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Learner Attitudes to AI in the EFL Classroom: Ensuring Future-Ready Education in KSA

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Abstract

Rapid integration of Artificial Intelligence (AI) in higher education has highlighted the need to understand learner attitudes, mainly within the Saudi English as a Foreign Language (EFL) context, where digital transformation aligns with national educational priorities. Though the Saudi education sector has not been untouched by technology, that has been more in the nature of general applications unlike AI's exceptional cognitive and interactive role, leaving restricted evidence on how Saudi undergraduates perceive its role in academics. This research examines Saudi EFL learners' attitudes toward AI integration and determines its relationship with academic performance and future-readiness of language education. Study data was obtained from a survey of learners at Majmaah University on the use of AI in EFL classes. These findings were triangulated with data from semi-structured interviews with a limited number of volunteers. Descriptive statistics were used to identify attitudinal trends, Pearson correlation test was used to trace the relationship between AI attitudes and academic achievement. Qualitative responses were thematically analyzed to draw inferences. Results indicated enhanced speaking confidence and academic performance, with EAT showing the strongest effect ($B = 0.54, \beta = 0.43, t = 5.10, p \leq 0.001$), followed by PLE ($B = 0.49, \beta = 0.35, t = 4.56, p \leq 0.001$), suggestive of positive contributions of AI in education in learners' perception. However, apprehensions about over-dependence on AI, accuracy issues, and need for structured guidance were identified as the obstacles. Overall, the outcomes indicate cautious optimism among Saudi EFL learners and highlight the importance of institutional training, awareness, and clear pedagogical frameworks to ensure responsible and future-ready AI integration in English language education.

Keywords: *AI-Supported Learning, EFL Education, Student Attitudes, Learning Engagement, Speaking Confidence, Academic Achievement*

Introduction

EFL classrooms depend on communication, exposure to interactive activities, and learner engagement and participation to generate linguistic confidence (Mardhatillah & Suharyadi, 2023). From teachers' vantage, engaging in meaningful activities in the classroom enable learners to achieve fluency and engage meaningfully with learning materials (Amin, 2023). The EFL classroom also fosters cultural sensitivity in learners as they are exposed to another culture through language (Nurhidayat et al., 2024). Further, group activities help maintain continuity of communication opportunities (Chaves-Yuste & De-La Pena, 2023). The inherent features of interaction, guided practice, and reflection in the EFL classroom train learners in strategies to cope with a range of communicative demands (Hidayat et al., 2024).

Language use opportunities and feedback mechanisms in AI models have certain unique advantages for EFL learners. AI thus renders the learning process dynamic with adaptive and

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individualized feedback. The AI systems offer diverse exposure to English using simulations, situational illustrations, and automated proposals. These characteristics enable creating environments in which the learners are free to communicate with the language more naturally and coherently (Zhai et al., 2024). Learning can be continuous and beyond the classroom with AI tools as they generate positive feedback to reinforce language structures and allow them to acquire fluency, without losing motivation during their academic development (Xu & Li, 2024). Individual learning styles and preferences are well served by AI tools in the language classrooms. Moreover, these tools expand practice opportunities, improving language exposure, thus furthering learners' English proficiency (Dai & Liu, 2024, Zou et al., 2023).

Previous studies in EFL and AI were founded on the general technology acceptance models and have not greatly focused on the cognitive and interactive roles of AI in EFL. The present research addresses this research gap by adopting mixed-method analysis, thematic analysis, and direct statistical tests to define the relationship between learners' perceptions and academic performance.

The study answers the following research questions:

- How do Saudi EFL learners perceive and respond to the integration of AI tools in university-level English classrooms?
- What is the relationship between learners' attitudes toward AI, engagement with AI-mediated activities, and their academic performance in EFL?
- What are the perceived benefits, challenges, and considerations of AI-assisted learning as reported by Saudi EFL students?

Related Works

The role of attitudes towards AI, immediacy of feedback, and efficacy in influencing willingness of learners to communicate was investigated using four questionnaires to collect data from EFL learners (Zhi & Wang 2024; Albelihi & Al-Ahdal, 2024). Results proved that more favorable attitudes towards AI and positive teacher relations enhance willingness to communicate. Study limitations included application of self-reporting, cross-sectional design, and a sample confined to a specific setting. Knowledge and attitudes of pre-service teachers of English to AI were studied in this study placed in Slovakia in addition to determining how they integrated AI in teaching EFL, and whether it was included in the curriculum (Pokrivcakova, 2023; Aljabr & Al-Ahdal, 2024). In general, knowledge, attitudes and practices in a cross-sectional format indicated positive attitudes and curriculum support though some limitations, such as self-report instruments, and sample of one country were also reported.

