



Exploring the pedagogical shift to AI-integrated teaching in university-level ELT

Srinivasa Rao Idapalapati¹, Shakeel Ahmed Bashir Ahmad²

^{1,2} English Language Institute, University of Tabuk, Tabuk, Saudi Arabia

Article DOI: 10.55677/SSHRB/2026-3050-0117

DOI URL: <https://doi.org/10.55677/SSHRB/2026-3050-0117>

KEYWORDS: AI-integrated ELT, qualitative metasynthesis, grounded theory, PRISMA guidelines, pedagogical transformation.

ABSTRACT: This study explored the key areas of ELT in which transformations happened by AI integration, with a specific focus on the pedagogical designs, teaching methods, and teacher and learner roles. Having assessed 35 peer-reviewed articles published during 2023 through 2025 employing qualitative metasynthesis methodology and guided by grounded theory the study has identified the most significant parameters that facilitate the transformation of ELT pedagogy. The parameters that rendered the transformations in ELT possible were critically evaluated and analyzed using open coding, axial coding, and category synthesis as outlined in grounded theory and used in grounding a core theory. The key areas in which pedagogical shifts happened were identified to be instructional design transformation, learner-centered pedagogy, teacher role reconfiguration, skill-specific enhancement, and institutional and cultural mediation. The findings suggest that although AI applications like ChatGPT, automated writing evaluation, and adaptive learning technologies help in improving personalized treatment, interaction, and teaching, they also generate ethical, digital equity, and humanistic issues. The study emphasized the significance of continued teacher training, the requirement for culturally sensitive and flexible policies to promote the successful integration of AI. These observations contribute to providing valuable directions to institutions that intend to become leaders in AI-driven ELT.

Corresponding Author:

Srinivasa Rao Idapalapati

Published: January 27, 2026

License: This is an open access article under the CC BY 4.0 license:

<https://creativecommons.org/licenses/by/4.0/>

1. INTRODUCTION

The integration of artificial intelligence (AI) in education is an ongoing process, causing phenomenal transformations in teaching methods and learning styles. This technological development has been both a challenge and an opportunity in English Language Teaching (ELT) in universities. Although AI is found to be playing a significant role in language acquisition, it is found to be incapable of replacing characteristics unique to humans, such as moral judgment, awareness of emotions, existential questioning, and the generation of meaning. Considering the distinctive human power, this study investigated the aspects of ELT that are transformed by AI in university-level English language programs. The study was carried out driven by two major research questions. (1) How does the integration of AI change the role of teachers and learners and the design of pedagogy? (2) What preferences, barriers, and transformative experiences do the teachers and learners face in AI-based ELT environments? The focus of the study was to investigate the transformation of instruction and the relationships of the human-machine in the teaching and learning of English in university-level English language programs.

The qualitative metasynthesis used in this study was informed by grounded theory in examining the effects of AI tools on human-centered pedagogy in English language teaching [6], [23], [28]. The research is based on the synthesis of findings of 35 studies identified according to PRISMA criteria in various databases that include Scopus, Google Scholar, and Emerald, covering such aspects as learner autonomy, teacher agency, the perception of feedback, digital mediation, and intercultural communication [32]. Grounded theory provided the rigor of the methods via systematic coding and reflexivity [29], [41]. Based on the findings, the research formulated a conceptual framework that presented the reconfiguring roles of teachers and students, as well as the significance of AI in ELT at the university level, and provided implications on curriculum, teacher training, and learner support to inform the future of language education that is AI-driven.

2. LITERATURE REVIEW

Artificial intelligence applications are changing English Language Teaching (ELT) in higher education institutions, as they allow students to gain personalization and autonomy in their learning process, help in reducing the amount of work done by teachers, and give them instant feedback [22]. Although advances in virtual reality facilitate intercultural competence, researchers emphasize the essentiality of teacher training and digital infrastructure in addressing challenges such as overdependence and inequality [22]. Generative AI simplifies the creation of course content and redirects the work of the teacher towards creative and interactive work by improving the skills of teachers in mastering prompt engineering [10]. EFL teachers in Pakistan enjoy the affordances offered by AI, even though they are still uncertain about the issues related to critical thinking, privacy, and digital equity [5]. The use of AI in education is considered associated with even greater uncertainties and ethical issues that affect the relationships between teachers and students [1].

As Kildé [21] emphasized, there is an overall positive attitude of language teachers to generative AI despite their insufficient digital skills. Kildé highlighted the importance of having technology training, frameworks that support such training, such as the TPACK (Technological Pedagogical Content Knowledge), and the support of institutions, and cautioned about the risks of academic integrity and privacy. As He et al. [14] disclosed, AI-based feedback at Chinese universities enhances the self-reflection and creativity of EFL learners, implying a higher level of learner agency. Elaborated by Southworth et al. [40], the model of curriculum used by the University of Florida encourages the development of digital skills and autonomy in teachers by putting the role of an institutional-supporting facilitator at the forefront. According to Zhou et al. [50], AI chatbots may improve the fluency and active participation of Chinese EFL students in blended learning, but the issues related to AI usage, such as learner fatigue and technical issues, are also highlighted by Zhou et al. [50] and He et al. [14], which should be also supported by careful pedagogy and robust institutional support.

