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The Role of Artificial Intelligence in Enhancing Translation Skills: EFL Instructors' Perspectives at King Khalid University

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***Abstract*—This study explores the integration of artificial intelligence (AI) tools in the teaching of translation within the English as a foreign language (EFL) program at King Khalid University. The aim was to assess the perceptions and attitudes of faculty regarding the effectiveness, challenges, and cultural adaptability of AI-driven learning systems in translation education. Descriptive statistical analysis of survey data reveals overwhelmingly positive attitudes toward AI integration, with high levels of agreement on its benefits for enhancing translation accuracy, pedagogical efficiency, student engagement, and confidence. However, the participants identified several challenges, including insufficient institutional support, a lack of training, ethical concerns, and difficulties in selecting appropriate tools. Although AI tools were perceived as valuable in improving linguistic skills and providing immediate feedback, their limitations in addressing cultural nuances and fostering learner autonomy were noted. The findings underscore the need for comprehensive institutional strategies, including targeted professional development, infrastructure enhancement, and culturally responsive AI design, to ensure effective and responsible implementation. This study contributes to the growing body of research on AI in language education and offers practical insights for educators, policymakers, and technologists who aim to integrate AI in EFL contexts.**

***Index Terms*—King Khalid University, role of artificial intelligence, EFL students, perspectives of instructors, translation skills**

I. Introduction

Recent advancements in artificial intelligence (AI) have profoundly transformed global educational practices. In general, AI offers innovative tools to enhance teaching and learning across disciplines. In the field of English as a foreign language (EFL) instruction, AI technologies have emerged as valuable assets for developing translation skills, which constitute an essential component of linguistic competence, cultural literacy, and effective global communication. Real-time error correction, personalized feedback, and adaptive learning environments promote learner autonomy, critical thinking, and self-regulated learning; these tools effectively complement traditional pedagogical approaches (Albahiri et al., 2025; Hwang & Coss, 2025). Within Saudi Arabia, institutions such as King Khalid University are increasingly integrating AI in alignment with the national priorities outlined in Saudi Vision 2030, which emphasizes digital transformation as a key driver of educational reform and socioeconomic development (Al-Shahrani et al., 2025). However, while AI-powered tools, such as machine translation (MT) engines, chatbots, and intelligent tutoring systems, offer scalable and personalized learning experiences, they also present complex pedagogical and ethical challenges. Concerns have emerged that overreliance on generative AI tools, including ChatGPT, may undermine academic integrity by evading the cognitive demands of translation tasks, which may impede the development of critical thinking and original language production skills (Darling-Hammond et al., 2020). Educators must adopt thoughtful instructional designs, inclusive pedagogical strategies, and continuous professional development to implement AI tools effectively in EFL translation instruction, especially within the multicultural and multilingual context of Saudi higher education. Teachers need digital and pedagogical competencies to integrate AI ethically and equitably while addressing the linguistic and cultural diversity of their students (Altamimi, 2025). Additionally, the success of AI-enhanced pedagogy depends on the readiness and attitudes of instructors and learners, which are shaped by technological self-efficacy, digital literacy, and trust in the educational value of AI. Despite the growing presence of AI in education, empirical research that specifically examines its role in EFL translation instruction within the Saudi context is lacking. Only a few studies have explored how AI tools are currently being integrated into translation pedagogy, how effectively they address the linguistic and cultural needs of students, or how educators balance innovation with established teaching practices. This gap is particularly pressing given the need for culturally responsive and pedagogically sound AI applications in diverse EFL classrooms. Therefore, this study aims to investigate the integration of AI technologies in EFL translation instruction at King Khalid University. Current usage patterns are explored, faculty's perceptions and readiness are assessed, and the key challenges and opportunities associated with AI adoption are identified. Ultimately, this research seeks to provide strategic, evidence-based recommendations for the effective and ethical use of AI to increase translation proficiency, support sustainable

educational innovation, and align with the goals of Saudi Vision 2030 and international benchmarks for quality education (UNESCO, 2021).

II. Literature Review

A. Concept of Artificial Intelligence

AI is considered one of the most advanced and rapidly evolving fields within computer science; it focuses on defining the nature and dimensions of human intelligence and then attempting to simulate certain aspects of it via computational methods. The goal of AI is not to compare or equate the human mind—created by God—with machines, which are human-made tools, but rather to understand the complex cognitive processes involved in human thinking and translate them into corresponding computer algorithms that can enhance the ability of a machine to solve intricate problems. AI aims to develop intelligent systems and software capable of mimicking human behavior, such as the ability to think, see, hear, speak, and move (Ismail & Ahmed, 2023). As Al-Sayyid (2004) described, AI is a combination of science and engineering that enables computers to perform tasks requiring human-like intelligence, including comprehension, speech, vision, and reasoning. Similarly, Arnous (2008) defines AI as a subfield of computer science that focuses on intelligent computer systems that possess features associated with human-like intelligence, decision making, and behavior, particularly in areas such as language processing, learning, reasoning, and problem solving.

