The Attitudes of English Language Learners Towards Artificial Intelligence Tools: Benefits and Challenges

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Ahmad Sokkar, Abdulrahman Olwi*

Abstract

This study investigated the perspectives of English language learners regarding the utilization of Artificial Intelligence (AI) tools in learning the English language. A survey was administered to students from both private and public universities to examine their perspectives regarding the benefits of language learning, usability, and the academic assistance offered by these resources. The research examined the influence of technological infrastructure, academic support, and the cultural and ethical norms of AI in education on the application of these technologies. A cohort of 530 male and female college students was chosen based on gender, age, and academic discipline. The analytical inquiry revealed that 7% of the participants had never utilized AI tools. Most students frequently utilized these tools, with younger groups employing them more often. Compared to males, females demonstrated a greater degree of optimism regarding AI tools. The use of these tools did not seem to be influenced by the type of university. Medical students employed AI to strengthen their English skills more effectively than their counterparts in other fields. The study finally recommended improvements for AI in English language learning, including technological infrastructure, student training, and academic assistance.

Keywords: Artificial Intelligence; English Language Teaching; Perception.

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اتجاهات متعلمي اللغة الإنجليزية نحو أدوات الذكاء الاصطناعي: الفوائد والتحديات

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المستخلص:

هدفت الدراسة إلى استكشاف اتجاهات متعلمي اللغة الإنجليزية نحو استخدام أدوات الذكاء الاصطناعي، وذلك من خلال مقياس موجّه لطلاب الجامعات الحكومية والخاصة، وذلك لاستقصاء آرائهم حول فعالية هذه الأدوات في تحسين مهاراتهم اللغوية، وسهولة استخدامها، ودورها في دعم تعلمهم الأكاديمي. كما تناولت الدراسة العوامل المؤثرة في تبني هذه الأدوات، مثل توفر البنية التحتية التقنية، والدعم الأكاديمي، والمعايير الثقافية والأخلاقية المرتبطة باستخدام الذكاء الاصطناعي في التعلم. كوّنت عينة الدراسة من (٥٣٠) طالبًا وطالبة، مع مراعاة بعض المتغيرات الديموغرافية مثل النوع والفئة العمرية والتخصص الدراسي. واعتمدت الدراسة على المنهج الوصفي التحليلي، وكشفت نتائجها عن عدة مؤشرات مهمة، منها: أن نسبة صغيرة من المشاركين (٧.٠%) لم يستخدموا أدوات الذكاء الاصطناعي مطلقًا. وأن معظم الطلاب يستخدمون هذه الأدوات بشكل متقطع، مع ميل أكبر نحو الاستخدام بين الفئات الأصغر سنًا. كما أن الإناث أظهرن اتجاهات أكثر إيجابية نحو استخدام أدوات الذكاء الاصطناعي مقارنة بالذكور. كما ظهر عدم وجود تأثير يُذكر لنوع الجامعة (حكومية/ خاصة) على الاتجاهات نحو استخدام هذه الأدوات. وأن طلاب التخصصات الطبية كانوا الأكثر استخدامًا لأدوات الذكاء الاصطناعي في تعلم اللغة الإنجليزية مقارنةً بالتخصصات الأخرى. وختامًا، قدّمت الدراسة مجموعة من التوصيات والمقترحات لتعزيز استخدام الذكاء الاصطناعي في تعلم اللغة الإنجليزية، مع التركيز على تحسين البنية التحتية التقنية، وتوفير التدريب والدعم الأكاديمي اللازم للمتعلمين.

الكلمات المفتاحية: الذكاء الاصطناعي، تدريس اللغة الإنجليزية، التصورات.

Introduction:

The integration of Artificial Intelligence (AI) into education is transforming learning processes to meet the evolving needs of contemporary students (Halaweh, 2023). AI-driven tools are influencing multiple facets of daily life, particularly in education, where they can enhance learning experiences via personalization, engagement, and adaptability. AI facilitates personalized learning experiences, allowing students to progress at their pace and engage with course materials through quizzes, games, and adaptive lessons (Baidoo-Anu & Ansah, 2023; Chiu et al., 2023; Niemi, 2024). The integration of AI in education is believed to enhance critical thinking, creativity, and collaboration, thus equipping students with essential skills for the future (Okaibedi, 2023; Adiguzel et al., 2023). The integration of AI in education presents significant challenges, including data privacy issues, the risk of excessive dependence on technology, and diminished human interaction (Luckin, 2024). Educators have expressed concerns regarding the emotional and interpersonal development of students, which are critical for enabling meaningful learning experiences (Mohanty et al., 2023). Alawi (2023) stated that the role of AI in education has been looked at in many different global settings, but its use and effects are still being studied in some areas, where students' interactions with AI may be affected by educational norms and values. This research examined the extent to which English language learners employ AI tools for academic and language learning activities, as well as their perceptions of these technologies. This study investigated the variation in student attitudes concerning key demographic factors, including gender, age, and the type of university attended (public versus private). This study aimed to provide a comprehensive analysis of AI adoption in English language learning by examining various dimensions, thus elucidating the benefits and challenges related to AI in education. The findings will enable informed decision-making about the future integration of AI-enhanced education and will contribute to ongoing discussions on the subject.

Statement of the problem:

AI technology in education has enormous potential to enhance quality and personalize instruction. However, the perceptions of

undergraduate English language learners, shaped by unique cultural, moral, and institutional factors, remain underexplored, particularly regarding their usage, attitudes, and influencing factors. While prior research has examined AI's benefits and challenges, few studies have looked at how gender and university type (public vs. private) affect students' perspectives and behaviors. These factors are often studied separately, making it difficult to understand their impact on AI use in education. As AI adoption in education grows, more research is needed to explore how demographic factors shape English learners' interaction with AI tools, their views on its benefits and drawbacks, and ethical concerns.