According to Dogar and Khan [7], though Automated Writing Evaluation (AWE) tools enhance writing among Pakistani ELT students, issues such as infrastructure and training of teachers still exist. Similar concerns were observed with Thai and Slovakian teachers who are enthusiastic about AI but are afraid of excessive dependence, privacy, and the necessity of ethical standards and professional growth [4], [16]. EFL educators are now in need of pedagogical and technical competence, ethical awareness, and continuous learning [27]. Nevertheless, there are still gaps between awareness and practice because of the lack of guidance and training [20]. The digital literacy and infrastructure disparity imply that comprehensive training and deliberate integration are essential [9]. AI, especially GPT-3.5, is transforming EFL by facilitating personalized and student-focused teaching for writing and offering real-time feedback that checks quality and boosts confidence [42]. Extensive application of AI to other techniques, which include the Grammar-Translation Method, Total Physical Response, and Student-Centred Learning, escalates interaction, digital literacy, and language proficiency, despite the teachers' concerns about ethical issues around privacy and reliability [39]. Immersive environments are suggested to make the learning process even more personal, and AI-generated content is changing the face of English testing with adaptive, efficient testing, yet human supervision is a vital aspect of the process of preserving quality and cultural relevance [13]. Indonesian lecturers see AI as useful, but the adoption is dependent on expectations, social factors, and institutional barriers apart from the ongoing issues of pedagogy and ethics [48]. Yaseen and Alnakeeb [46] identified that the direction of ELT shifted to more immersive, but it needs deeper investigation on the long-term results and professional preparation of teachers. Although the AI tools are satisfactory, socio-cultural aspects show that there should be context-dependent solutions [34].

AI applications such as Natural Language Processing (NLP), chatbots, and adaptive learning platforms are assisting students in building their writing, speaking, and vocabulary. However, the ethical issues, including fairness and training for everyone, exist [30]. Since AI does not possess self-awareness, similar to humans, it is unable to provide guidance to students concerning ethics or decision-making [43]. In Saudi Arabia, despite the fact that tools such as ChatGPT are assisting EFL students to be more engaged and give them more personalized feedback, the lack of access to technology and the opportunities to develop professionally are limiting the teachers from utilizing AI to its full potential [3]. Moreover, the concern about the reliability of the systems and academic integrity contributes to the complexity [49]. In the case of Large Language Models (LLMs) applying in ELT, the tools must be trained to have advanced reasoning and autonomy, as explained by [37]. Although AI serves the needs of language students worldwide, the issues of plagiarism and equity remain to be discussed [15]. As Ferreiro-Santamaria [11] noted, even in the context of Costa Rica, where teachers acknowledge the existence of generative AI, most of them are reluctant to utilize it because there are no specific guidelines and there are more solid policies regarding the equity of the tools. Duron and Jiménez-Preciado [8] showed how AI is able to extend beyond learning and individualize lessons, create a personalized learning path, offer immediate feedback, and lower the workload of teachers to reflect on their practice. On the same note, Sarnovska, Rybinska, and Mykhailichenko [36] also view AI as a means to achieve improved distance learning in languages, particularly when the classes are interrupted unpredictably. It is possible to think of a classroom where smart tutors provide on-the-fly feedback, chatbots allow students to practice dialogues, applications can make learning enjoyable through games, automatic assessments are assisted by virtual reality, and virtual worlds can be created on the basis of virtual reality to learn a language [36].

Most of the reviewed studies demonstrated the complexity of the effect of the use of AI tools in ELT. Thai students, to a

large extent, use the generative AI tools because they are fast and provide instant feedback [44]. Nevertheless, the application of these tools does not appear to be related to improved academic performance. Although the use of AI tools made the students more confident in their language abilities, they also advised not to rely on them too much. They emphasized that one should always think critically when it comes to the content that is created by these tools. The teachers themselves, however, had problems in assessing actual student progress since it was challenging to determine how much work was accomplished by students themselves as opposed to utilizing the AI tools. This indicates that there is a necessity to define policies clearly [44]. Younas et al. [47] have discovered that, even though AI-generated content can enhance scenario-based language learning and give the learner feedback that is more personalized, there are concerns about the quality of AI-generated content and overdependence on such technologies, which is a reason to consider teacher training and a gradual adoption of a new technology. In Nepal, Karki and Karki [17] observed that the use of AI applications within schools is highly disparate, ranging from simple applications such as translations and more complex ones such as Duolingo and chatbots. These tools can be used to make the process of learning more student-centered. However, technological and training gaps, particularly in rural areas, are an issue that must be addressed to level the use of AI tools among all learners of English.

2.1 Overview of AI Applications in Education in General

Graff [12] stated that AI cannot be utilized in education without some difficulty because it lacks moral sensitivity, which is an intuitive and context-specific knowledge peculiar to humans. AI systems are too inflexible, and those that learn with data frequently lack the worldly experience that is essential in understanding true morality. Accordingly, AI can be beneficial in simple areas, whereas it cannot be useful when dealing with sensitive ethical issues. Lewis and Sarkadi [25] noted that, as AI tools do not have the nuanced reasoning that is required to tackle complex social predicaments, they can not replace but facilitate the ethical judgment of humans. Schuster and Kilov [38] hold that common alignment techniques like crowdsourcing and reinforcement learning do not solve serious moral conflicts or support making ethical decisions.