B. Features of Artificial Intelligence

Artificial intelligence (AI) is revolutionizing education by enabling personalized, efficient, and accessible learning experiences through the analysis of large datasets that adapt instruction to individual student needs, thereby enhancing engagement and effectiveness (Al-Sayyid, 2004; Ismail & Ahmed, 2023). AI automates routine tasks such as grading, allowing educators to focus on more complex teaching activities (Arnous, 2008), while also supporting learners with disabilities through assistive technologies and fostering language development via natural language processing (Al-Sayyid, 2004). Theoretically, AI models cognitive functions including reasoning and learning by managing symbolic processing, uncertainty, and experience-based adaptation, which facilitates flexible decision-making in educational settings (Al-Sayyid, 2004). These capabilities collectively empower AI to enhance learner autonomy, improve instructional precision, and promote inclusive access to education.

C. Importance of Using Artificial Intelligence in Higher Education

AI significantly transforms education by enabling personalized learning experiences that cater to the individual abilities, cognitive styles, and learning speeds of students. When large datasets on student performance are analyzed, AI creates adaptive learning pathways that help improve academic outcomes, close learning gaps, and increase engagement. AI also enhances teaching efficiency by automating assessments, delivering real-time feedback, and generating customized instructional materials tailored to diverse learner needs. In higher education, AI supports second language acquisition and helps bridge knowledge gaps, which can accelerate skill development. Importantly, AI promotes educational equity by expanding access to high-quality resources for marginalized groups, including students with disabilities, refugees, and learners in remote or underserved areas. These digital tools and platforms offer flexible and inclusive learning opportunities that support autonomous learning and critical thinking. As such, AI integration into education is more than a technological trend: it is a strategic move aligned with global digital transformation and sustainable development goals, which can reshape education into a more intelligent, responsive, and inclusive system that prepares learners for the challenges of the future.

D. AI Translation Technologies

Teacher training and teacher education represent two distinct approaches to preparing language teachers. Teacher training focuses on practical solutions and adherence to prescribed curricula, whereas teacher education emphasizes a comprehensive understanding of the theoretical principles underlying teaching practices (Johnson, 2009). Simultaneously, AI translation technologies have evolved from rule-based systems to neural models, which can greatly improve language learning by enhancing translation accuracy and learner engagement (Lee, 2020). Google Translate and similar tools support vocabulary acquisition, fluency, and communication skills in the EFL context. Moreover, AI applications in education, such as automated grading and adaptive feedback systems, facilitate personalized learning by reducing cognitive load and promoting motivation and proficiency (Davis, 1985; Guo et al., 2022).

E. Previous Studies

Previous research has extensively explored the integration of AI and MT tools in language learning and translation training, highlighting their potential benefits and challenges. Niño (2009) reported that while students appreciated tools such as Google Translate for vocabulary building and understanding sentence structures, instructors were concerned about overreliance and the risk of errors in meaning and syntax. Subsequent studies, such as that of Aljohani (2021), reported positive attitudes among EFL teachers and students in Saudi Arabia toward AI integration, emphasizing its usefulness in language acquisition. Bowker (2020) demonstrated how MT post-editing tasks can enhance MT literacy, which fosters critical thinking and editing skills in translator training. Similarly, Lee (2020) showed that guided use of Google Translate

could improve the reading and writing skills of students, although instructors stressed the need for critical engagement. Fan et al. (2023) investigated ChatGPT as a feedback tool and reported that it improved lexical diversity and cohesion, whereas human feedback remained more effective for syntactic accuracy, which suggests a complementary role for AI. Alshahrani (2024) noted that while tools such as ChatGPT and Duolingo were praised for promoting engagement and personalization, concerns remained regarding teacher preparedness and potential misuse. Hazaymeh et al. (2024) reported that instructors generally hold favorable views of AI for enhancing teaching and learning strategies, although challenges such as a lack of training persist regardless of teaching experience. Lin et al. (2024) supported these findings, highlighting the capacity of AI to reduce workload and support learner autonomy, alongside concerns about ethics, assessment, and job security. Collectively, the literature underscores the value of AI in supporting translation education via personalized feedback, vocabulary development, and autonomy while cautioning against its uncritical use. Notably, effective AI integration should complement rather than replace human instruction and must be supported by clear institutional policies, continuous professional development, and context-specific pedagogical approaches (Bahari & Hashim, 2021; Lin & Lee, 2022). While educators are optimistic about the potential of AI to enhance language instruction and reduce workload, issues such as student dependency, validity of assessments, and insufficient training remain critical (Chen et al., 2023). Despite widespread scholarly attention, a literature gap remains in the in-depth exploration of the experiences of educators and learners with AI in Saudi EFL contexts, particularly in translation instruction. This study addresses this gap by investigating how AI tools are utilized to increase translation proficiency among EFL students at King Khalid University. The aim is to gather insights for informing future pedagogical practices and policy development in AI-assisted language education.