Role of using AI applications on mobile devices in enhancing English proficiency in EFL university students in Indonesia was examined (Arini et al., 2022). This was a pre-posttest non-equivalent control group study that compared how an experimental group using NovoLearning fared compared to the control group. Results showed high competence and positive attitudes among the experimental group. Its limitations were sampling size and peculiarity of the context. The research highlighted the views, attitudes, and concerns of EFL students about AI-based teaching and learning, including demographic aspects (Jamshed et al., 2024). Findings showed that learners generally had positive attitudes, perceived implementation challenges were generally positive with some variation in study level; parental education did not create significant differences neither did residential background. Weaknesses of the study were self-reporting and single-institution sample.

Chatbot affordances in EFL elementary classrooms and their influence on learners' motivation were examined with a sample of thirty-six Korean students enrolled in a 16-week dialogue course with the assistance of Dialog flow chatbots (Jeon, 2024). Certain pedagogical, technological, and social affordances were examined in this study (Zitouni et al., 2021).

Research Gap

Previous research has established positive attitudes toward AI and language improvement but based on self-reported measures and cross-sectional designs (Zhi & Wang, 2024). Another study showed positive learner attitudes to AI but was limited to one-country samples and self-report measures (Pokrivcakova, 2023). Experimental data demonstrated enhancement of proficiency, but it was circumstantially and instrumentally specific (Arini et al., 2022). The present research filled these gaps with mixed evidence, multiple attitudinal and performance variables, and a Saudi EFL setting.

Materials and Methods

The purpose of this research is to examine Majmaah University EFL students' attitudes towards AI and the relationship thereof with learning outcomes. A mixed-methods research design is employed to examine Saudi undergraduate learners' attitudes towards integrating AI in the EFL classroom. Attitudes are measured quantitatively with a validated questionnaire, and findings are reinforced with qualitative data from semi-structured interviews. The design is chosen to identify both quantifiable trends and contextualization of the perceptions of learners.

Data Collection Procedure

The study used a validated questionnaire to collect quantitative data from 102 Majmaah University EFL students to assess their attitudes to the integration of AI in EFL, their perceived learning efficacy, engagement, ease of use, and concerns, if any. Semi-structured interviews with a purposive group of participants were used to gather qualitative data to triangulate findings.

Research Participants

Study sample comprised 102 undergraduate EFL learners at Majmaah University, Saudi Arabia. This was a convenience sample since the study questions could be answered by learners who were exposed to AI tools as supplementary learning support. The sample included both male and female learners aged 18-26 years, representing typical demographic characteristics of EFL learners in KSA. Table 1 summarizes all relevant information about the participants.

Table 1: Demographic data

Variable	Category	Frequency (n=102)	Percentage (%)
Gender	Male	48	47.1
	Female	54	52.9
Academic Level	1st Year	25	24.5
	2nd Year	30	29.4
	3rd Year	28	27.5
	4th Year	19	18.6
Age Group (years)	18–20	40	39.2
	21–23	50	49.0
	24–26	12	11.8
Field of Study	Humanities	30	29.4
	Sciences	35	34.3
	Business	37	36.3
Prior Experience with AI	None	45	44.1
	Basic	38	37.3

	Advanced	19	18.6

Instruments

Study instruments are an attitude questionnaire and semi-structured interviews.

Quantitative Instrument: A structured questionnaire using five-point Likert scale with survey items eliciting perceptions on usefulness, ease of use, engagement, personalized support, and risks of AI in EFL.

Qualitative Instrument: Semi-structured interviews to obtain data on learners' experiences of using AI, feedback quality perceptions, expectations of classroom implementation, accuracy, and over-reliance concerns.

Variables

The application of AI in EFL instruction is evaluated using six variables: Attitude toward AI Integration (AAI), Perceived Learning Effectiveness (PLE), Engagement with AI Tools (EAT), and Digital Comfort (DC) show the perceptions and preparedness of learners, whereas Self-Confidence in Speaking (SCS) and Language Performance (LP) reflect the results of AI-aided learning.

