily was indicated by 53 respondents (10.6%), 28.7% of respondents spent between four and six hours daily, 23.0% spent seven to nine hours daily, 18.2 spent from 10 to 12 hours, 32 respondents (6.4%) spent 13-18 hours, and 31 respondents (6.2%) spent more than 18 hours. The most common activity practiced online by respondents was interacting with others (78.8%), followed by online shopping (49.9%), learning (37.3%), downloading films and music (37.1%), using search engines to find information (31.5%), and playing interactive games (27.3%). The vast majority of respondents (83.2%) used mostly Arabic when they were online, while 32.4% used mostly English, and only 11 respondents used other languages. Most respondents perceived their level of English proficiency as 'intermediate' (50.7%), 25.0% perceived it as 'beginner,' and 13.2% perceived it as 'upper intermediate.' Only 21 respondents (4.2%) perceived their level of English proficiency as 'advanced, ' and 35 respondents (7.0%) perceived it as 'below beginner. ' Regarding dealing with technology, most respondents perceived their level as either 'intermediate' or 'upper intermediate, ' 31.5% and 31.7%, respectively. Surprisingly, 28.5% of respondents perceived it as 'advanced,' while only 7 respondents (1.4%) perceived it as 'below beginner,' and 6.8% perceived it as 'beginner.' Most respondents (68.3%) preferred face-to-face education when learning English, while 28.1% preferred online education, 25.1% preferred self-study home tasks, 22.2% preferred team projects, and 14.8% preferred individual assignments.

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Table 4. Demographic Profile of Student Sample

Demographics	Count	Percent
Age		
M±SD = 21.58±4.460, Md = 20, Range = 17 – 50 years old		
Gender		
Female	372	74.3
Male	123	24.6
No response	6	1.2
Hours of Using Personal Devices Daily (Phone/ Laptop/ Tablet…etc.)		
Rarely	2	.4
< 1 hour	2	.4
1-3 hours	53	10.6
4-6 hours	144	28.7
7-9 hours	115	23.0
10-12 hours	91	18.2
13-18 hours	32	6.4
> 18 hours	31	6.2
It depends	4	.8
Don't know	4	.8
No response	23	4.6
Online Activity		
Interacting with others (family or friends)	395	78.8
Using search engines to find info	158	31.5
Sending emails	29	5.8
Shopping	250	49.9
Learning	187	37.3
Downloading films and music	186	37.1
Playing interactive games	137	27.3
Blogging	31	6.2
Other	86	17.2
Language Mostly Used Online		
Mostly Arabic	416	83.2
Mostly English	162	32.4
Other	11	2.2
Student Perception of their Level of English Language Proficiency		
Below beginner	35	7.0
Beginner	125	25.0
Intermediate	254	50.7
Upper intermediate	66	13.2
Advanced	21	4.2
Student Perception of their Level of Dealing with Technology		
Below beginner	7	1.4
Beginner	34	6.8
Intermediate	158	31.5
Upper intermediate	159	31.7
Advanced	143	28.5
Preference when Learning English		
Face-to-face Education	342	68.3%
Online Education	141	28.1%
Team Projects	111	22.2%
Individual Assignments	74	14.8%
Self-study Home Tasks	126	25.1%

4.3. Students' Perceptions

Overall, students showed positive perceptions about using AI tools for learning the English language. Most students, representing 58.1%, showed their agreement to the survey items, with a mean score of 3.56±0.649, which shows a level of agreement at 71.2% (Table 5). The highest

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agreement was shown for ATT, with a mean of 3.74±0.853 and an agreement index of 74.8%. That is, students underscored their interest in using AI to learn English. Students also showed a good level of agreement with PE, with a mean of 3.70±0.760 and an index of 74.0%. Similarly, students had a good level of agreement for EE (3.62±0.826, 72.4%). The lowest agreement level was shown for SI (3.34±0.811, 66.8%) and FC (3.48±0.617, 69.6%).

The normality of study variables was assessed through skewness and kurtosis. Based on the skewness and kurtosis values reported in Table 5, all variables follow an approximately normal distribution; skewness is within the range [-2, +2], and kurtosis is within [-7, +7] (Hair et al., 2010; Byrne, 2010).