Purpose of the Study

This study examined undergraduate English language learners' perceptions of AI tools, focusing on their benefits, challenges, and usage frequency for academic and language learning activities. It also explored how students' views on AI vary by gender, university type (public vs. private), and age, addressing a gap in the current literature. By investigating these demographic factors, the study aimed to provide a more profound understanding of AI adoption in education and shed light on the cultural and ethical issues surrounding its use in English language learning.

Research Questions

Based on the purpose of the study, the following research questions were addressed:

1. To what extent do Saudi learners frequently use AI tools when performing English language learning tasks, and how is this related to their willingness to use these tools in learning?
2. What are the attitudes of Saudi learners toward using AI tools in English language learning?
3. Do Saudi learners' attitudes toward AI tools in English language learning differ by age?
4. Are there statistically significant differences in Saudi learners' attitudes toward AI tools in English language learning based on gender (male vs. female)?

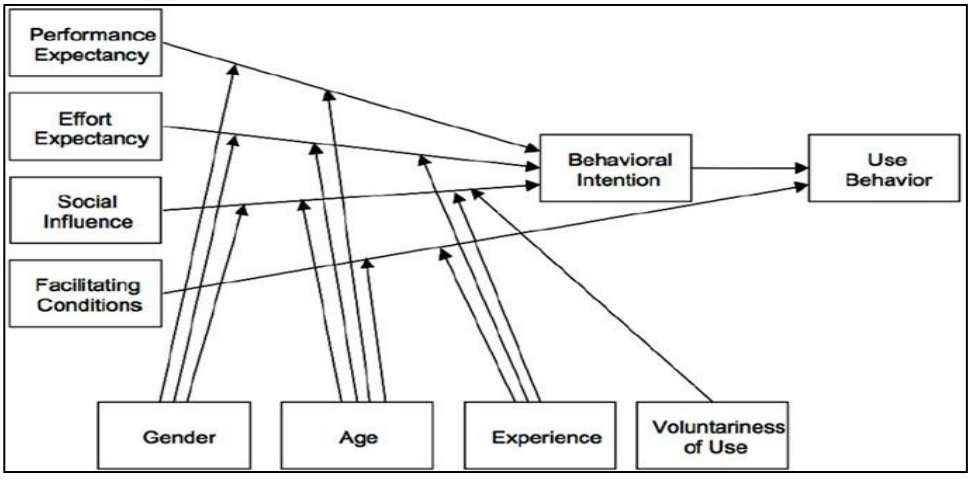
5. Does the type of university (public or private) affect Saudi learners' attitudes toward using AI tools in English language learning?
6. Do Saudi learners' attitudes toward using AI tools in English language learning differ according to their academic major?

Theoretical Framework

The Unified Theory of Acceptance and Use of Technology (UTAUT), introduced by Venkatesh et al. (2003), is a framework for analyzing technology adoption, focusing on factors like performance expectancy, effort expectancy, social influence, and facilitating conditions. It clarifies how learners and educators perceive and use new technologies to enhance learning. The model integrates principles from eight theories, including the Theory of Planned Behavior and Technology Acceptance, to explain technology adoption behaviors.

The UATUA model identifies four factors—performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC)—that influence technology adoption. It emphasizes the role of gender, age, experience, and willingness to use in shaping adoption. Venkatesh et al. (2003) show that gender and age affect perceived ease of use and benefits, while EE is also influenced by these factors. SI considers external influences, and FC addresses how age and experience impact resource access for sustained use.

Figure (1)Venkatesh et al. (2003) Unified Theory of Acceptance and Use of Technology (UTAUT) model.



Literature Review

In January 2023, the emergence of Artificial Intelligence (AI), namely ChatGPT, caused a substantial shift in education, altering the field and pushing educators and students to actively investigate AI's influence, particularly its ability to improve learning experiences such as teaching, grading, study habits, and research methodologies. As AI integration in education grows, it becomes more necessary to investigate how emerging technologies might improve creativity and communication. This transformation impacts not just children but also parents, instructors, and educational supervisors, all of whom have a say in how AI is implemented in schools (Alawi, 2023).

The literature highlights several benefits of AI in education, particularly in fostering personalized learning (Chiu, 2023; Rizvi et al., 2023). AI adapts lessons to individual needs, improving efficiency and engagement by accommodating varying learning paces (Gibson et al., 2023; Baidoo-Anu & Ansah, 2023). It promotes exploratory learning through interactive methods like games and quizzes, making subjects more engaging (Chiu et al., 2023; Su et al., 2023). AI also prepares students for future careers (Okaibedi, 2023).

AI provides data-driven perceptions that can analyze students' performance. This feature makes teachers able to adjust their teaching based on what works best (Al-Zahrani, 2024). Through understanding where every single student excels and struggles, teachers could offer targeted support (Yim, 2024). Such a connection between teachers and AI should set the stage for an effective educational environment (Casal-Otero et al., 2023). By adopting innovative AI, teachers could promote the conventional ways the students learn and make education enjoyable (Frank et al., 2022). Adopting such changes makes for a smart and interesting classroom experience (Southworth et al., 2023).

AI in education also fosters creativity by analyzing data and enhancing learning methods (Kr, 2024). It encourages imagination through writing, art, and hands-on projects (Bushuyev et al., 2024). When combined with teachers' guidance, AI creates impactful learning experiences, empowering both teachers and students to focus on what matters (Afzaal et al., 2023). AI brings endless possibilities, keeping students engaged and prepared for success in a rapidly evolving world (Adiguzel et al., 2023; Ferrara & Qunbar, 2022).

Human support is an essential ingredient when teaching (Jose & Jose, 2024). People view education as an individual, social, and scientific branch that transcends facts and figures. According to Lima et al. (2024), education connects with emotions that AI might not be able to reach. Hence, it is difficult for AI to offer comforting words and inspire young minds. Only teachers can do that. There is some fear that using AI takes away the human factor that energizes learning.