Investigating the application of AI in the process of moral reasoning, Kilov et al. [19] noted that, despite the ability of the large language models to assist the users in navigating ethical dilemmas, they are likely to fail in coping with the complexities of the real-world due to their reliance on preset scenarios and can misguide a user to believe that the AI output is referred to ethical reasoning. Quelo [35] further revealed that because of the variability in human values, any moral judgment cannot be achieved without personal agency that is specifically applied in delicate areas such as education, healthcare, and law, in which AI ought to assist but not take over human accountability. In the same way, Ou et al. [31] observe that the use of AI applications, such as ChatGPT and Grammarly, to support writing and creativity is becoming increasingly popular among universities, and caution that the assistance of technology brings up concerns regarding integrity and critical thinking, indicating the necessity for clear ethical standards. Passamonti [33] pointed out that computational constraints prevent consistency in the predictions of AI tools and make them confined to being enhancers of human moral reasoning and not as its substitute. These sentiments are reiterated by Laitinen and Sahlgren [24], who emphasized that although AI can both benefit and jeopardize human agency, maintaining the agency of the user and free will, especially in education, should be a top priority.

3. THEORETICAL FRAMEWORK

This study applied two closely connected qualitative theoretical frameworks, i.e. metasynthesis and grounded theory, to provide insight into pedagogical outcomes of AI implementation in university-level ELT. The synthesis of diverse qualitative results using metasynthesis was performed following a systematic procedure for developing an explanatory model through coding and comparing provided by grounded theory. Harnessing the integrated approach, this research study provided a sound and contextually applicable framework of how AI is changing the design of instruction, teacher roles, and learner agency in higher education.

3.1. Metasynthesis

It is an interpretive approach that is rigorous and synthesises the results of different qualitative studies to gain a deeper insight into challenges in English as a Foreign Language (EFL) teaching and learning [6], [23], [28]. Through research questions, study selection and appraisal, data extraction and analysis, and result synthesis, researchers can combine learners' experiences and instructional practices into insightful theories [23]. This method, which is complemented by such models as meta-ethnography and thematic synthesis, provides a conceptual richness to such issues as motivation, classroom interaction, and intercultural communication [6]. It is flexible in its methodology, which makes it adaptable to research goals and facilitates theoretical innovation [28].

3.2. Grounded Theory (GT)

It is a qualitative approach that derives theory out of systematically collected data, which is useful where there is a need to identify processes and interactions within the social sphere, such as EFL teaching [29]. Instead of using preset structures, GT relies on the interpretive ability of the researcher that is informed by literature and experience, and uses the open, axial, and selective coding processes to establish theoretical frameworks. Theoretical sampling and analytical memos guide the research in GT and facilitate reflexivity and theory building [29]. Thornberg et al. [41] further noted that GT is based on both symbolic interactionism and constructivist epistemology, which is the result of interactions between people and their social worlds, and thus, in the context of

educational research, GT is deemed useful for exploring how learners make meaning and negotiate identity, particularly because it is an iterative, responsive model. Wolfswinkel, Furtmueller and Wilderom [45] emphasized the significance of GT in literature reviews by developing a five-stage model that focuses on transparency and theory development. All of these contributions highlight the depth of GT, which allows the development of context-sensitive theories that shape EFL pedagogy [29], [41], [45].

4. RESEARCH METHODOLOGY

The study used a qualitative metasynthesis approach, complemented by grounded theory, to examine the pedagogical implications of integrating AI in ELT at the university level. The methodology is designed to create theory based on the systematically analysed qualitative data and make it possible to synthesise various findings in cultural and institutional contexts. The metasynthesis and grounded theory approach used in the research combine to provide a broad scope of coverage and analytical depth to the role of AI tools in transforming the nature of instruction design, teachers' roles, and student experiences.

4.1. Research Design

The research design used a qualitative metasynthesis to summarize the results of various qualitative studies, generate theory-driven implications related to the pedagogical changes happening in AI-enhanced ELT, as well as demonstrate recurring patterns, contradictions, and conceptual developments across the situations [6] [23]. Grounded theory is a method that allows generating theory in a systematic manner using iterative coding and constant comparison with the combination of open coding to identify concepts, axial coding to investigate relationships between categories, and selective coding to create a coherent theoretical model [29], [41]. Through the integration of these methods, the study can go beyond the descriptive synthesis and provide an explanatory model that shows the dynamic interaction of AI technologies, pedagogical practices, and human agency.