Table 5. Descriptive Statistics of Students' Perceptions

Statistics	UTAUT	EE	PE	SI	ATT	FC
Mean	3.56	3.62	3.70	3.34	3.74	3.48
Agreement Index (%)	71.2	72.4	74.0	66.8	74.8	69.6
Median	3.60	3.67	3.89	3.40	4.00	3.50
Std. Deviation	.649	.826	.760	.811	.853	.617
Skewness	-.490	-.566	-.604	-.437	-.716	-.517
Kurtosis	1.003	.781	.962	.469	.861	.821
Minimum	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	4.98	5.00	5.00	5.00	5.00	5.00

4.4. Multivariate Analysis

Multivariate analysis of covariance (MANCOVA) was conducted to investigate the impact of SI, FC on EE, PE, and ATT, while controlling for hours of using personal devices daily, online activity, language mostly used online, perception on English proficiency level, perception on level of dealing of technology, and preferences for learning English. Before running the MANCOVA, correlation analysis was conducted to find significant relationships between the dependent and independent variables. Pearson's r correlation, independent-sample t-tests, and ANOVA were used to investigate these relationships, and only the independent variables correlating with the dependent variables were used in the MANCOVA. The results of the MANCOVA indicated a significant effect of SI [Pillai's Trace = 0.12, $F(3, 408) = 18.461$, $p < 0.001$, $\eta 2 = 0.12$], FC [Pillai's Trace = 0.39, $F(3, 408) = 85.57$, $p < 0.001$, $\eta 2 = 0.39$], perception of technology level [Pillai's Trace = 0.02, $F(3, 408) = 2.89$, $p = 0.035$, $\eta 2 = 0.02$], and Shopping [Pillai's Trace = 0.02, $F(3, 408) = 3.13$, $p = 0.026$, $\eta 2 = 0.02$], see Table 6. The tests of between-subjects effects (Table 7) indicated that SI had a significant positive impact on EE, PE, and ATT, with p values < 0.01. FC had a significant positive impact on EE, PE, and ATT, with p values < 0.01. Perception of English Level had a significant positive impact on PE, $p = 0.015$. Perception of Technology Level had a significant positive impact on EE, $p = 0.043$. Finally, shopping had a significant positive impact on EE, $p = 0.029$. No other significant effects were found. Examination of effect size ($\eta 2$) indicated that FC had the largest effect size in multivariate tests ($\eta 2 = 0.386$), and in tests of between-subjects effects; i.e., FC had the largest effect on EE ($\eta 2 = 0.330$). FC also had a moderate effect on PE and ATT, $\eta 2 = 0.253$ and 0.241, respectively. Other effects indicated in Tables 6 and 7 are low in size. Examining the values of R2, indicated in Table 7, it can be concluded that the independent variables could explain 52.9% of the variance in EE, 53.6% of the variance in PE, and 46.7% of the variance in ATT.

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Table 6. Multivariate Tests

Effect	Pillai's Trace	F[a]	Sig.	η^2
SI	.120	18.461	< .001**	.120
FC	.386	85.572	< .001**	.386
Daily Hours	.005	.626	.599	.005
Perception of English Level	.017	2.371	.070	.017
Perception of Technology Level	.021	2.888	.035*	.021
Using search engines to find info	.013	1.831	.141	.013
Sending Emails	.000	.033	.992	.000
Shopping	.022	3.130	.026*	.022
Downloading films and music	.005	.660	.577	.005
Playing interactive games	.006	.778	.507	.006
Blogging	.001	.148	.931	.001
Using English Online	.018	2.528	.057	.018
Face-to-Face Education	.010	1.327	.265	.010
Online Education	.001	.081	.970	.001

a. df1 = 3, df2 = 408.

**. Significant at .05.*

***. Significant at .01.*

Table 2. Tests of Between-Subjects Effects

Source	EE			PE			ATT		
	F[a]	Sig.	η^2	F[a]	Sig.	η^2	F[a]	Sig.	η^2
SI	10.303	.001**	.025	52.483	<.001**	.113	31.126	<.001**	.071
FC	202.342	<.001**	.330	139.150	<.001**	.253	130.455	<.001**	.241
Daily Hours	1.226	.269	.003	.365	.546	.001	1.109	.293	.003
Perception of English Level	.096	.757	.000	6.004	.015*	.014	1.412	.235	.003
Perception of Technology Level	4.124	.043*	.010	2.846	.092	.007	.337	.562	.001
Using search engines to find info	1.857	.174	.005	.221	.639	.001	3.526	.061	.009
Sending Emails	.006	.940	.000	.025	.876	.000	.099	.753	.000
Shopping	4.785	.029*	.012	.003	.953	.000	2.171	.141	.005
Downloading films and music	.902	.343	.002	.129	.720	.000	.238	.626	.001
Playing interactive games	.435	.510	.001	.521	.471	.001	.033	.855	.000
Blogging	.219	.640	.001	.005	.945	.000	.063	.802	.000
Using English Online	3.521	.061	.009	.001	.980	.000	1.679	.196	.004
Face-to-Face Education	2.334	.127	.006	2.967	.086	.007	2.463	.117	.006
Online Education	.136	.712	.000	.194	.660	.000	.022	.881	.000
R^2 =	.529			.536			.467		