However, some ethical questions have surfaced. Job security is one of the biggest worries (Chilaka, 2024). While AI could help in grading and offering learning resources, teachers can still bring empathy to the classroom (Zafar et al., 2024). The teaching spirit lies in the interactions that teachers and students make. There is a worry that AI might diminish such an important part of education.

In fact, Celik et al. (2022) have identified several strategies for integrating AI into the educational system. For instance, game-based learning turns lessons into enjoyable experiences (Zheng & Yang, 2024). Students love games and enjoy learning when it contains activities (Videnovik et al., 2024). Game-based learning could encourage students to grasp complicated concepts (Sun et al., 2023). When students purposefully play, they realize the facts (Cai et al., 2022). Furthermore, using apps allows students to get points and rewards and then keep them enthusiastically engaged. Students acquire knowledge and apply terminology while enjoying competition (Pan et al., 2022). Such activities should cultivate problem-solving skills (Awidi, 2024).

Another example is the virtual tutor, which goes with the student anytime and anywhere (Ramesh & Sanampudi, 2022). Such a virtual tutor ultimately helps students by offering immediate feedback and guiding them through complicated situations. Additionally, the collaborative robot (Xia et al., 2022) is another intriguing tool that can enhance learning (Kalervo et al., 2022). Introducing such a simple robotic project to the curriculum could spark creativity (Swiecki et al., 2022). The student could learn programming languages. When making the robot accomplish specific tasks, the student develops critical thinking skills and learns to troubleshoot and solve problems. It is like what scientists do in the real world (Maier & Klotz, 2022).

Furthermore, there are AI art generators that help students to create visuals (Yildirim-Erbasli & Bulut, 2023). In a similar vein, AI writing assistants could draft stories and reports, offering suggestions and recommendations (Khosravi et al., 2022). Aleedy et al. (2022) consider these art productions innovative and suggest their potential use in teaching. Just like an excellent tutor, AI could meet each student's personal learning needs (A.S. et al., 2024). It is like having an exceptional coach who knows exactly what the student needs to work on (Nur et al., 2024).

Learning AI techniques helps students develop essential skills for the future (Kishore et al., 2023) and fosters adaptability (Järvelä et al., 2023). AI can also encourage collaboration, allowing students to share ideas and build strong relationships (Dwivedi et al., 2023; Alwabel, 2024). However, AI's reliability is a concern, as it could provide inaccurate information or reinforce incorrect concepts (Bozkurt & Bae, 2024). Over-reliance on AI could hinder critical thinking and problem-solving skills, leading to laziness (Salloum, 2024; Tiwari, 2024).

There are other hardships that educators should deal with. One of them is the reduced social interaction (Pipiya & Dorogokupets, 2024). Some educators worry that using AI too much could limit face-to-face interactions (Hastuti & Syafruddin, 2023) and make students unable to build warm links with teachers and peers (Maan, 2022). AI could replace human touch instead of enhancing the learning outcomes (Chan & Tsi, 2023). Therefore, educators are encouraged to strike a balance between using AI and maintaining personal connections (Ji et al., 2022).

Another hardship is data privacy (Huang, 2023). Protecting students' personal information comes first (Luca, 2023). Schools must have clear policies to safeguard data (Mohamed, 2024). Transparency is key in data privacy to create an environment rich in trust (Ali & Okon, 2024). Furthermore, teachers are regarded in the AI-enhanced classroom because they are like advisors in such a learning landscape (Benouachane, 2024), which prompts them to spend less time on memorization and focus more on critical thinking (Krebs, 2024). Since AI handles basic content delivery, teachers could hold extended discussions and problem-solving sessions (Rosak-Szyrocka et al., 2024) to inspire students to think beyond the content and explore real-world issues (Imran & Arsalan, 2024).

Balancing AI's educational benefits requires careful consideration of screen time (Raza et al., 2024; Bettayeb et al., 2024; Lo, 2023). Excessive screen time can lead to eye strain, reduced physical activity, and social isolation (Yang, 2022). To mitigate these risks, families and communities must be involved in education (Su & Yang, 2022; Yim, 2024). Understanding AI control methods empowers society to support learners (Morales-Navarro et al., 2023). Providing AI access encourages real-world application (Miao & Shiohira, 2022). Active engagement with AI, like constructing robots and programming, cultivates mastery and comprehension (Chiu et al., 2024; Almatrafi et al., 2024; Han et al., 2024). Group AI projects promote collaboration and idea sharing, essential skills alongside academic subjects (Williams et al., 2024; Jauhiainen & Guerra, 2023).

Educators could also invite guest speakers from the tech field to hold workshops (Yau et al., 2023). Bringing in those experts should open students' eyes to what AI implies (Kong et al., 2022). They could share experiences and tips that encourage students and increase enthusiasm (Mertala et al., 2022). In such workshops, students could pick up several skills like coding for beginners and learn about various AI features (Carvalho et al., 2022). Furthermore, those workshops could explain real-world applications because they include lessons that show how AI is used in many different fields, including education (Ramadevi et al., 2023). The students will feel emphatically engaged when realizing that AI is an authenticated theory, and it actually solves real problems (Troncoso-Pastoriza et al., 2022).

The researchers stated that AI is everywhere, from smartphones to classrooms (Dennehy et al., 2023). They indicated that an exact concept has become apparent under the theme "responsible AI," which means using AI in safer ways so that they become more beneficial for students and teachers. Furthermore, the conversation underscores the focus of AI on assisting students and teachers while avoiding any potential physical or ethical harm. Nevertheless, there are voices discussing using AI in education from a different perspective. Bringing these voices together offers an illustrative picture. In another study, the researchers stressed that understanding the varied opinions toward using AI in education is important (Xia et al., 2023).