4.2. Data Sources and Selection Criteria

The search of the article databases, particularly Scopus, Google Scholar, and Emerald, was based on the PRISMA guideline and confined to the articles published between 2023 and 2025 to be included in a qualitative metathesis of this study. The search was focused on the articles concerning the integration of AI in ELT at the university level. Only full-text empirical or conceptual studies utilizing qualitative research and in the English language were taken into account. Articles that dealt with the role of teachers, learner agency, instructional design, and ethical issues were prioritized. Articles were included based on the requirements that the article should be about higher education ELT and not about K-12 education, non-ELT topics, only quantitative research, non-peer-reviewed sources, and opinion articles. Another criterion was the requirement of the articles to discuss various international settings, such as Saudi Arabia, China, Slovakia, Pakistan, Turkey, and Ukraine.

4.2.1. PRISMA Selection Process

In tune with PRISMA criteria, the study started the search with 432 articles available in databases Scopus, Google Scholar, and Emerald. After eliminating duplicates, there were 389 records left. The title and abstract screening eliminated 276 articles, most of them due to the lack of focus on interpretive or thematic synthesis. Among the 113 reviewed articles that had enough full-text content to determine their eligibility, 78 articles were excluded as they either had no sufficient methodological transparency that would have enabled them to be qualitatively appraised or were missing enough methodological information. At the end, 35 peer-reviewed articles were identified to fit all the criteria of inclusion and were incorporated into the qualitative metasynthesis, which guarantees methodological soundness and topic relevance to the theme of AI-assisted university-level ELT.

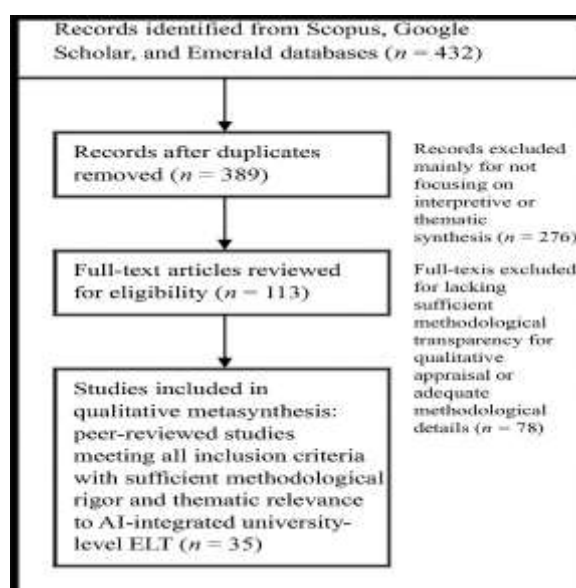


Figure 1: PRISMA selection process

4.3. Data Analysis Procedures

Data analysis involved a detailed and multi-stage coding procedure. The initial stage of the open coding started with the derivation of the key concepts based on the literature review that revealed certain pedagogical roles of AI, including feedback automation, personalized learning paths, content generation, and emotional support. Subsequently, these ideas were organized in the broader thematic groupings during the process of axial coding, that is, instructional design transformation, learner-centered pedagogy, reconfiguration of teacher roles, skill-specific improvement, and institutional mediation. These categories were studied with regard to their relationships to see more in-depth pedagogical dynamics. During the last selective coding step, the general axial coding categories were summarized into a complete theoretical framework that helped to clarify how AI tools mediate pedagogical changes in ELT at the university level.

4.4. Coding Process informed by Grounded Theory

In this research, the coding was performed to transform a wide range of qualitative data into a logical theoretical framework in alignment with the principles of grounded theory. It started with open coding to define the key parameters in the selected 35 articles, which indicate the pedagogical functions of AI in higher education ELT, including automated feedback, student autonomy, and curriculum development. Using axial coding, these codes were clustered under categories, established relationships, and depicted how instructional design, teacher roles, learner agency, and institutional mediation interacted in AI-enhanced situations. Lastly, these categories were brought together by selective coding into one overall explanatory model to make the grounded theory not only conceptually sound but also contextually valid, which completes the grounded theory process of iterative comparison, reflexivity, and theory-building based on comparatively analyzed data [29], [41], [45].

4.4.1. Open Coding of Key Concepts

The keywords were identified in the literature review using the open coding method to produce the key concepts that were used to explain the way AI tools promote pedagogical change in EFL teaching and learning. The concepts and their explanation are presented in the table below.

Table 1: Open Coding Concepts and their Descriptions.

Concept	Description
AI for feedback automation	AI tools like ChatGPT and AWE systems provide instant, personalized feedback to learners.
AI for personalized learning paths	AI algorithms dynamically adjust content and task difficulty based on learner data.
AI for lesson planning and content generation	Teachers use AI to generate adaptable materials, quizzes, and reading texts.
AI for writing support	AWE tools and chatbots improve writing accuracy and fluency.
AI for speaking practice	Chatbots enhance oral fluency and reduce performance anxiety.
AI for learner autonomy	Students engage in self-regulated learning through AI-mediated environments.
AI for teacher workload reduction	Automation of routine tasks allows teachers to focus on strategic instruction.
AI for intercultural competence	AI tools support global communication and cultural awareness.
AI for emotional resilience	Motivational feedback boosts learners' confidence and persistence.
AI for ethical inquiry and digital literacy	Teachers guide students in navigating AI-generated content critically.
AI for curriculum innovation	Institutions embed AI literacy across disciplines to foster career readiness.
AI for multimodal engagement	AI tools support behavioural, cognitive, and emotional engagement.