The study is guided by three research questions:

1. How are AI tools currently implemented in teaching translation skills within EFL programs at King Khalid University, and what challenges do educators face when these tools are integrated with traditional teaching methods?
2. What are the perceptions and attitudes of faculty toward the use of AI technologies in EFL translation education?
3. To what extent do AI-driven learning systems support the diverse cultural and linguistic needs of Saudi EFL learners?

Furthermore, this study considers sociocultural factors affecting AI adoption (Al-Surimi, 2020), the importance of stakeholder attitudes, and the balance between AI tools and human translation skills (Kiraly, 2015). In alignment with Saudi Vision 2030 (2016), this research seeks to inform the strategic integration of AI in EFL translation pedagogy.

III. Methodology

A. Research Approach

Descriptive research was applied as a study methodology to explore the views of 100 EFL instructors at King Khalid University on the role of AI in improving the translation skills of students. A questionnaire served as the main data collection tool for gathering current insights into the perceptions of instructors (Dörnyei & Taguchi, 2010). The descriptive survey method allows for systematic analysis of trends and attitudes within a specific timeframe (Creswell & Creswell, 2018; Fraenkel et al., 2019). The findings were objectively interpreted to provide relevant insights within the broader educational context.

B. Participant Recruitment and Sampling

Participants in this study comprised 100 EFL instructors from King Khalid University. To ensure a representative sample and reduce selection bias, a simple random sampling technique was utilized. A comprehensive list of EFL instructors was collected from the university's faculty database, and participants were randomly chosen using a pseudo-random number generator. This approach ensured that each instructor had an equal chance of being included in the study. Invitations to participate in the research were sent via official university email, explaining the purpose of the study, ensuring confidentiality, and requesting voluntary participation. Instructors who agreed to participate completed the questionnaire electronically. This method of random sampling and voluntary participation helped to boost the appropriateness and reliability of the results while also diminishing potential bias in the process of selection.

C. Demographic Characteristics of the Research Sample

Frequencies and percentages were calculated for the members of the research sample in accordance with the specific demographic variables. The primary variables that were examined included the following:

(a). Years of Experience

The participants in the study were grouped according to their years of academic experience, categorized as less than 5 years, between 5 and 15 years, and more than 15 years. The distribution is presented in Table 1.

TABLE 1
FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE VARIABLE "YEARS OF EXPERIENCE"

Categories	Frequency	Percentage (%)
Less than 5 years	10	10%
From 5 years to 15 years	20	20%
15 years or more	70	70%
Total	100	100%

Approximately 70% of the respondents had more than 15 years of academic experience, which ensures that the study would primarily reflect the insights of seasoned scholars with deep expertise. Approximately 20% are middle-career academics with 5–15 years of experience who have provided valuable perspectives on evolving trends. The remaining 10% were early-career academics, who have contributed fresh views on emerging pedagogical approaches. This balanced distribution across career stages strengthens the study findings by capturing a wide spectrum of academic perspectives.

(b). Academic Qualifications

TABLE 2
FREQUENCY AND PERCENTAGE DISTRIBUTIONS OF THE VARIABLE "ACADEMIC QUALIFICATION"

Academic Qualification	Frequency	Percentage (%)
Bachelor's Degree	13	13%
Master's Degree	26	26%
Doctorate (PhD)	61	61%
Total	100	100%

The data indicate that a substantial majority of the study sample (61%) possessed a doctorate degree, which indicates a highly qualified and academically advanced cohort. Similarly, 26% of the participants held a master's degree, representing a significant proportion of those with advanced postgraduate qualifications. Only 13% of the sample holds a bachelor's degree, which suggests that individuals with solely undergraduate credentials are underrepresented. This distribution implies that the sample primarily comprises well-educated faculty members or professionals, likely affiliated with specialized academic or research institutions. The predominance of doctorate holders contributes to the robustness and credibility of the research findings, whereas the limited presence of bachelor's degree holders may reflect the specialized nature of the setting, where higher academic qualifications are customary or needed.