Existing research often examines AI in public or private universities separately (Sobaih et al., 2024), while some studies compare these

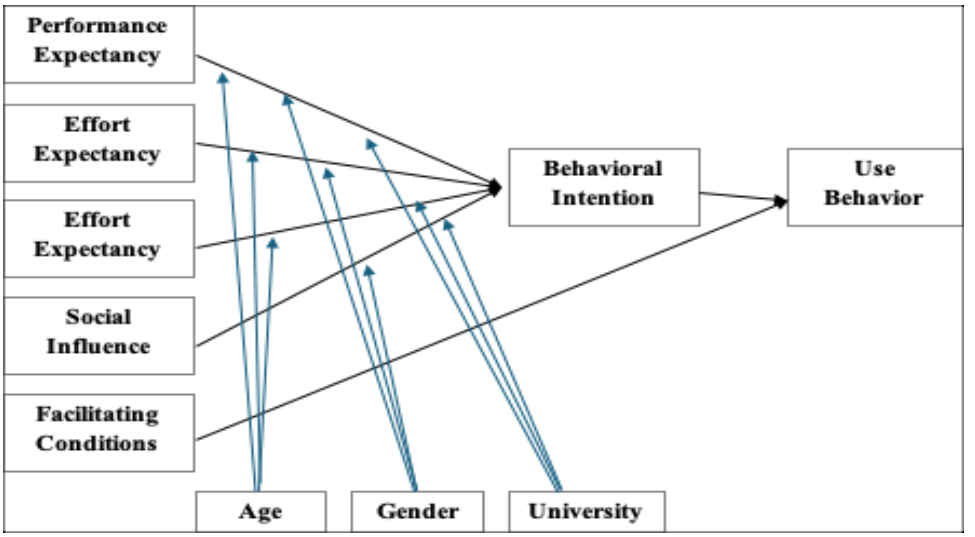
institutions (Al-Jenaibi, 2024). However, a comprehensive analysis of students' AI attitudes, usage, and orientation, considering gender across both types of universities, is lacking. This study aims to fill this gap, providing valuable insights for AI adoption in higher education.

Methods and Procedures

Wang and Shi's (2024) questionnaire was utilized in this study. Although its internal consistency reliability was assessed using Cronbach's alpha (0.734-0.897), composite reliability (0.833-0.928), and rho_A (0.739-0.899) to demonstrate internal consistency dependability, the validity and reliability were retested for the purpose of this study. Hence, six key dimensions were set to analyze the data:

1.The effectiveness of AI tools in supporting English language learning.
2.The ease of using AI tools in learning.
3.The influence of social factors on the use of AI tools in English language learning.
4.The availability of resources and support for using AI tools.
5.The usability of AI tools in English language learning.
6.Ethical considerations and concerns associated with the use of AI tools in learning.

Figure (2)Wang and Shi (2024) Modified Unified Theory of Acceptance and Use of Technology (UTAUT) Model Based on Venkatesh et al. (2003) Model.



Participants

A pilot sample included 45 university students, comprising 20 males (44.44%) and 25 females (55.56%). The sample was selected beyond the main research sample to evaluate construct validity and scale reliability before the implementation of the primary study.

Table (1)Demographic Distribution of the Sample by Gender, University, Major, Age, and Academic Year

Variable	Variable Category	Frequency	Percent
Gender	Male	217	40.9
	Female	313	59.1
University	Public	174	32.8
	Private	356	67.2
Age	Age 19	288	54.3
	Age 20	110	20.8
	Age 21 years and above	132	24.9
Major	Business	40	7.5
	Computer	171	32.3
	Engineering	137	25.8
	Humanism	51	9.6
	Medical	86	16.2
	Science	45	8.5
Academic Year	Freshman	405	76.4%
	Graduate	18	3.4%
	Junior	23	4.3%
	Senior	11	2.1%
	Sophomore	73	13.8%
	Total	530	100.0%

Table 1 presents the demographics of the 530 research participants. The sample comprised 59.1% females and 40.9% men, with 67.2% originating from private institutions and 32.8% from public universities. The majority of participants were 19 years old (54.3%), followed by those aged 21 and older (24.9%) and those aged 20 (20.8%). The predominant major was computer science (32.3%), succeeded by engineering (25.8%), business administration, medical sciences,

sciences, and humanities. The majority of participants were first-year students (76.4%), followed by second-year students (13.8%) and those from other academic years.

Scale Description:

The students' perceptions of AI tools for learning English were assessed using a 23-item scale, with responses evaluated on a five-point Likert scale ranging from strongly agree to strongly disagree. Each statement received a score ranging from 5 to 1. The scale had six dimensions: five assertions in the first (1-5), four in the second (6-9), three in the third (10-12), four in the fourth (13-16), four in the fifth (17-20), and three in the sixth (21-23).

Validity

Correlation analysis in Table 2 looked at the links between statement scores, dimension scores, and the total scale score to make sure the scale was valid. Robust, substantial correlations at the 0.01 or 0.05 level between statements and their corresponding dimensions validate construct validity. Minimal or negligible correlations with other parameters affirmed discriminant validity.