- **AAI:** It is the general perception and desire of the learners to embrace AI in EFL classrooms which depicts their preparedness, acceptance, and readiness to improve engagement and individual learning.
- **PLE:** Learners believe that AI tools enhance English language proficiency by improving their grammar, vocabulary, and fluency which affects their academic achievement.
- **EAT:** It is the frequency, intensity, and active participation of learners in AI-mediated activities, indicating motivation, attention, and involvement in EFL tasks facilitated by AI platforms.
- **DC:** It is the confidence and comfort of the learners in using AI and digital platforms which are indicative of technological preparedness.
- **SCS:** It is the perceived ability and confidence of learners in oral communication using English that reflects their fluency, coherence, and motivation to communicate through AI tools.
- **LP:** It is the quantifiable academic performance, grades, and proficiency level which indicate how learning with AI affects English language proficiency.

Questionnaire

The perceptions of learners towards AI in EFL classrooms are measured using a structured questionnaire with WH-format Likert-scale items. The scale contained six items, where two statements measure each construct on a five-point scale as shown in Table 2.

Table 2: Questionnaire on learners' perceptions of AI in EFL classrooms

Variable	Questions
AAI	Why do I believe that using AI in English learning is beneficial for me?
	How willing am I to accept and use AI tools in my English classes?
PLE	How effectively do I think AI helps me improve my English skills (grammar, vocabulary, fluency)?
	To what extent do I believe AI increases the overall effectiveness of my English learning?
EAT	How often do I feel that I engage actively with AI tools during English learning?
	How much do I believe AI increases my motivation in English learning tasks?

DC	How confident am I when using AI and digital tools for English learning?
	What level of comfort do I feel when exploring or using new AI tools?
SCS	How much do I feel AI-supported practice improves my confidence in speaking English?
	In what ways do I feel AI helps me to speak English more fluently?
LP	How much do I believe AI-assisted learning improves my English language performance?
	To what extent do I feel AI helps improve my English grades or proficiency level?

Statistical Analysis

The relationship between the perceptions and interactions of learners with AI and speaking confidence and academic performance was examined. This section discusses overall patterns, relationships, group differences, and predictive effects. Descriptive statistics, Pearson's correlation, independent samples t-tests, and linear regression were used. All quantitative parameters were analyzed with IBM SPSS version 26; for the qualitative component, thematic analysis was used to identify recurring patterns and interpret learner perspectives on AI integration.

Descriptive Statistics

Descriptive statistics is employed to generalize the perceptions of learners, their engagement behaviors, and scores related to results. It is represented as equation (1)

$$S = \sqrt{\frac{\sum|x-\bar{x}|^2}{n-1}} \quad (1)$$

In Equation (1), S is the standard deviation, x is each score, $\bar{x}$ is the mean score, n is the sample size, Σ is the summation of squared deviations, and M denotes the mean score, SD indicates Standard Deviation, Min represents the minimum value, and Max represents the maximum observed value.

Table 3: Descriptive Analysis of Learners' Perceptions and Performance

Variable	M	SD	Min	Max
AAI	3.87	0.61	2.00	5.00
PLE	3.92	0.67	2.50	5.00
EAT	3.78	0.72	2.00	5.00
DC	3.95	0.64	2.00	5.00
SCS	3.81	0.69	2.00	5.00
LP	3.88	0.58	2.00	5.00

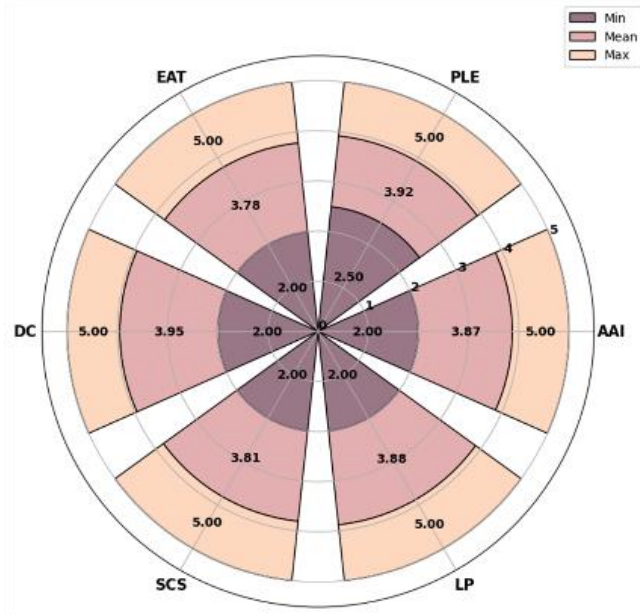

Figure 1: Regression coefficients comparing predictor contributions

Table 3 and Figure 1 show that learners' perceptions of AI use are mostly positive and significant with a mean of 3.78 in EAT and 3.95 in DC. The range of SD, between 0.58 (LP) and 0.72 (EAT), indicates consistency of responses, proving that the perceptions and interactions of the learners with AI are significant in their writing confidence and academic performance.