a. df1 = 1, df2 = 410.

**. Significant at .05.*

***. Significant at .01.*

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4.5. Students' Explanations

4.5.1. Effort Expectancy

Students' responses reflected a mixed perspective on AI in English language learning. Similar to some previous research, such as Hsu (2023), Pedró (2020), White (2022), and Zhu (2022), many acknowledged the benefits of AI, such as ease of access to learning resources, time-saving features, and personalized learning opportunities. One participant, for example, highlighted the element of practicality as a vital component in the online learning experience: 'Learning English from applications is easier than learning it from books because it is more practical', while the other pinpointed its efficacy in enriching her vocabulary repertoire through quicker word searches.

Despite such positive views, concerns and skepticism remain. Some emphasized the importance of human interaction and direct communication with others as a key ingredient to the success of language learning, citing the limitations of some AI channels in their inability to teach them informal daily expressions and the lack of accuracy of the provided information. Similar to findings in Milad & Fayez (2024) and opposing the conception of young learners as technologically enthusiasts provided by Kirovska-Simjanoska (2021), some participants still preferred the traditional learning styles with the presence of the teacher, maintaining its virtue of providing in situ guidance. Inspired by Chan & Tsi (2023) and Norton & Toohey's (2011) emphasis on the value of the social aspect in learning, the statements suggest that AI can be a valuable tool but should be used in conjunction with traditional learning methods for optimal language acquisition.

4.5.2. Performance Expectancy

In this component, students' views were more consistent in terms of how they viewed the impact of AI on the development of their language proficiency level. Students, in general, acknowledged AI's potential benefits, such as ease of use, access to helpful resources, and improved understanding. Mostly discussing ChatGPT, students highlighted its interactive and quick response features as seminally contributing to these positive views in skills such as reading, listening and writing, as well as the subskills of grammar and pronunciation. The only skill they were quite skeptical about was speaking, as students strongly pinpointed human nature as a fundamental factor contributing to the success of the teaching of speaking: 'I hardly disagree. It lacks human interaction and cannot fully understand the nuances in conversation. Unless there is a function that can hook me up with an AI agent, I won't learn speaking'.

Students also highlighted some important themes in their open responses: issues of trust and literacy. In this realm, some students have shown full trust in the forms of knowledge in which they are exposed to AI applications. As shown in this response, 'AI is better than me in English. After all, it was programmed by a genius. Additionally, phrases like 'I might benefit, but I haven't tried it' and 'I don't know how to use it' were common among students' responses. As confirmed by Amoozadeh et al. (2024), Francis et al. (2025) and Southgate (2020), proper knowledge of AI use and the amount of trust in it can be a double-edged weapon and perceptions towards its usability and efficacy can determine how learners use it and the degree of benefit they can achieve. As similarly inferred by Raffaghelli et al. (2022) and jin et al. (2025), academic guidance becomes crucial to expand learners' horizons on the effective channels of AI educational uses and rectify any problematic views in this regard.

4.5.3. Social Influence

Only few demonstrated positive effects of siblings and colleagues on their language learning through AI resources like programs, websites, and translation tools. On the other hand, some students have shown a serious lack of AI exposure in their environments for reasons such as lack of awareness, preference for traditional learning methods (books, teachers), concerns about its

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effectiveness or safety, and limited access to technology. This was similar to the students' views of the encouragement of teachers and academic institutions, with no support or resources indicated to familiarize learners on the issue. As such, students' decisions to adopt AI in their language learning experience were mostly personal. As shown in Fang et al. (2021), Milad & Fayez (2024) and Mushthoza, et al. (2023), teachers' role in facilitating opportunities for learners to experiment and reflect on different modes of learning, such as AI, is a crucial eye-opener for them to sketch their own learning trajectories autonomously even after graduation.