Table (2)Correlation Coefficients Between each Item's Score and the Total Score of its Respective Dimension, Its Correlation with Other Dimensions, and the Total Scale Score (n=45)

Item #	respective dimension						
	S1	**S2**	**S3**	**S4**	**S5**	**S6**	**SS**
V1	.864**	.350*	.289	.477**	.649**	.472**	.703**
V2	.913**	.388**	.339*	.507**	.794**	.500**	.782**
v3	.919**	.421**	.438**	.542**	.813**	.519**	.822**
v4	.835**	.377*	.241	.441**	.616**	.520**	.683**
v5	.908**	.247	.391**	.472**	.720**	.550**	.744**
v6	.319*	.883**	.347*	.684**	.308*	.202	.568**
v7	.458**	.876**	.535**	.724**	.441**	.340*	.704**
v8	.267	.851**	.421**	.786**	.424**	.380**	.640**
v9	.327*	.819**	.325*	.605**	.442**	.285	.587**
v10	.240	.362*	.849**	.339*	.391**	.090	.469**
v11	.317*	.530**	.823**	.455**	.477**	.096	.565**

Item #	respective dimension						
	S1	S2	S3	S4	S5	S6	SS
v12	.413**	.298*	.846**	.329*	.381**	.283	.531**
v13	.441**	.839**	.431**	.925**	.509**	.468**	.752**
v14	.195	.713**	.207	.808**	.303*	.238	.505**
v15	.485**	.720**	.481**	.862**	.504**	.346*	.717**
v16	.654**	.303*	.310*	.762**	.656**	.567**	.705**
v17	.853**	.353*	.504**	.578**	.869**	.623**	.840**
v18	.679**	.446**	.428**	.551**	.921**	.496**	.784**
v19	.688**	.404**	.411**	.501**	.934**	.647**	.793**
v20	.755**	.492**	.476**	.612**	.925**	.620**	.855**
v21	.451**	.412**	.246	.479**	.446**	.771**	.585**
v22	.789**	.162	.378*	.747**	.713**	.799**	.864**
v23	.098	-.106	-.151	.065	.231	.663**	.532**

Table 3 demonstrates the verification of the correlation between the total score of each dimension and the total score of the scale. The correlation coefficients between the total score of each dimension and the total score of the scale were high and statistically significant at the 0.001 level. These findings meant that the dimensions were internally consistent and helped measure the main idea that the scale was trying to measure. The results demonstrated the degree of consistency between the dimensions and the total scale, thereby supporting the construct validity of the employed scale.

Table (3)Correlation Coefficients Between the Total Score of Each Dimension and the Total Scale Score (n=45)

	S1	S2	S3	S4	S5	S6
Pearson Correlation	.842**	.726**	.621**	.838**	.895**	.705**

The construct validity of the scale was further assessed via exploratory factor analysis, employing the Kaiser-Meyer-Olkin-Bartlett (KMO & Bartlett) test. The KMO value of 0.945 signifies sufficient sampling adequacy. With 253 degrees of freedom and a significance level of 0.001, the chi-square value was 8776.201. The results confirmed the adequacy of the sample size for factor analysis. Statistical analysis indicated a modest

distribution, characterized by a mean of 3.97 and a median of 4.00. The skewness was approximately zero, measured at -0.259, suggesting negligible bias. The frequency distribution conformed to the standard normal curve, thereby justifying the application of exploratory factor analysis.

Figure (3)Frequency Distribution of Sample Data with Standardized Normal Curve for Scores

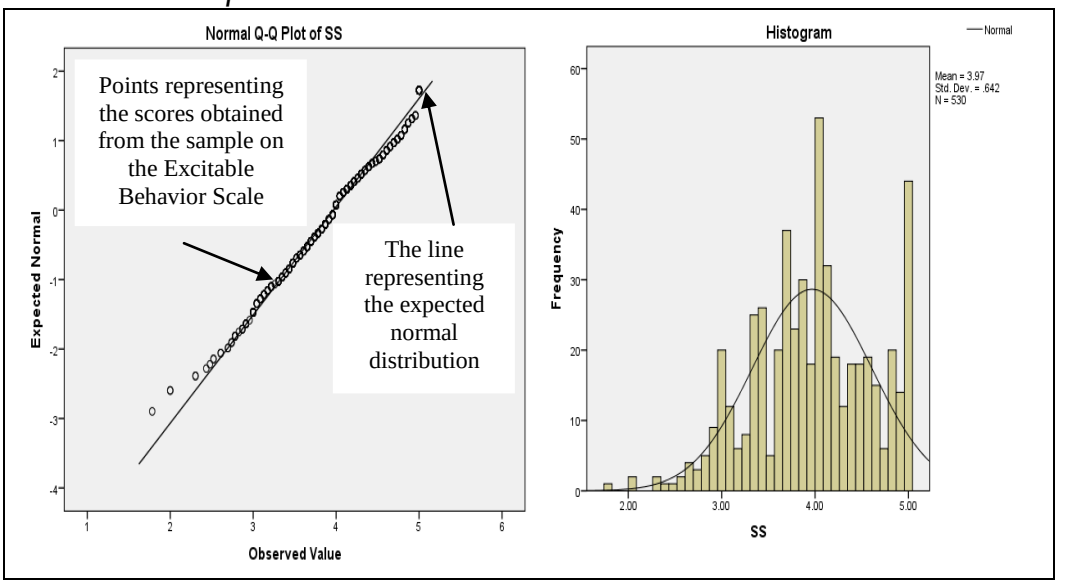


Figure 3 illustrates that the frequency distribution of the sample closely aligns with the normal curve, with the majority of data points conforming to the expected normal distribution line. In this case, exploratory factor analysis using principal component analysis and orthogonal rotation of factors using varimax for Kaiser normalization was used. A Kaiser criterion of a latent root value ≥1 and Cattell's scree plot method were used to find the number of factors. Guilford's advice to keep factors where three or more statements showed a saturation of at least 0.30 was also taken into account.