D. Instruments

A structured questionnaire was used as the primary data collection tool and was designed to address the study objectives effectively by capturing standardized and comparable responses.

E. Validity of the Research Instrument

A panel of experts reviewed the questionnaire for clarity, relevance, and completeness to ensure the validity of the instrument used in this study. Their feedback was incorporated to enhance content validity and ensure accurate measurement of the intended constructs.

F. Internal Consistency Reliability

Internal consistency was assessed by calculating correlation coefficients between each item and the total score within its dimension. The items could reliably measure their respective constructs.

TABLE 3
PEARSON CORRELATIONS BETWEEN EACH ITEM AND OVERALL ATTITUDES TOWARD AI IN TRANSLATION TEACHING

Item Number	Statement	Correlation Coefficient
1	I trust AI tools to provide accurate translation assistance	0.547**
2	AI technology enhances my teaching effectiveness	0.695**
3	Using AI in the classroom increases student engagement	0.744**
4	I am interested in learning more about AI tools for translation teaching	0.669**
5	AI tools help reduce the instructors' workload in translation teaching	0.700**
6	AI tools can motivate students to improve their translation skills	0.658**
7	I believe AI tools can significantly support translation teaching	0.702**
8	I feel confident using AI tools to assist students in translation tasks	0.768**
9	AI tools complement traditional teaching methods effectively	0.778**
10	The integration of AI in translation teaching aligns with modern educational trends	0.668**

Table 3 shows the Pearson correlation coefficients between each questionnaire item and the overall construct of attitudes of instructors toward the use of AI in translation teaching. All the items are statistically significant at $p < 0.01$, indicating strong internal consistency and construct validity (Field, 2018). The correlation values ranged from $r = 0.547$ to $r = 0.778$. According to Cohen (1988), this range reflects moderate to strong positive relationships. The highest correlation ($r = 0.778$) was with the ninth item about AI as a complement to traditional teaching. The eighth item ($r = 0.768$) highlights the importance of instructor confidence in the use of AI tools. The lowest correlation ($r = 0.547$) was

with the first item about trust in the translation accuracy of AI. While still moderate, this value suggests some reservations about AI reliability in translation tasks. This finding aligns with the literature highlighting concerns over AI-generated errors (Koponen, 2016; Bowker, 2020). Overall, the findings suggest that positive attitudes are driven by confidence and perceived usefulness, whereas concerns about accuracy remain a barrier. These insights can help guide the integration of AI in translator training programs.

TABLE 4
PEARSON CORRELATIONS BETWEEN EACH ITEM AND "CHALLENGES IN IMPLEMENTING AI IN TRANSLATION TEACHING"

Item Number	Statement	Correlation Coefficient
1	There is insufficient institutional support for incorporating AI in teaching	0.620**
2	The time required to learn and implement AI tools is a barrier	0.797**
3	Students sometimes rely too heavily on AI tools, reducing their learning effort	0.749**
4	Lack of sufficient training limits my ability to use AI tools effectively	0.807**
5	AI tools are not always compatible with the curriculum requirements	0.723**
6	There is a lack of clear guidelines on how to use AI tools in translation teaching	0.732**
7	Limited access to AI resources and technology hinders their use in class	0.821**
8	I find it difficult to select appropriate AI tools for translation teaching	0.781**
9	I am concerned about the ethical implications of using AI in language teaching	0.680**
10	Technical problems frequently disrupt the use of AI tools	0.783*

Table 4 shows the Pearson correlations between each item and the overall construct of *"*challenges in implementing AI in translation teaching*."* All the items show significant positive correlations ($p < 0.001$), confirming their relevance to the perceived challenges. The strongest correlations were related to practical barriers: limited access to AI tools (r = 0.821), lack of training opportunities (r = 0.807), and the time required to learn and use AI (r = 0.797). These findings highlight the key obstacles faced by educators. Technical issues also rank high. Problems during implementation (r = 0.783) and difficulty in selecting suitable tools (r = 0.781) point to usability and system complexity as major concerns. Moderate correlations are found for institutional support (r = 0.620) and ethical concerns (r = 0.680). While important, these items are viewed as secondary to more immediate practical issues. In summary, the main challenges to AI integration in translation teaching are access, training, and time. Addressing these issues can support more effective and sustainable use of AI in the classroom.