4.5.4. Attitudes towards Using AI

Students' responses indicated that AI has the potential to significantly impact English language learning. Many students found AI-powered platforms beneficial, citing ease of use, accessibility, and engaging features like images and videos. These platforms can make learning more flexible and personalized, providing easy access to information and allowing for independent learning at one's own pace. However, concerns remain. Some students preferred traditional face-to-face learning, emphasizing the importance of human interaction, direct explanations, and group dynamics. Concerns about AI's accuracy in translation and the potential for a less engaging learning experience compared to in-person classes were also expressed. As also corroborated by Qin and Yan (2020), the effectiveness of AI in English language learning depends on students' preferences and learning styles.

4.5.5. Facilitating Conditions

Students provided an extensive set of responses with valuable insights into their knowledge, experiences, and opinions regarding AI and its potential role in English language learning. Key themes arising from students' responses are:

Awareness and Usage: While there is general awareness of AI, its specific applications and usage vary widely. Despite having an awareness of AI applications in a general sense, many students expressed less knowledge of how to use it to enrich their English language learning experiences. This brings to the fore the role of teachers as facilitators to provide their learners with eye-opening experiences on the types of learning channels which can best suit their contexts and circumstances (Zhang, 2022). Advocating training or 'technological familiarisation', Raffaghelli et al. (2022, pp. 11-12) assert that students should be acquainted with the tools they need to deal with technology before enacting any plan of change towards a technologically driven learning experience.

Perceived Benefits: AI is recognized by students as a valuable resource for its potential to: (1) Improve efficiency by saving time and effort, provide quick access to information, and facilitate faster learning, (2) Enhance accessibility: Offer personalized learning experiences, provide instant feedback, and make learning 'a spontaneous and non-restrictive' experience, and (3) Improve learning outcomes: Help with pronunciation, grammar, and vocabulary, and provide access to diverse learning resources.

Concerns and Limitations. (1) Over-reliance: Concerns existed about over-reliance on AI, potentially hindering independent learning and critical thinking. Some alternatively highlighted 'human factor' as the key factor that should be shaping their learning experience (2) Accuracy and reliability: Concerns about the accuracy of AI-generated translations and the potential for misinformation; (3) Ethical considerations: Concerns about the potential misuse of AI, such as data privacy issues and the impact on human creativity.

Resource Availability: Access to necessary resources (computers, internet, AI tools) varied significantly among respondents. Limited access to reliable internet and appropriate devices in some settings was a serious concern among respondents.

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Overall, while AI offers promising potential for English language learning, its effective integration requires careful consideration of individual needs, learning styles, and the availability of appropriate resources and support. As also corroborated by (Annamalai et al., 2025; and Taktak et al., 2024), AI tools are becoming burgeoning channels through which learners can receive instant and interactive feedback to support their learning, becoming a 'learning buddy' (Zheldibayeva, 2025), which offers them tailored content on the spot. Surprisingly, this came in advent of some studies such as Dolenc & Brumen (2024) and Zaim, et al. (2024). While respondents in the current study perceived the use of AI as a means of keeping up with the global technological advances and wished for its incorporation in their language courses, respondents of Dolenc & Brumen (2024) and Zaim, et al. (2024) were quite satisfied with their current conditions and aspired for a more stable experience with no drastic technological changes. Such divergence could be ascribed to numerous factors, amongst which are the respondents' academic levels, current technological literacies, and institutional support. As such, a full and significant incorporation of AI into the academic systems is an ambitious step which should be carefully delineated, and a balanced approach that combines AI-powered tools with human interaction and personalized learning strategies is likely to be most effective when introducing AI to an institution.

5. Conclusion

Using a mixed method approach, this research examined the views of learners on the use of AI to contribute to the improvement of their learning experiences, unveiling a complex interplay between their views of technological competence, institutional support and their learning styles and preferences. Although learners demonstrated positive potentials of AI in their learning experiences, they still referred to critical gaps upon incorporating AI tools in relation to cognitive and applied aspects. Despite its easy accessibility and time and effort saving advantages, it seems that AI still needs more time to occupy a greater space in the educational enterprise. As such, the study confirms the need for a more structured preparation plan for learners to survive the AI learning situations to which they are exposed.