4.4.2. Axial Coding of Relating Categories

It was through the axial coding procedure that the grouping of open codes into higher categories was done, and the relationship between the codes was examined. The table below illustrates the axial coding process, categories, subcategories, and how they will be used in transforming pedagogical models.

Table 2: The Axial Coding Categories, the Subcategories, and their Relationship

Category	Subcategories (Open Codes)	Core Relationship
Instructional Design Transformation	Automated feedback, AI-driven content creation, dynamic lesson structuring, curriculum redesign	AI shifts instructional design towards more flexible, responsive, and data-driven models.
Learner-Centered Pedagogy	Customized learning journeys, student independence, emotional well-being, and diverse engagement	AI fosters autonomy, engagement, and emotional safety, repositioning learners as active agents.
Teacher Role Reconfiguration	Workload reduction, ethical inquiry, digital literacy, intercultural competence	AI redefines teachers as facilitators, mentors, and evaluators of technology rather than sole content deliverers.
Skill-Specific Enhancement	Writing support, speaking practice	AI tools target specific language skills with tailored scaffolding and practice environments.
Institutional and Cultural Mediation	Curriculum innovation, digital equity, professional development	Successful AI integration depends on institutional support, teacher training, and cultural responsiveness.

4.4.3. Selective Coding to Synthesize a Theoretical Framework

The identified axial categories were synthesized into an overall theoretical model to show how integrating artificial intelligence (AI) can stimulate pedagogical change when used in university-level ELT settings. Through an extensive examination of the themes in the previous stages of research, the model portrays the dynamic nature of interaction among technological advancement, teaching methods, and student interactions. This framework is named ‘AI-Mediated Pedagogical Transformation in University-Level ELT,’ which clarifies that AI tools and platforms facilitate the transformation of the teaching process, enhance more individualized and responsive learning environments, and eventually transform the environment of English Language Teaching (ELT) in higher education.

4.5. Domain Representation of the Number of Selected Articles in AI-Mediated ELT.

Of the 35 reviewed articles, Skill-Specific Enhancement is the most frequently used, found in 9 articles demonstrating the greatest quantitative impact. The concept of Learner Autonomy was noted in 8 articles, with such results as self-regulation, resilience, and confidence being identified. Adaptive Instructional Design was found in 7 articles, and Reconfigured Teacher Agency in 6, and both focused on the major qualitative shift in curriculum and new roles that teachers play. Institutional Mediation was addressed in a limited number of 5 articles; nonetheless, it is fundamental in the context of the adoption, equity, and policy dimension within the AI-mediated English language teaching.

Table 3: Domain Distribution of Article Count

Domain	Number of Articles (out of 35)	Representative Studies
Instructional Design Transformation	7 articles	Köksal & Zorlu Kale (2025); Ester Mariñoso et al. (2025); Shruthi et al. (2025); Tseng & Lin (2024); Ha & Nguyen (2025); Younas et al. (2025); Karki & Karki (2025)
Learner-Centered Pedagogy	8 articles	He et al. (2025); Zhou et al. (2025); Pikhart et al. (2024); Esen (2025); Altamimi (2025); Younas et al. (2025); Nykyporets et al. (2025); Waluyo & Kusumastuti (2024)
Teacher Role Reconfiguration	6 articles	Méndez-Alarcón et al. (2024); Southworth et al. (2023); Kalra (2024); Bibi & Shahzad (2025); Benek (2025); Ferreira-Santamaria (2024)
Skill-Specific Enhancement	9 articles	Nykyporets et al. (2025); Zhou et al. (2025); Dogar & Khan (2025); Tseng & Lin (2024); Shruthi et al. (2025); Ha & Nguyen (2025); Zaimoğlu & Dağtaş (2025); Ivanytska et al. (2024); Younas et al. (2025)
Institutional and Cultural Mediation	5 articles	Zaim et al. (2024); Waluyo & Kusumastuti (2024); Southworth et al. (2023); Yaseen & Alnakeeb (2023); Karki & Karki (2025)

4.6. The Grounded Theory:

Based on the grounded theory coding procedure, the study outlined the theory that helped in synthesizing the theoretical framework entitled 'AI-mediated pedagogical transformation in university-level ELT'. The grounded theory is defined as 'AI integration in ELT at the university level triggers the pedagogical transition of the teacher-centered teaching and learning to the learner-centered, adaptive, and ethically mediated learning environment. This transformation is possible with the ability of AI to personalize learning, automate feedback, and scaffold skill development, reconfigure teacher roles contingent on the institutional infrastructure and cultural background.'

4.6.1. Implications of the Theory

The theory draws attention to the ways AI tools are changing the instruction design, specifically by automating feedback and allowing the creation of flexible learning resources. Those innovations provide dynamic learning spaces and turn students into independent co-producers of knowledge who enjoy personalized, multimodal, and effective AI-driven learning. With the development of instructional strategies, educators acquire more and more attributes of facilitator and ethical mentor that assist students in the critical analysis of AI-generated content. The implementation of AI in ELT needs curriculum alignment, continuous training in order to be effective and sustainable, and support from institutions. As one may learn, AI has the greatest pedagogical potential when it is used to supplement human teachers, but not to substitute them.