TABLE 5
PEARSON CORRELATIONS BETWEEN EACH ITEM AND THE PERCEIVED EFFECTIVENESS OF AI TOOLS IN ENHANCING THE TRANSLATION SKILLS OF STUDENTS

Item number	Statement	Correlation Coefficient
1	AI tools improve students' vocabulary and grammar in the target language	0.782**
2	AI assists students in understanding cultural nuances in translation	0.795**
3	The use of AI in translation teaching leads to better overall student performance	0.764**
4	Using AI encourages students to learn from their translation mistakes	0.790**
5	AI tools can effectively supplement teacher feedback in translation	0.754**
6	AI tools help students produce more accurate translations	0.838**
7	AI tools provide useful immediate feedback to students during translation tasks	0.790**
8	Students show greater confidence in their translation abilities when using AI tools	0.699**
9	AI tools help students develop critical thinking skills related to translation	0.645**
10	AI tools foster independent learning among EFL students	0.731**

Table 5 shows the significant and positive correlations (r = 0.645–0.838) between specific uses of AI tools and their perceived effectiveness in improving the translation skills of students. The highest correlation (r = 0.838) is with the belief that AI helps students produce more accurate translations, which highlights the advantage of using AI for grammar and vocabulary support. Strong correlations (r = 0.790) also appear for understanding cultural nuances, learning from mistakes, and receiving immediate feedback, which reveals the role of AI in deep learning. Moderate correlations (r = 0.645–0.731) are related to student confidence, critical thinking, and independent learning, which suggests increased educational benefits depending on how AI is used. Overall, AI tools are viewed as valuable not only for improving accuracy but also for supporting reflection, autonomy, and critical engagement in translation learning.

G. Reliability of the Research Instrument

In the assessment of the reliability of the questionnaire, Cronbach's α coefficients were calculated for the items associated with each primary axis. As a widely accepted measure of internal consistency, Cronbach's α evaluates the extent to which items within a given scale are interrelated and collectively capture the intended latent construct. The resulting coefficients indicated satisfactory levels of internal consistency across all axes, which affirms the reliability and coherence of the instrument in measuring the targeted dimensions.

TABLE 6
CRONBACH'S α RELIABILITY COEFFICIENTS FOR THE RESEARCH INSTRUMENT AXES

Axis No	Axis Title	Number of Items	Cronbach's Alpha Value
Axis 1	Overall attitudes toward AI in translation teaching	10	α = 0.83
Axis 2	Challenges in Implementing AI in Translation Teaching	10	α = 0.78
Axis 3	Perceived Effectiveness of AI Tools in Enhancing Students' Translation Skills	10	α = 0.91
Overall Instrument		30	0.89

The reliability analysis of the research instrument, as indicated by Cronbach's α coefficients, demonstrated a high level of internal consistency across all three axes. In particular, the values for Axis 1 (α = 0.83), Axis 2 (α = 0.78), and Axis 3 (α = 0.91) suggest good to excellent reliability, and the overall instrument is α = 0.89. According to George and Mallery (2003), α values greater than 0.70 are generally considered acceptable, values greater than 0.80 are good, and values greater than 0.90 are excellent. Therefore, these results confirm that the instrument is not only reliable but also suitable for measuring attitudes, challenges, and perceptions regarding the use of AI in translation teaching.

IV. RESULTS

A. Results for Research Question 1

Implementation of AI tools in teaching translation within EFL programs at King Khalid University

Means and standard deviations were calculated for the items in the first section of the survey to investigate how AI tools are integrated into translation teaching within EFL programs at King Khalid University and identify related challenges.

These items focus on educators' perceptions of the benefits of AI in higher education. Responses were recorded via a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Table 7 presents the means and standard deviations for these items and summarizes the attitudes and experiences of participants with AI in translation instruction.

TABLE 7
DESCRIPTIVE STATISTICS FOR ATTITUDES TOWARD AI IN TRANSLATION TEACHING

Item Number	Axis Statements	Mean	Standard Deviation	Rank	Degree of Agreement
1	I trust AI tools to provide accurate translation assistance	4.71	0.57	1	Strongly Agree
2	AI technology enhances my teaching effectiveness	4.51	0.63	7	Strongly Agree
3	Using AI in the classroom increases student engagement	4.52	0.72	6	Strongly Agree
4	I am interested in learning more about AI tools for translation teaching	4.53	0.64	5	Strongly Agree
5	AI tools help reduce the instructors' workload in translation teaching	4.54	0.71	4	Strongly Agree
6	AI tools can motivate students to improve their translation skills	4.56	0.68	3	Strongly Agree
7	I believe AI tools can significantly support translation teaching	4.57	0.73	2	Strongly Agree
8	I feel confident using AI tools to assist students in translation tasks	4.43	0.72	9	Strongly Agree
9	AI tools complement traditional teaching methods effectively	4.36	0.85	10	Strongly Agree
10	The integration of AI in translation teaching aligns with modern educational trends	4.48	0.10	8	Strongly Agree
Overall Mean		4.52	0.0872	Strongly Agree	