Figure (4)Scree Plot Test to Analyze Data

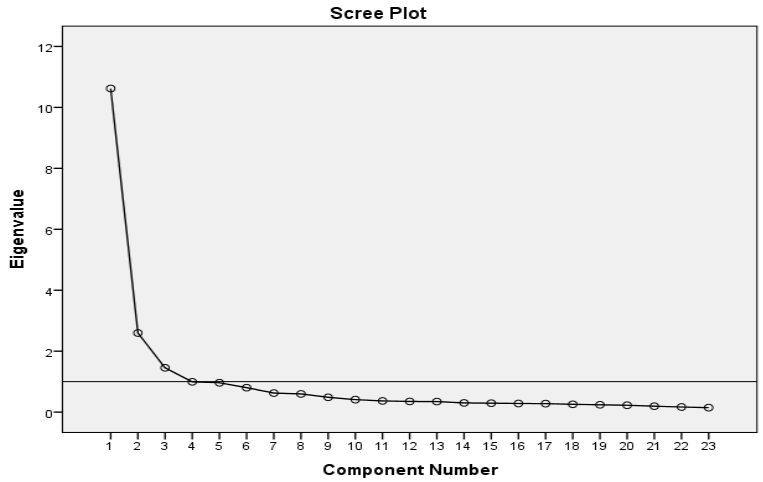


Figure 4 illustrates three components with latent roots exceeding one, accounting for 63.78% of the variance. A saturation value of 0.380 was employed to enhance factor purity, and all scale statements were preserved. The analysis resulted in the categorization of the 23 statements into three distinct factors. Table 4 displays the factorial structure, encompassing communalities, factor saturation, and the latent root (Eigenvalue) for each component, as well as the variance explained by each factor, thereby validating the scale's fit.

Table (4)Factor Structure of the Scale, Including Communalities, Factor Loadings, Eigenvalues, and Explained Variance

	Statement	Component			Extraction
		1	2	3	
V3	Using AI tools increases my productivity in learning English.	.812			.726
V1	I find AI tools helpful in my English learning.	.795			.704
V17	I intend to use AI in English learning as much as I need.	.771			.726
V19	I intend to use AI in English learning whenever I have the opportunity.	.757			.707
V4	AI tools help me improve my specific language skills (such as grammar, vocabulary, speaking).	.743			.649

	Statement	Component			Extraction
		1	2	3	
V5	AI tools provide personalized feedback that supports my English learning.	.743			.635
V2	Using AI tools helps me complete English learning tasks faster.	.729			.631
V20	I will use AI tools to learn English in all its forms as much as possible.	.716		.383	.691
V22	I believe that using AI tools for language learning is fair and appropriate.	.714			.630
V18	I plan to use AI tools routinely in my English learning.	.688		.445	.686
V21	My use of AI tools in academic tasks aligns with my ethical beliefs.	.637			.515
V14	I have the necessary knowledge to use AI tools.		.838		.737
V6	Learning how to use AI tools is easy for me.		.810		.694
V8	I find AI tools easy to use.		.794		.688
V7	My interaction with AI tools is clear and understandable.		.784		.693
V9	It's easy for me to become proficient in using AI tools.		.752		.645
V13	I have the necessary resources to use AI tools.		.706		.578
V15	AI tools are compatible with other technologies I use.		.652		.595
V16	I can get help from others when I encounter difficulties in using AI tools.		.380		.288
V11	People who influence my behavior believe I should use AI tools in English learning.			.832	.770
V10	People who are important to me believe I should use AI tools in English learning.			.814	.782
V12	People whose opinions I value prefer that I use AI tools in English learning.	.413		.708	.698
V23	I fear becoming overly dependent on AI tools for academic tasks.			.406	.201
	Initial Eigenvalues	10.61	2.597	1.45	Cumulative %
	% of Variance	29.56	21.34	12.87	63.78

The first factor, with a latent root of 10.619, accounts for 29.563% of the variation and includes 11 statements focused on "acceptance and integration," with saturations ranging from 0.812 to 0.637. This factor reflects learners' recognition of AI tools' benefits in productivity, feedback, and task completion, as well as ethical views on their use. The second factor has a latent root of 2.597 and explains 21.344% of the variation. It is made up of 8 statements about "perceived efficiency and ease of use," and its saturations are between 0.838 and 0.380. This factor reflects students' ability to use AI tools effectively with minimal effort, enhancing learning through productivity and feedback. The third factor, with a latent root of 1.453, explains 12.873% of the variation and includes four statements on "social influence and concerns," with saturations ranging from 0.832 to 0.406. This factor highlights the impact of others' opinions and concerns about overuse, academic assignments, and effects on self-skills and autonomy.

Table (5)Distribution of the Statements in the Scale Measuring Learners' Attitudes Toward Using AI Tools in Learning English

Factor	Number of Statements	Statement Numbers
First Factor	11	1, 2, 3, 4, 5, 17, 18, 19, 20, 21, 22
Second Factor	8	6, 7, 8, 9, 13, 14, 15, 16
Third Factor	4	10, 11, 12, 23
Overall Scale	23	

Table (6)Reliability Coefficients of the Scale Measuring Learners' Attitudes toward Using AI Tools in Learning English Using Internal Consistency (Cronbach's Alpha) and Split-Half Methods

Factor	First	Second	Third	Total Score
Number of Items	11	8	4	23
Cronbach's Alpha	.94	.90	.77	.94
Split-Half Reliability	.96	.92	.77	.97

The reliability of the scale, as indicated in Tables 5 and 6, was assessed through internal consistency using Cronbach's alpha. The Cronbach's alpha and split-half methods indicated high reliability for all three factors and the overall score. This evidence indicates that the scale exhibits internal consistency and is reliable in measuring the intended attitudes.