Future studies could further pursue the investigation of this topic by implementing observations and interventionist methods to appraise the perceptions of learners upon the actual application of AI in their learning and the consequences of AI applications on their learning experiences. Participatory action research could also yield valuable data is this realm. More research should continue to explore the 'the relevance of the human aspects' (Pedró, 2020, p. 72) while digitalizing teaching and learning. This is because although technological advancements are urging more use of technology in the educational scenarios, expectations of the individuals involved in such scenarios cannot be pre-assumed or taken for granted because of some pre-assumed age-related, generational or technology-use factors. Instead, these expectations should be thoroughly delved into to pinpoint any problematic issues which deserve to be rectified for a better experience.

6. Limitations and Suggestions

The study bears limitations when it comes to constructs of generalizability and validity. Given the versatility of cultures and diversity of cultural intricacies, users of AI in academic and educational settings demonstrate variances and ambivalences which confirms the uniqueness of their own contextual circumstances. More contextual research therefore should be direct towards understanding the matter based on their circumstances from the eyes of their direct actors.

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References

Abbad, M. (2021). Using the UTAUT model to understand students' usage of e-learning systems in developing countries. *Education and information technologies, 26*(6), 7205-7224. https://doi.org/10.1007/s10639-021-10573-5

Al Shuraiaan, A., Al Bloushi, B., & Al Bloushi, L. (2024). The double-edged sword: Analyzing the influence of technology on English language learning in Kuwait higher education institutions (HEIs). *International Journal of Middle Eastern Research, 3*(1), 15-23. https://doi.org/10.32996/ijmer.2024.3.1.3

Alenezi, W. (2024). Potentiality and apprehensions of artificial intelligence in education: Perspectives of education staff. *International Journal of Education in Mathematics, Science and Technology, 12*(4), 942-956. *https://www.ijemst.net/index.php/ijemst/index*

Alshammari, A., & Al-Enezi, S. (2024). Role of artificial intelligence in enhancing learning outcomes of pre-service social studies teachers. *Journal of Social Studies Education Research, 15*(4), 163-196. https://doi.org/10.46328/jsser.v15i4.5787

Amoozadeh, M., Daniels, D., Nam, D., Kumar, A., Chen, S., Hilton, M., & Alipour, M. (2024). Trust in Generative AI among students: An exploratory study. *The 55th ACM Technical Symposium on Computer Science Education*, (pp. 67-73). *https://doi.org/10.48550/arXiv.2310.04631*

Annamalai, N., Bervell, B., Mireku, O., & Andoh, K. (2025). Artificial intelligence in higher education: Modelling students' motivation for continuous use of ChatGPT based on a modified self-determination theory. *Computers and Education: Artificial Intelligence*, *8*, 100346. https://doi.org/10.1016/j.caeai.2024.100346

Baker, T., & Smith, L. (2019). Educ-ai-tion rebooted? exploring the future of artificial intelligence in schools and colleges. *Technical report, Nesta Foundation*. https://media.nesta.org.uk/documents/Future_of_AI_and_education_v5_WEB.pdf

Bax, S., & Chan, S. (2019). Using eye-tracking research to investigate language test validity and design. *System, 83*, 64-78. https://doi.org/10.1016/j.system.2019.01.007

Byrne, B. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming.* New York: Routledge.

Chan, C., & Tsi, L. (2023). The AI revolution in education: Will AI replace or assist teachers in higher education? *Computers and Society*. https://arxiv.org/abs/2305.01185

Choung, H., David, P., & Ross, A. (2023). Trust and ethics in AI. *Ai & Society, 38*(2), 733-745. https://doi.org/10.1007/s00146-022-01473-4

Dolenc, K., & Brumen, M. (2024). Exploring social and computer science students' perceptions of AI integration in (foreign) language instruction. *Computers and Education: Artificial Intelligence, 7*. https://doi.org/10.1016/j.caeai.2024.100285

Fang, S., Wu, X., & Lai, I. (2021). Factors affecting Macau undergraduate students' acceptance of hospitality English app: applicability of UTAUT model. *International Journal of Innovation and Learning, 29*(3), 250-266. https://doi.org/10.1504/IJIL.2021.114510

Fornell, C., & Larcker, D. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research, 18*(1), 39-50.

Francis, N. J., Jones, S., & Smith, D. P. (2025). Generative AI in higher education: Balancing innovation and integrity. *British Journal of Biomedical Science*, *81*, 14048. https://doi.org/10.3389/bjbs.2024.14048

Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate data analysis (7th ed.).* Upper Saddle River, New Jersey: Pearson Educational International.