Table 7 shows strong positive attitudes toward the use of AI tools in translation teaching, with mean scores between 4.36 and 4.71 on a 5-point scale. Educators expressed high levels of trust in the accuracy of AI (M = 4.71) and believed that it supported teaching and motivated students (M = 4.57 and 4.56). The relatively lower but still positive scores on items related to traditional methods (M = 4.36) and confidence in the use of AI (M = 4.43) suggest some need for more training and support. The consensus that AI aligns with modern educational trends was especially strong (M = 4.48). Overall, educators recognize the benefits of AI but highlight the importance of continuous professional development for effective integration.

B. Results for Research Question 2

Perceptions and attitudes of faculty toward the use of AI technologies in EFL translation education

Descriptive statistics were computed to examine faculty perceptions and attitudes regarding the use of AI technologies in EFL translation education.

Table 8 presents the means and standard deviations for the survey items measuring these perceptions and attitudes. The participants responded on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

TABLE 8
DESCRIPTIVE STATISTICS FOR FACULTY AND PERCEPTIONS TOWARD AI TECHNOLOGIES IN EFL TRANSLATION EDUCATION

Item Number	Axis Statements	Mean	Standard Deviation	Rank	Degree of Agreement
1	There is insufficient institutional support for incorporating AI in teaching	4.40	0.73	9	Strongly Agree
2	The time required to learn and implement AI tools is a barrier	4.39	0.76	10	Strongly Agree
3	Students sometimes rely too heavily on AI tools, reducing their learning effort	4.49	0.77	6	Strongly Agree
4	Lack of sufficient training limits my ability to use AI tools effectively	4.51	0.67	5	Strongly Agree
5	AI tools are not always compatible with the curriculum requirements	4.47	0.80	7	Strongly Agree
6	There is a lack of clear guidelines on how to use AI tools in translation teaching	4.46	0.65	8	Strongly Agree
7	Limited access to AI resources and technology hinders their use in class	4.54	0.74	4	Strongly Agree
8	I find it difficult to select appropriate AI tools for translation teaching	4.81	0.78	1	Strongly Agree
9	I am concerned about the ethical implications of using AI in language teaching	4.57	0.71	2	Strongly Agree
10	Technical problems frequently disrupt the use of AI tools	4.55	0.79	3	Strongly Agree
Overall Mean		4.52	0.74	-	Strongly Agree

Table 8 reveals strong consensus among faculty on the challenges of integrating AI in EFL translation education. Key issues included difficulty in selecting suitable AI tools, ethical concerns, technical problems, lack of training and institutional support, unclear guidelines, curriculum misalignment, student overreliance, and limited resource access. These gaps highlight the urgent need for comprehensive institutional strategies to provide training, clearer policies, better infrastructure, and ethical safeguards for effective AI use.

C. Results for Research Question 3

Role of AI-driven learning systems in supporting the diverse cultural and linguistic needs of Saudi EFL learners

Descriptive statistics were calculated to explore the perceptions of participants on how AI-driven learning systems support the diverse cultural and linguistic needs of Saudi EFL learners. These systems are increasingly acknowledged for their potential benefits; however, their effectiveness depends significantly on the degree to which they are adapted to the local context. Table 9 presents the means and standard deviations for the survey items related to this topic. The participants responded via a 5-point Likert scale, where 1 indicates “strongly disagree” and 5 indicates “strongly agree”.

TABLE 9
DESCRIPTIVE STATISTICS FOR THE ROLE OF AI-DRIVEN LEARNING SYSTEMS IN SUPPORTING THE DIVERSE CULTURAL AND LINGUISTIC

Item Number	Axis Statements	Mean	Standard Deviation	Rank	Degree of Agreement
1	AI tools improve students’ vocabulary and grammar in the target language	4.20	0.70	7	Strong Agreement
2	AI assists students in understanding cultural nuances in translation	4.10	0.71	9	Strong Agreement
3	The use of AI in translation teaching leads to better overall student performance	4.47	0.75	3	Strong Agreement
4	Using AI encourages students to learn from their translation mistakes	4.11	0.60	8	Strong Agreement
5	AI tools can effectively supplement teacher feedback in translation	4.42	0.79	4	Strong Agreement
6	AI tools help students produce more accurate translations	4.39	0.38	5	Strong Agreement
7	AI tools provide useful immediate feedback to students during translation tasks	4.51	0.77	2	Very Strong Agreement
8	AI tools help students develop critical thinking skills related to translation	4.12	0.65	6	Strong Agreement
9	Students show greater confidence in their translation abilities when using AI tools	4.57	0.71	1	Very Strong Agreement
10	AI tools foster independent learning among EFL students	4.10	0.76	10	Strong Agreement
Overall Mean		4.36	0.71	-	Strong Agreement