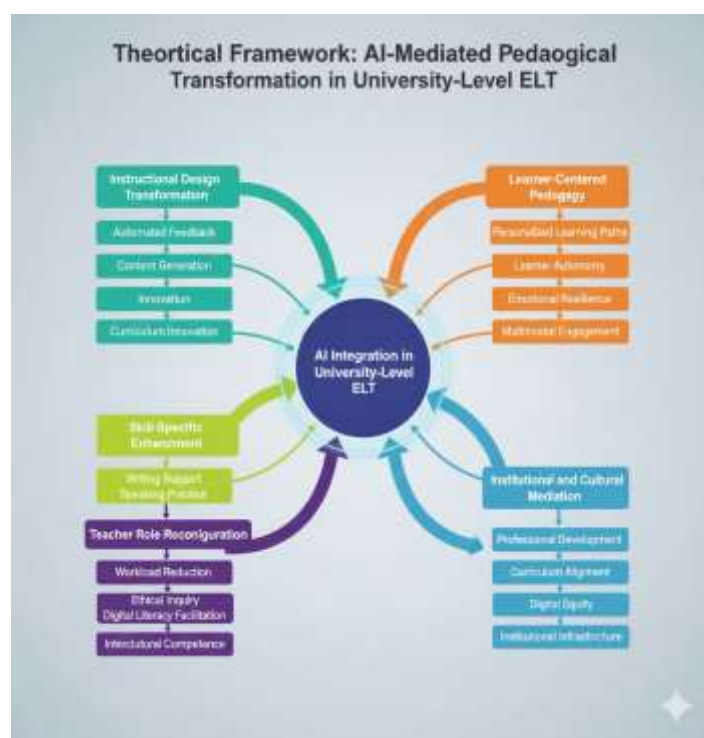


Figure 2: Thematic map of the theoretical framework

5. FINDINGS

The qualitative metasynthesis of the presented study, informed by grounded theory, identified a complex and multidimensional change in the ELT methods at the university level, due to the incorporation of AI tools. The synthesis of the core findings from 35 peer-reviewed studies enabled the identification of the five thematic domains that are interconnected and complementary to one another in different cultural and institutional contexts that highlight the new roles of teachers, learners, and AI technologies.

5.1. Instructional Design Transformation

The introduction of AI has replaced the traditional one-size-fits-all instructional designs with dynamic, adaptive, and data-driven designs. ChatGPT, ELSA Speak, Pronunroid, and automated writing evaluation systems have now become capable of offering real-time feedback, personalized instruction, and differentiated instruction. Education with the incorporation of AI has enabled teachers to devote their time to more important strategic tasks, since the routine workload is reduced and resources are optimized. The AI-created materials and interactive learning courses could adjust teaching to the personal data of learners and transform the teaching process into a joint human-technology process. Yet, the success of these technologies depends on the ability of the teachers to facilitate the timely integration of the tools with the pedagogical objectives.

5.2. Learner-Centered Pedagogy

AI tools have facilitated the transition to learner-centered pedagogy through autonomy, self-regulation, and a personalized learning process. The students tend to rely on websites like Duolingo, ChatGPT, and Google Translate to learn vocabulary,

grammar, and pronunciation by themselves. Being emotionally resilient, creative, and reflective, AI can give motivational and corrective feedback and make students active and co-creators of knowledge. The AI-based chatbots support in improving fluency and interaction in mobile-mediated blended learning. However, overuse of AI may curtail critical thinking and spontaneous language generation, which underscores the need to adopt a moderate use of AI.

5.3. Teacher Role Reorganization

AI has transformed the role of teachers from being information agents to becoming enablers, designers of learning, and ethical entrepreneurs. Teachers have begun to select digital materials, support students in understanding AI-generated information, and resolve such ethical challenges as data privacy and fake news. The AI across the curriculum programs can be viewed as examples of this transition, with teachers as the agents that establish AI literacy and cross-disciplinary interaction as its main catalysts. The general purpose of using AI by teachers is not to replace, but rather to complement, and thus, it is necessary to participate in professional development in a structured form. The importance of training to fill the gap between theoretical knowledge and practical activity must be emphasized significantly.

5.4. Skill-Specific Enhancement

AI tools have demonstrated great improvement in certain language abilities, like writing and speaking. It is determined that significant advances in writing performance and learner engagement can be made through automated feedback systems. Verbal fluency and receptive vocabulary retention are observed with the assistance of AI chatbots and adaptive vocabulary platforms. The results indicate that ChatGPT improves the quality of writing and promotes the autonomy of learners as it provides the possibility to revise information through multiple iterations and provides feedback in real-time. As many articles highlighted, AI-based testing helps with adaptive testing and gives feedback instantly, which plays a major role in motivation and engagement. However, challenges of persistent screen fatigue, technical breakdown, and unequal access persist, especially in under-resourced institutions.