Results and Discussion:

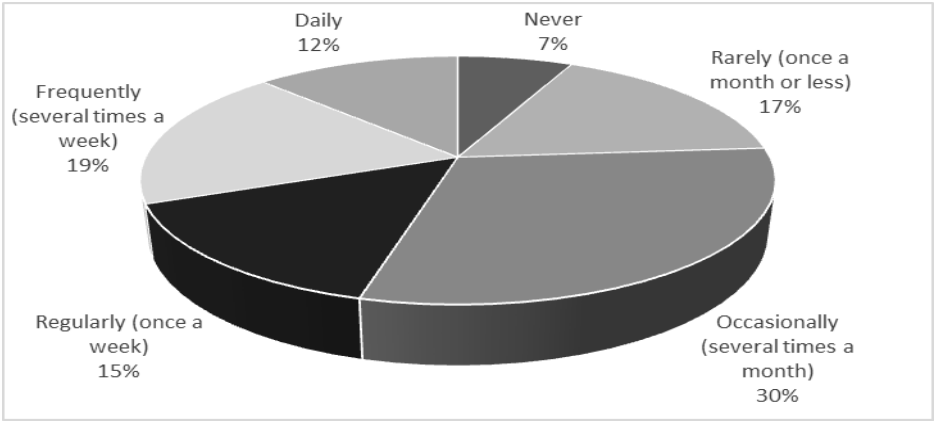
The first question measured how frequently learners used AI tools for English tasks. As shown in Table 7 and Figure 5, the results were as follows:

- 7% of participants never used AI tools, possibly due to lack of awareness or technical skills.
- The largest group 30.4% used AI tools "occasionally" (several times a month), and 16.8% used them "rarely" (once a month or less), possibly due to reliance on traditional methods or low motivation.
- Moderate users include 14.9% who used them "regularly" (once a week) and 18.5% who used them "frequently" (several times a week), indicating integration into their learning process but not daily.
- 12.5% used AI tools daily, reflecting high adoption and integration into their routine.

Table (7)Distribution of Learners' Frequency of Using AI Tools in Learning English

Choices	Frequency	Percent
Never	37	7.0
Rarely (once a month or less)	89	16.8
Occasionally (several times a month)	161	30.4
Regularly (once a week)	79	14.9
Frequently (several times a week)	98	18.5
Daily	66	12.5
Total	**530**	**100.0**

Figure (5)*Graphical Representation of Respondents' Distribution Regarding the Frequency of Using AI Tools*



The disparity in AI tool usage may stem from learners' familiarity, access to technology, or concerns about accuracy and misuse. Groups with limited resources may underutilize these tools. Integrating AI into formal education could increase adoption. Studies show varying usage, with some learners using AI daily while others use it rarely. Training on effective use and highlighting the benefits may improve uptake in English language learning.

The second question analyzed learners' attitudes toward using AI for English learning. The 530 participants' scores yielded a mean of 3.97, a median of 4.00, a standard deviation of 0.642, a variance of 0.412, and a skewness of -0.259, indicating normal data distribution. Exploratory factor analysis confirmed the scale's validity. Learners' views on AI usage in English learning were assessed using these statistics, with a mean of 3.97 and a standard deviation of 0.642, reflecting their overall attitudes.

Table (8)Criteria for Assessing the Level of Learners' Attitudes toward Using AI Tools in Learning English (M = 3.97, SD = 0.642)

Cut-off points	Score Ranges	Number of Students	Percentage	Interpretation
M +3 SD (5.896)	5	44	8.30	Very High Positive Attitudes
M +2 SD (5.254)	5			
M + SD (4.612)	4.612 ≤ 4.99	154	29.06	High Positive Attitudes
M (3.97)	4.611 ≤ x ≤ 3.32	247	46.60	Moderate Attitudes
M- SD (3.33)	3.33 ≤ x ≤ 2.68	74	13.96	Low Negative Attitudes
M -2 SD (2.69)	2.69 ≤ x ≤ 2.03	8	1.51	High Negative Attitudes
M - 3 SD (2.04)	2.04 ≤ x ≤ 1	3	0.57	Very High Negative Attitudes

Nearly half of the respondents, 46.6%, had neutral attitudes on AI tools for English learning, indicating doubt about potential benefits. 29.06% had highly favorable attitudes, whereas 8.3% demonstrated positive attitudes, indicating a preference for these tools. Nonetheless, 13.96% exhibited unfavorable attitudes, while 1.51% had extremely negative attitudes. The distribution exhibited a normal curve, with the majority of responses clustered around the mean and a decline as attitudes grew more severe. The data indicate that the majority of learners were either supportive of or indifferent to AI in learning a

language. Negative attitudes, ranging between 15 and 16%, may stem from unfamiliarity, questions over efficacy, or technical difficulties, indicating areas for more examination.

A one-way ANOVA was employed to compare scores among three age groups in response to the third question. Table 9 indicates that age did not significantly influence the first and third factors—acceptance of AI tools, integration, or worries regarding AI. The second component, "perceived efficiency and ease of use," had a substantial F-value of 7.090 $p < 0.001$. Age affected views of AI tool efficacy, as younger learners perceived them more positively. Post-hoc analyses indicated substantial differences between the groups of 19 and 21 years old. Age did not impact social influence and concerns. Younger learners exhibited a more favorable attitude toward AI technologies, indicating that older learners may require technical training to enhance their judgments of their usefulness.

Table (9)One-Way ANOVA Results for Learners' Attitudes Toward Using AI Tools in Learning English across Different Factors and Age Groups

Factor	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
First Factor	Between Groups	2.667	2	1.334	2.195	.112
	Within Groups	320.209	527	.608		
	Total	322.877	529			
Second Factor	Between Groups	6.072	2	3.036	7.090	.001
	Within Groups	225.678	527	.428		
	Total	231.750	529			
Third Factor	Between Groups	.075	2	.038	.051	.950
	Within Groups	386.196	527	.733		
	Total	386.271	529			
Total	Between Groups	2.581	2	1.290	3.160	.043
	Within Groups	215.190	527	.408		
	Total	217.771	529			

An independent samples t-test was conducted to evaluate gender differences in the total score and sub-factors in Table 10. Significant differences were observed between males and females regarding the total score, $t = 3.225$, $p < 0.001$; the first factor, $t = 3.428$, $p < 0.001$; and the second factor, $t = 2.593$, $p = 0.010$. Females demonstrated superior performance compared to males in terms of AI tool acceptance and

perceived efficiency. No significant gender differences were found in the third factor, social influence and concerns, t = 1.274, p > 0.05. The findings indicate that females exhibit more positive perceptions of AI tools for English learning, likely attributable to variations in learning styles, motivation, and technological interest. The lack of gender differences in social concerns indicates that both genders hold comparable perspectives regarding the influence of AI on conventional education. Cultural and social factors may influence women's increased receptiveness to AI tools.