Saudi EFL learners strongly agree (M = 4.36) that AI-driven systems improve translation skills, confidence, and

feedback. The students felt more confident (M = 4.57) and perceived better performance (M = 4.47). AI is viewed as effective in providing immediate feedback (M = 4.51), but slightly lower scores of approximately 4.10 suggest that it is less effective in fostering independent learning and addressing cultural nuances. These findings highlight the need for further development of AI tools to better support learner autonomy and cultural understanding while maintaining their positive impact on language learning outcomes.

V. Discussion

The findings of this study offer compelling and multifaceted evidence of the strong and growing acceptance of AI technologies in EFL translation teaching at King Khalid University. Faculty members and students alike reported high levels of agreement regarding the perceived usefulness of AI tools in enhancing educational quality, particularly in improving translation accuracy, increasing student engagement, and improving pedagogical efficiency. Notably, the highest-rated item, such as faculty trust in the accuracy of AI-assisted translation (M = 4.71), reflects a widespread belief in the reliability and technological maturity of contemporary AI systems. This finding aligns with the work of Kumar et al. (2023), who highlight the rapid advancements in neural MT (NMT) and transformer-based models that enable context-aware, fluent, and highly accurate translations. Furthermore, these finding support the role of using AI as a reliable instructional aid.

The participants also emphasized the role of AI in supporting instructional practices and motivating students to engage more deeply and autonomously with translation tasks. These findings support the findings of Li and Zhao (2022) that AI can personalize instruction, accommodate individual learner needs, and foster autonomous learning when meaningfully integrated into classroom environments. Moreover, the data indicate that AI tools not only enhance the teaching capabilities of educators but also improve the self-efficacy and confidence of students in translation, which supports the findings of Kukulska-Hulme (2020) that AI-enhanced learning environments can reduce learner anxiety and improve outcomes. This dual function, which facilitates teacher effectiveness and motivates student engagement, suggests that AI holds transformative potential for EFL translation pedagogy.

However, despite these benefits, the study also reveals a complex array of pedagogical, institutional, and ethical challenges that must be addressed to ensure the effective and sustainable integration of AI technologies. Key barriers include difficulty in selecting appropriate tools for translation teaching (M = 4.81), limited professional training opportunities (M = 4.51), insufficient institutional support (M = 4.40), and frequent technical disruptions (M = 4.55). These challenges echo concerns raised by Luckin et al. (2016), who argue that technological innovation must be underpinned by solid pedagogical frameworks, continuous teacher development, and supportive institutional policies. The data suggest that while enthusiasm for AI is high, the current educational ecosystem may not yet be fully prepared to support its nuanced demands. These findings underscore the need for strategic planning and clear implementation guidelines.

Ethical considerations also emerged as a prominent concern, with high levels of apprehension (M = 4.57) about data privacy, algorithmic bias, intellectual property rights, and the integrity of academic work. The participants were worried that overreliance on AI tools might undermine intrinsic motivation, reduce critical thinking, and weaken the cognitive processes essential for language learning. These concerns are consistent with the recommendation of Lin and Wang (2020) that AI should be a scaffold rather than a substitute for active cognitive engagement. In the Saudi EFL context, in which translation is critical for academic, religious, and professional communication, this risk is particularly significant. Effective translation requires more than linguistic accuracy; it demands deep cultural insight and interpretive judgment, areas in which current AI technologies remain limited.

Further insights emerged in response to Research Question 3, which explored the capacity of AI to address the diverse cultural and linguistic needs of Saudi learners. Although the participants generally agreed that AI tools support vocabulary acquisition, grammar development, and overall student performance (M = 4.36), they expressed reservations about the ability of AI to foster independent learning (M = 4.10), address cultural nuances (M = 4.10), and promote reflective learning from translation errors (M = 4.11). These findings indicate that while AI is effective for automating certain instructional tasks, its capacity to support deep learning processes, such as metacognition, intercultural competence, and critical reflection, remains constrained. This finding supports critiques by Yuan and Gao (2023), who call for the development of more culturally responsive and pedagogically sophisticated AI systems.