5.5. Institutional and Cultural Mediation

The success of AI integration depends on the institutional infrastructure, willingness to be flexible in the curriculum, and awareness of the sociocultural contexts. Studies done in Saudi Arabia, Pakistan, and Indonesia show that limited technology access, rigid education curricula, and pedagogical change resistance hinder successful adoption. Inadequate digital skills among instructors and insufficient time are identified as other deterrents in most of the studies. Certain studies investigated psychological and ethical factors and established that uncertainty and ethical issues are determinants of stakeholder engagement. From a philosophical angle, the research findings indicate that AI is incapable of replicating self-awareness, moral reasoning, and emotional intuition, which are the key characteristics of effective, relational pedagogy. The results support the idea that AI-based ELT requires culturally responsive methods and principles of ethical conduct. Collectively, these works help to understand that the implementation of AI at the university level ELT is more than a mere technical enhancement, and is a multi-layered change conditioned by pedagogical, ethical, and cultural influences.

6. DISCUSSION

The incorporation of AI technology in university-level ELT has brought in major transformations in pedagogical aspects. The trend is changing the instructional design, redefining the roles of teachers and learners, and bringing in new ethical and institutional issues. In light of the framework generated by the metasynthesis of 35 peer-reviewed articles and grounded theory analysis, this discussion interprets the results and puts them into the context of the broader discussions of digital pedagogy, teacher agency, and learner autonomy.

The essence of the research shows that AI tools are revolutionizing the process of instructional design in a way that is not guided by teachers but rather by learners and their needs. The use of technologies such as ChatGPT, ELSA, and automated writing assessment systems allows real-time feedback, creation of adaptive content, and individual instruction. This is in line with the Technological Pedagogical Content Knowledge framework, which emphasizes the systematic combination of technology, pedagogy, and instructional content. But, the success of AI does not only depend on access but also the ability of teachers to create meaningful prompts, as well as align AI-generated outputs and educational goals. This indicates the necessity to consider instructional design a joint activity between human teachers and intelligent technologies.

AI-mediated learning has helped learners to be more autonomous, self-regulated, and resilient to emotion. Studies show that AI apps help students in learning new languages on their own, get individual feedback, and develop confidence in less stressful environments. This evolution aligns with the constructivist learning theory that focuses on active knowledge-building processes based on interaction and reflection. Certain studies also caution that overreliance on AI may lead to the impairment of critical thinking and spontaneity. Thus, although AI enhances behavioral, cognitive, and emotional interaction, its use must follow a pedagogical approach that prevents unnatural interactions of learners. Due to the capabilities of AI, teachers cease to be mere dispensers of knowledge and become facilitators, instructional designers, and ethical custodians of their students. However, studies have constantly found loopholes in digital competencies and ethical knowledge of teachers. These results indicate that continuous professional growth and reflective practice will be necessary to assist teachers in overcoming the pedagogical, technical, and ethical

issues of integrating AI into ELT.

The implementation of AI in ELT is not merely an upgrade to technology but is influenced by cultural and ethical factors. The studies emphasize that institutional resistance, lack of adequate infrastructure, and sociocultural resistance are some of the factors that may hinder effective implementation. Also, there are ethical concerns such as privacy of data, algorithmic bias, and reduced human interaction, which affect stakeholder trust and participation. All these studies prove that an efficient technological environment is not enough and indicate that culturally oriented conditions and powerful ethical standards are required. Digital equity, flexible design, and inclusive design should be prioritized by institutions to formulate a successful AI integration effort, as these three aspects should enable AI to enhance educational integrity. The body of evidence is growing that AI will not be used as a substitute for a human teacher but as a collaborative partner. As many studies have found, learning can be supported by AI, as well as personalized instruction and simplified assessments. AI cannot mimic human abilities like moral judgment, emotional intuition, or profound reflection, which is the central argument of the current research: AI must be incorporated in the form of a human-based pedagogical strategy, which will strengthen the relational and interpretative elements of learning.

7. CONCLUSION

This qualitative study has examined how ELT methods at the university level are transforming due to the use of AI technology. It draws upon a qualitative metasynthesis of 35 peer-reviewed studies and grounded theory to shed light on the role of AI technologies that are redefining the instructional design, teacher and learner roles, and introducing new ethical and institutional concerns. The results have revealed that AI tools, including ChatGPT, automated writing assessors, and adaptive learning platforms, are becoming catalysts of major pedagogical transformations and not just a technological improvement. The design of instruction is changing to become adaptive and data-driven to facilitate personalized learning and multimodal interactions. Students are becoming more engaged and self-reliant learning individuals. Educators view themselves more as mediators and designers of instruction and as ethical custodians of AI-enhanced schools of ELT.

Although these developments have been made, there are still significant challenges. The study has identified existing gaps in teacher readiness, infrastructural provisions, digital equity, and ethical supervision. The integration of AI in ELT cannot easily be achieved without providing access to technology to all equally, without radical redesigning of the curriculum, continuous training to teachers, and policies that are culturally sensitive. Even with the upgraded and increased use of AI, humanistic factors, including ethical reasoning, emotional intelligence, and contextual and culture-oriented interactions, need to be central to the study of language. This study asserts that AI adoption in ELT is a multidimensional phenomenon that should be influenced by human-oriented values, pedagogical sincerity, and the vision of the institution. With the increasing adoption of AI technologies in universities, they should consistently be kept focused on inclusiveness, ethical accountability, and maintaining the human aspects that are primarily engaged in making such educational changes feasible.