Hoi, V. (2020). Understanding higher education learners' acceptance and use of mobile devices for language learning: A Rasch-based path modeling approach. *Computers & Education, 146*. https://doi.org/10.1016/j.compedu.2019.103761

Hsu, L. (2023). EFL learners' self-determination and acceptance of LMOOCs: The UTAUT model. *Computer Assisted Language Learning, 36*(7), 1177-1205. https://doi.org/10.1080/09588221.2021.1976210

Huang, F., Teo, T., & Zhao, X. (2023). Examining factors influencing Chinese ethnic minority English teachers' technology adoption: an extension of the UTAUT model. *Computer Assisted Language Learning*, 1-23. https://doi.org/10.1080/09588221.2023.2239304

Hyland, K. (2013). Student perceptions of hidden messages in teacher written feedback. *Studies in Educational Evaluation, 39*(3), 180-187. https://doi.org/10.1016/j.stueduc.2013.06.003

Jin, Y., Yan, L., Echeverria, V., Gašević, D., & Martinez-Maldonado, R. (2025). Generative AI in higher education: A global perspective of institutional adoption policies and guidelines. *Computers and Education: Artificial Intelligence*, *8*, 100348. https://doi.org/10.1016/j.caeai.2024.100348

Kanber, H., Jassim, K., Al-Taai, S., Ibrahim, M., & Farhan, N. (2025). The Role of Digital Educational Content in Eliminating Traditional Methods in the Educational Process within Iraqi Universities. *Educational Process: International Journal, 14*. https://doi.org/10.22521/edupij.2025.14.50

Kelly, S., Kaye, S., & Oviedo-Trespalacios, O. (2023). What factors contribute to the acceptance of artificial intelligence? A systematic review. *Telematics and Informatics, 77*, 1-33. https://doi.org/10.1016/j.tele.2022.101925

Kirovska-Simjanoska, D. (2021). Designing an ESP course for the 21st century students: The clash of the digital immigrants and natives. *Journal of Teaching English for Specific and Academic Purposes*, 17-30. https://doi.org/10.22190/JTESAP2101017K

Liu, Y. Z. (2024). A systematic review of research on emotional artificial intelligence in English language education. *System, 126*, 103478. https://doi.org/10.1016/j.system.2024.103478

Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. (2016). Intelligence Unleashed. An argument for AI in Education. https://discovery.ucl.ac.uk/id/eprint/1475756

McStay, A. (2020). Emotional AI and EdTech: serving the public good? *Learning, Media and Technology, 45*(3), 270-283. https://doi.org/10.1080/17439884.2020.1686016

Milad, M., & Fayez, F. (2024). Your Way AI Way: Let‟ s Meet Half-Way: Paradigm Shift in TEFL. *World Journal of English Language, 14*(5), 468-468. https://doi.org/10.5430/wjel.v14n5p468

Mushthoza, D., Syariatin, N., Tahalele, O., Telussa, S., Rasmi, R., & Mokodenseho, S. (2023). Analyzing the impact of artificial intelligence (AI) on the future of English language teaching and learning. *Journal on Education, 6*(1), 1549-1557. https://doi.org/10.31004/joe.v6i1.3115

Niemand, T., & Mai, R. (2018). Flexible cutoff values for fit indices in the evaluation of structural equation models. (https://doi.org/10.1007/s11747-018-0602-9, Ed.) *Journal of the Academy of Marketing Science, 46*(6), 1148–1172. https://doi.org/10.1007/s11747-018-0602-9

Norton, B., & Toohey, K. (2011). Identity, language learning, and social change. *Language teaching, 44*(4), 412-446. https://doi.org/10.1017/S0261444811000309

Pedró, F. (2020). Applications of Artificial Intelligence to higher education: possibilities, evidence, and challenges. *IUL Research, 1*(1), 61-76. https://doi.org/10.57568/iulres.v1i1.43

Qin, F., & Yan, J. (2020). Understanding user trust in artificial intelligence-based educational systems: Evidence from China. *British Journal of Educational Technology, 51*, 1693-1710. https://doi.org/10.1111/bjet.12994

Raffaghelli, J., Rodríguez, M., Guerrero-Roldán, A., & Bañere, D. (2022). Applying the UTAUT model to explain the students' acceptance of an early warning system in Higher Education. *Computers & Education, 182*. https://doi.org/10.1016/j.compedu.2022.104468