Importantly, while AI is widely viewed as a transformative force in global education, its local implementation must be carefully contextualized within the unique educational, cultural, and linguistic landscape of Saudi Arabia. The adoption of AI in EFL translation education aligns with the national objectives outlined in Saudi Vision 2030, which emphasize digital transformation and educational modernization. However, realizing these ambitions requires that AI initiatives align with local values, address the specific needs of learners, and ensure that teachers are adequately prepared to integrate these tools effectively. Despite strong enthusiasm, many educators report feeling underprepared to use AI without more robust institutional support. This trend highlights the urgent need for targeted professional development programs that address technical proficiency and pedagogical integration.

Additionally, the success of AI adoption in this context will depend on sustained investment in technological infrastructure, the creation of clear institutional policies, and the development of culturally adaptive AI applications. These tools must extend beyond linguistic translation to support interpretive, intercultural, and critical thinking skills.

Ultimately, while AI technologies offer tremendous promise for revolutionizing EFL translation instruction, their ethical and effective implementation requires a balanced approach—one that combines technological innovation with pedagogical integrity, cultural sensitivity, and systemic support.

If these foundational concerns are unaddressed, then AI integration may exacerbate existing educational inequities rather than alleviate them. This study contributes to a growing body of scholarship advocating for a critically informed, contextually grounded, and human-centered approach to AI in language education—one that empowers educators and learners while preserving the complexity and richness of effective translation and teaching practices.

VI. Conclusion

This study offers comprehensive insights into the integration of AI technologies into EFL translation education at King Khalid University. The results reveal predominantly positive attitudes among faculty and students regarding the use of AI tools, which highlights the potential of this tool to increase translation accuracy, student engagement, and teaching effectiveness. The participants expressed strong trust in the reliability of AI-assisted translation, which is consistent with the findings of Kumar et al. (2023), who documented improvements in NMT models. Moreover, the motivational and engagement benefits align with the findings of Li and Zhao (2022), who investigated the ability of AI to personalize learning and foster autonomy. However, significant challenges, including technical difficulties, insufficient institutional support, and a lack of adequate training, constrain the effective adoption of AI in language education (Luckin et al., 2016; Pérez & Salazar, 2021). Ethical concerns about the overreliance of students on AI and its potential impact on learner autonomy also emerged as notable issues, which supports the recommendation of Lin and Wang (2020).) about critical engagement with AI in education. Additionally, the limited capacity of current AI tools to address cultural nuances and promote metacognitive skills aligns with critiques by Lin and Wang (2020). This aspect emphasizes the need for culturally adaptive and pedagogically intelligent AI systems. Overall, the findings underscore that while AI offers promising enhancements to EFL translation instruction, its sustainable integration requires a balanced approach that incorporates technological innovation alongside pedagogical, ethical, and institutional considerations.

A. Recommendations

On the basis of these findings, the following recommendations are proposed to improve AI integration in EFL translation education:

1. Professional development: Institutions should provide continuous and targeted professional development programs that address technical proficiency, pedagogical applications, and ethical considerations in AI use (Luckin et al., 2016; Pérez & Salazar, 2021).
2. Institutional support and infrastructure: Universities must invest in technological infrastructure and develop clear, strategic policies and guidelines to support the effective and responsible integration of AI tools in teaching (Pérez & Salazar, 2021).
3. Curriculum alignment: AI applications should be aligned with curricular goals to ensure that they support linguistic competence and intercultural understanding. This aspect reinforces the complex demands of translation education.
4. Ethical frameworks: Clear institutional policies on data privacy, intellectual property, and responsible AI usage should be established to guide educators and students in ethical practices.
5. Development of culturally responsive AI: Collaboration among educators, AI developers, and cultural experts is critical for creating AI systems that address the linguistic and cultural diversity of Saudi EFL learners and promote higher-order thinking skills (Lin & Wang, 2020).

B. Limitations and Future Research

Several limitations of this study provide avenues for future research. First, the study's focus on King Khalid University limits the generalizability of the findings; future research should encompass multiple institutions across Saudi Arabia and other regions for broader insights. Second, the reliance on quantitative survey data limits the depth of understanding regarding user experiences with AI tools. Qualitative methods, such as interviews or focus groups, could enrich the comprehension of pedagogical and affective factors influencing AI adoption (Li & Zhao, 2022). Third, given the rapid evolution of AI technologies, longitudinal studies are necessary to track changing perceptions, technological improvements, and implementation strategies over time (Kumar et al., 2023). Fourth, the study did not differentiate between specific AI tools or platforms; future work should evaluate individual applications to determine their comparative effectiveness in translation education (Luckin et al., 2016). Finally, empirical studies measuring the direct impact of AI tools on student translation quality and language proficiency are needed to validate perceptions and inform pedagogical decisions (Kukulska-Hulme, 2020).

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