Pearson's Correlation

Pearson's correlation measures the intensity and direction of the linear connection between the variables of interest to ascertain the relationship between changes in one measure and changes in another. It is expressed as equation (2)

$$r = \frac{\sum(x_i-\bar{x})(y_i-\bar{y})}{\sqrt{\sum(x_i-\bar{x})^2\sum(y_i-\bar{y})^2}} \quad (2)$$

In Equation (2), r represents the Pearson correlation, x_i and y_i are denoted as paired values, $\bar{x}$ and $\bar{y}$ are their means, Σ indicates summation, and the denominator reflects the product of squared deviations for both variables.

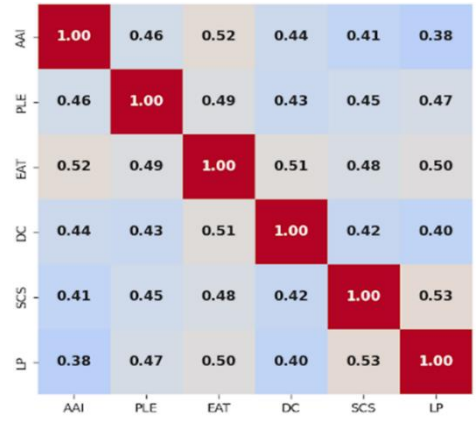

Figure 2: Intercorrelation heatmap illustrating associations between the six constructs

Figure 2 displays Pearson's correlation computations that indicates the magnitude and direction of the relationship between the six variables. Due to the fact that all variables are perfectly correlated with themselves, the diagonal values are 1.00. The matrix demonstrates moderate positive relationships, which implies significant, multicollinearity between variables, and these factors' devotion to AI is positively correlated with the improved results in EFL learning.

Linear Regression

Linear regression analyzes the predictive capacity of AI-mediated learning on the outcome variables by approximating the direction and intensity of the relationship between AI use and each of the measured indicators. It is represented as equation (3)

$$Y_i = \beta_0 + \beta_1 X_i \quad (3)$$

Where, Y_i is the predicted outcome, β_0 is the intercept, β_1 is the regression coefficient, and X_i is the predictor value, which describes how changes in AI-related measures influence corresponding outcome indicators, B denotes the unstandardized coefficient, β defines standardized coefficient, t represents the test statistic, p produces significance value, and SE is the standard error.

Table 4: Regression Analysis of AI-Related Variables Predicting Outcomes

Predictor Variable	B	β	t	p	SE
AAI	0.38	0.26	3.61	0.001	0.105
PLE	0.49	0.35	4.56	<.001	0.107
EAT	0.54	0.43	5.10	<.001	0.106
DC	0.43	0.34	4.02	<.001	0.107
SCS	0.41	0.31	4.17	<.001	0.098
LP	0.46	0.38	4.59	<.001	0.100

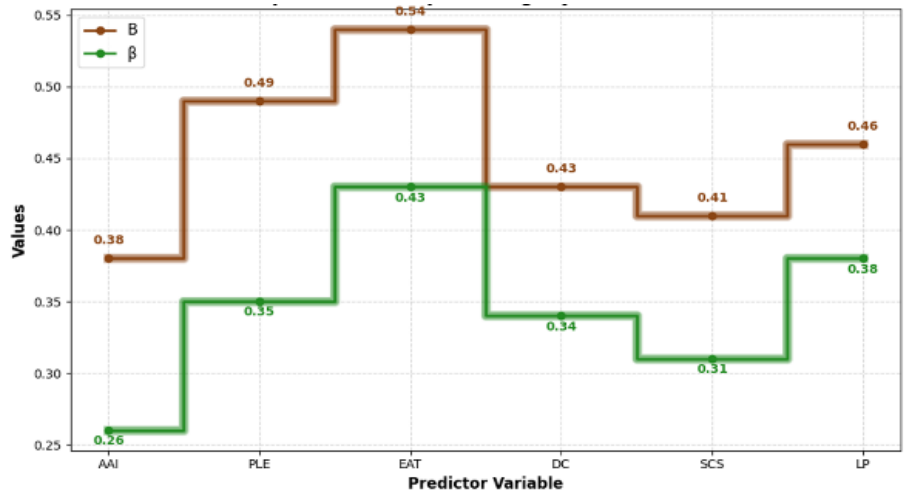

Figure 3: Radar chart illustrating score ranges across all learner constructs.