Reiss, M. (2021). The Use of Al in Education: Practicalities and Ethical Considerations. *London Review of Education, 19*(1), 1-14. https://doi.org/10.14324/LRE.19.1.05

Schroeder, N., & Gotch, C. (2015). Persistent Issues in Pedagogical Agent Research. *Journal of Educational Computing Research, 53*(2), 183–204. https://doi.org/10.1177/0735633115597625

Sousa, V., & Rojjanasrirat, W. (2010). Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: a clear and user-friendly guideline. (https://doi.org/10.1111/j.1365-2753.2010.01434.x, Ed.) *Journal of Evaluation in Clinical Practice, 17*(2), 268–274. https://doi.org/10.1111/j.1365-2753.2010.01434.x

Southgate, E. (2020). Artificial intelligence, ethics, equity and higher education:A 'beginning-of-the-discussion' paper. *Technical Report. National Centre for Student Equity in Higher Education*, 1-20.

Steponenaite, A., & Barakat, B. (2023). Plagiarism in AI empowered world. *International Conference on Human-Computer Interaction* (pp. 434-442). Switzerland: Springer Nature. https://doi.org/10.1007/978-3-031-35897-5_31

Strzelecki, A. (2023). To use or not to use ChatGPT in higher education? A study of students' acceptance and use of technology. *Interactive learning environments*, 1-14. https://doi.org/10.1080/10494820.2023.2209881

Taber, K. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. (https://doi.org/10.1007/s11165-016-9602-2, Ed.) *Research in science education, 48*, 1273–1296. https://doi.org/10.1007/s11165-016-9602-2

Taktak, M., Bellibaş, S., & Özgenel, M. (2024). Use of ChatGPT in Education: Future Strategic Road Map with SWOT Analysis. *Educational Process: International Journal, 13*(3), 7-21. https://doi.org/10.22521/edupij.2024.133.1

Trewin, S., Basson, S., Muller, M., Branham, S., & Treviranus, J. (2019). Considerations for AI fairness for people with disabilities. *AI Matters, 5*(3), 40-63. https://doi.org/10.1145/3362077.3362086

Tu, Y., & Hwang, G. (2023). University students' conceptions of ChatGPT-supported learning: a drawing and epistemic network analysis. *Interactive Learning Environments*, 1-25. https://doi.org/10.1080/10494820.2023.2286370

Venkatesh, M. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425–478. https://doi.org/10.2307/30036540

Wang, B., Rau, P., & Yuan, T. (2023). Measuring user competence in using artificial intelligence: validity and reliability of artificial intelligence literacy scale. *Behaviour & information technology, 24*(9), 1324-1337. https://doi.org/10.1080/0144929X.2022.2072768

Wang, X., Pang, H., Wallace, P., Wang, Q., & Chen, W. (2024). Learners' perceived AI presences in AI-supported language learning: A study of AI as a humanized agent from community of inquiry. *Computer Assisted Language Learning, 37*(4), 814-840. https://doi.org/10.1080/09588221.2022.2056203

White, J. (2022). Artificial Intelligence and People with Disabilities: a Reflection on Human–AI Partnerships. In F. Chen, & J. Zhou, *Humanity Driven AI: Productivity, Well-being, Sustainability and Partnership* (pp. 279-310). Springer. https://doi.org/10.1007/978-3-030-72188-6_14

Zaim, M., Arsyad, S., Waluyo, B., Ardi, H., Al Hafizh, M., Syafitri, W., . . . Hardiah, M. (2024). AI-powered EFL pedagogy: integrating generative AI into university teaching preparation through UTAUT and activity theory. *Computers and Education: Artificial Intelligence, 7*. https://doi.org/10.1016/j.caeai.2024.100335

Zhang, W. (2022). The Role of technology-based education and teacher professional development in English as a Foreign Language Classes. *Frontiers in Psychology, 13*, 1-7. https://doi.org/10.3389/fpsyg.2022.910315

Zheldibayeva, R. (2025). GenAI as a Learning Buddy for Non-English Majors: Effects on Listening and Writing Performance. *Educational Process: International Journal, 14*, e2025051. https://doi.org/10.22521/edupij.2025.14.51

Zhu, M. (2022). Factors influencing analysis for level of engineering english education based on artificial intelligence technology. *Mathematical Problems in Engineering, 2022*, 1-11. https://doi.org/10.1155/2022/4447209

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