Table (10)Independent Samples t-Test Results for Gender Differences in Attitudes Toward Using AI Tools in Learning English

Factor	Gender	N	Mean	Std. Deviation	t	Sig.
First Factor	Male	217	3.8530	.80956	3.428	0.001
	Female	313	4.0871	.74740		
Second Factor	Male	217	4.0305	.63942	2.593	0.010
	Female	313	4.1813	.67111		
Third Factor	Male	217	3.5461	.81590	1.274	0.203
	Female	313	3.6422	.87943		
Total	Male	217	3.8614	.64033	3.225	0.001
	Female	313	4.0425	.63296		

An independent-samples t-test in Table 11 indicated no significant differences in total scores or sub-factors based on university type (public vs. private), with all t-values yielding p > 0.05. This indicates that the type of university did not affect students' attitudes toward utilizing AI tools for learning English, probably because of comparable access to technology and digital resources in both environments.

Table (11)Independent Samples t-Test Results for University Type Differences in Attitudes toward Using AI Tools in Learning English

Factor	University	N	Mean	Std. Deviation	T	Sig.
First Factor	Public	174	3.9201	.74417	1.468	.143
	Private	356	4.0260	.79746		
Second Factor	Public	174	4.0905	.61947	.706	.480
	Private	356	4.1338	.68205		
Third Factor	Public	174	3.5675	.78835	.665	.507
	Private	356	3.6201	.88561		
Total	Public	174	3.9180	.59106	1.262	.207
	Private	356	3.9929	.66434		

A one-way ANOVA was performed to analyze differences in total scores and sub-factors according to academic specialty as shown in Table 12. The findings indicated that the third factor, social influence and concerns, was not significantly influenced by academic specialty. Both the first and second factors, along with the total score, exhibited statistically significant differences, $p < 0.01$. The result indicates that academic specialization affects students' attitudes toward AI tools for learning English, specifically regarding acceptance and perceived usefulness. Post-hoc comparisons indicated that medical students outperformed other majors on the first factor, whereas significant differences in the second factor were observed among computer science, engineering, humanities, and medical specialties. The observed variations may result from the technological requirements of specific fields, which enhance proficiency and engagement with AI tools.

Medical students showcased the highest scores in the acceptance and integration of AI tools, surpassing their counterparts in business administration, computer science, engineering, and humanities, with differences of 0.287, 0.259, 0.266, and 0.368, respectively. The results were statistically significant; $p < 0.01$, likely attributable to the prevalent application of AI in medical domains for diagnosis, decision support, and data analysis, which has increased students' receptiveness to AI tools. In contrast, students in computer science and engineering exhibited positive yet comparatively lesser attitudes, suggesting an awareness of AI's potential while indicating a need for further training in language learning applications. Students in the humanities and business administration exhibited the least favorable attitudes, probably attributable to their limited exposure to AI within their curricula. The findings indicate that sectors with greater technological engagement, such as medicine, cultivate more favorable perceptions of AI, whereas other sectors may require training programs to enhance awareness of AI's potential applications.

Table (12)One-Way ANOVA Results for Learners' Attitudes Toward Using AI Tools in Learning English across Different Factors and Academic Majors

Factor	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
First Factor	Between Groups	9.544	5	1.909	3.192	.008
	Within Groups	313.333	524	.598		
	Total	322.877	529			
Second Factor	Between Groups	7.129	5	1.426	3.326	.006
	Within Groups	224.621	524	.429		
	Total	231.750	529			
Third Factor	Between Groups	3.656	5	.731	1.002	.416
	Within Groups	382.614	524	.730		
	Total	386.271	529			
Total	**Between Groups**	**5.970**	**5**	**1.194**		
	Within Groups	**211.801**	**524**	**.404**	**2.954**	**.012**
	Total	**217.771**	**529**			

These results suggest the necessity of expanding AI tools integration into curricula across diverse disciplines and offering practical training opportunities to improve awareness and understanding of these tools. These initiatives will enhance their acceptance and utilization across diverse academic and professional domains.

Recommendations

Below are some suggestions for educators regarding the integration of AI in English language learning: Educators ought to foster positive attitudes by emphasizing the advantages of AI and demonstrating practical applications that improve language learning. Analyzing the origins of negative attitudes via surveys or interviews can facilitate the resolution of challenges and enhance perceptions. Implementing professional training programs enhances learners' ability to utilize AI tools effectively, thereby improving educational outcomes. Support programs for older learners can mitigate the technological divide between age groups, facilitating equitable access to AI. AI tools must be designed to accommodate the diverse needs of various age groups, thereby ensuring usability for all learners. Further research could

investigate the extent to which technical experience or exposure to technology influences perceived ease of use in comparison to age.

Future Studies

Future research on learners' attitudes toward AI in English language learning should examine the effects of these technologies in various cultural and educational contexts. Longitudinal studies can monitor the evolution of perceptions and usage over time, emphasizing the impact of AI on language proficiency, autonomy, and critical thinking. Ethical considerations such as data privacy and excessive dependence on AI warrant further examination. Furthermore, research must investigate the integration of AI in education, focusing on the challenges associated with teacher training and infrastructure. Creating AI tools that are sensitive to different cultures for language learners and researching how age, gender, and educational background affect language learning can make AI-driven interventions more effective and fairer.

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