Table 4 and Figure 3 indicate the predictor's significant impact on learning outcomes ($p \leq 0.001$). EAT demonstrated the strongest effect on academic outcomes (B = 0.54, β = 0.43, t = 5.10), followed by PLE, which also showed a substantial positive influence (B = 0.49, β = 0.35, t = 4.56). Each variable has a positive and significant contribution, which indicates that the perceptions and interaction of learners with AI are significant to enhance speaking confidence

and overall learning performance.

Qualitative Analysis

Thematic coding was used to interpret the qualitative data as summarized in Table 5.

Table 5: Thematic Insights into EFL Learners' AI Experiences

Analytic Framework	Concept	Themes	Sub-themes
Learner Attitudes toward AI	Perceived Value of AI	Positive Attitudes	Increased motivation, supportive learning experience
		Cautious Attitudes	Awareness of limitations, selective use
Learning Engagement	AI-mediated Interaction	Engagement Enhancement	Active participation, sustained interest
		Learning Support	Immediate feedback, personalized assistance
Affective Response	Emotional Impact	Confidence Building	Reduced anxiety, improved speaking confidence
		Enjoyment	Interactive learning, reduced boredom
Learning Autonomy	Self-Regulation	Independent Learning	Self-paced practice, self-correction
		Dependency Concerns	Over-reliance on AI has reduced critical thinking
Pedagogical Awareness	Responsible Use	Accuracy and Trust	Reliability concerns, content verification
		Instructional Guidance	Need for teacher supervision and awareness

Table 5 shows the qualitative interpretations in terms of themes gleaned from the semi-structured interviews which establish a connection between the attitude of learners, engagement, affective response, autonomy, and awareness about the use of AI. It identifies motivations, concerns, and support needs, which give an insight into how AI affects EFL learning behaviors and perceptions. These concepts explain why AI inclusion promotes interaction, trust, and self-control, determine dependency and moral implications, and guide teachers to create responsible and efficient AI-mediated EFL classrooms.

Discussion

The EFL learners' attitudes about usage of AI, as well as how it affected their academic performance and writing confidence were examined in this study. Some of the limitations of the previous studies on AI in EFL contexts reported promising results, but were based on self-report questionnaires, a cross-sectional design, and a small sample which constrained generalizability of results (Zhi & Wang, 2024). Self-report instruments were also used in a single-country sample by Pokrivcakova (2023), limiting the applicability. Arini et al. (2022) designed a pre-posttest experiment with a small experimental group, diminishing external validity. Jamshed et al. (2024) was a one-institution survey, and Jeon (2024) used a very small sample to examine the outcomes of chatbot-based learning. The current research overcomes the earlier limitations due to the mixed-method design with a large sample of 102 participants from different academic levels, and

includes six variables which provides strong, general, and comprehensive perspectives on AI-assisted learning. The findings suggested that positive attitudes and active interactions with AI significantly affected the speaking confidence and academic achievements of EFL learners which indicated the significance of interactive, personalized, and structured AI-based learning.

Conclusion

The attitude of EFL learners towards AI and its effects on speaking confidence and academic performance is investigated. The study sample comprised 102 EFL learners at Majmaah University enrolled at various academic levels and with previous AI experience. The data are gathered through a validated questionnaire that included six variables, namely, AAI, PLE, EAT, DC, SCS, and LP, and findings were complemented with semi-structured interviews. Quantitative analyses, linear regression, Pearson's correlation, and descriptive statistics were performed with the help of IBM SPSS v26. Results indicate learners' positive attitudes, with EAT having the highest predictive value $B = 0.54, \beta = 0.43, t = 5.10, p \leq 0.001$) followed by PLE ($B = 0.49, \beta = 0.35, t = 4.56, p \leq 0.001$) which prove that attitudes of the learners towards AI and their interaction with it increased speaking confidence and academic results.

Recommendations

The study recommends employing AI in EFL classes to achieve learning outcomes, enhancing speaking confidence, and learner engagement. Structured guidance and training, alongside technology awareness programs should be offered in institutions. It is suggested that the teachers should integrate AI with other aids, observe student interactions, and create individual and interactive activities to optimize learning outcomes.

Limitations

Given the narrow scope of the current study, future research can be extended to various universities and regions to increase the generalizability of the results, use longitudinal research designs to monitor change, and combine objective measures of performance with self-reports. The current research was constrained by a single-institution sample, self-report tools, cross-sectional design, and situation-specific results, which decreased the scope of applications of findings to other contexts.

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