FUNDING INFORMATION

This research was not funded by any organization.

AUTHOR CONTRIBUTIONS STATEMENT

Both authors equally contributed to every aspect of the study.

CONFLICT OF INTEREST STATEMENT

The authors state no conflict of interest.

INFORMED CONSENT

Not applicable to this study.

ETHICAL APPROVAL

Not applicable to this study.

DATA AVAILABILITY

The data that support the findings of this study are available on request from the corresponding author, [AS], upon reasonable request.

REFERENCES

1. S. A. Alkhalifah, A. A. Bedaiwi, M. A. Shaikh, M. Seddiq, and S. A. Meo, "Existential anxiety about artificial intelligence (AI)—Is it the end of the human era or a new chapter in the human revolution? Questionnaire-based observational study," *Frontiers in Psychiatry*, vol. 15, Art. no. 1368122, 2024, doi: 10.3389/fpsy.2024.1368122.

2. K. M. Alshewiter, F. S. S. Mohammad, A. T. Shawaqfeh, A. J. Khasawneh, H. Alqudah, Y. J. A. Khasawneh, and M. A. S. Khasawneh, "Improving the learning of language proficiency at the tertiary education level through AI-driven assessment models and automated feedback systems," *Migration Letters*, vol. 21, no. 2, pp. 712–726, 2024. [Online]. Available: <https://migrationletters.com/index.php/ml/article/view/6216/4203>
3. D. Altamimi, "AI integrating in EFL classrooms: A study on lecturers' adaptation and student outcomes," *Arab World English Journal*, pp. 364–379, 2025, doi: 10.24093/awej/call11.22.
4. K. Benek, "EFL learners' and teachers' perceptions of AI-powered language learning technologies: Benefits and challenges," *International Journal of Instruction*, vol. 18, no. 2, pp. 103–120, 2025, doi: 10.29333/iji.2025.1827a.
5. S. Bibi and A. K. Shahzad, "Impact of artificial intelligence on English language teaching at university level: A study of EFL teachers' perspectives in Pakistan," *Advance Social Science Archive Journal (ASSAJ)*, vol. 4, no. 01, pp. 200–234, 2025. [Online]. Available: <https://assajournal.com/index.php/36/article/view/520/766>
6. J. Chrastina, "Meta-synthesis of qualitative studies: Background, methodology and applications," *NORDSCI*, 2018. [Online]. Available: <https://files.eric.ed.gov/fulltext/ED603222.pdf>
7. M. F. Dogar and S. Khan, "AI-enhanced English language learning at the undergraduate level: A mixed-methods analysis of effectiveness and challenges," *Advance Social Science Archive Journal (ASSAJ)*, vol. 4, no. 02, pp. 503–513, 2025, doi: 10.5281/zenodo.17360268.
8. N. G. Durón and A. L. Jiménez-Preciado, "Exploring the role of AI in higher education: A natural language processing analysis of emerging trends and discourses," *The TQM Journal*, 2025, doi: 10.1108/TQM-10-2024-0376.
9. S. Esen, "Digital tools in second language learning in higher education: A systematic review of recent research," *Janus*, vol. 16, no. 1, TD1, 2025, doi: 10.26619/1647-7251.DT0325.4.
10. P. Ester, P. Á. Caballero-García, I. Morales, and E. Cañadas, "Evaluating the use of AI in the design of learning situations by university students of early childhood education," *Frontiers in Psychology*, vol. 16, Art. no. 1604414, 2025, doi: 10.3389/fpsyg.2025.1604414.
11. G. Ferreiro-Santamaria, "Exploring the role of ChatGPT in English teaching within higher education settings," *International Journal of Trends and Developments in Education*, vol. 4, no. 1, pp. 44–58, 2024, doi: 10.5281/zenodo.11204781.
12. J. Graff, "Moral sensitivity and the limits of artificial moral agents," *Ethics Inf. Technol.*, vol. 26, Art. no. 13, 2024, doi: 10.1007/s10676-024-09755-9.
13. D. N. L. Ha and A. T. Nguyen, "Artificial intelligence-based assessment in ELT exam creation: A case study of Van Lang University lecturers," *Saudi Journal of Language Studies*, vol. 5, no. 1, pp. 34–49, 2025, doi: 10.1108/SJLS-06-2024-0030.
14. M. He, B. N. Abbasi, and J. He, "AI-driven language learning in higher education: An empirical study on self-reflection, creativity, anxiety, and emotional resilience in EFL learners," *Humanities and Social Sciences Communications*, vol. 12, no. 1, pp. 1–20, 2025, doi: 10.1057/s41599-025-05817-5.
15. N. Ivanytska, K. Olena, T. Kovalevska, O. Matsera, and T. Tkachuk, "Analyzing the possibilities of implementation of AI and social networks in teaching foreign language students: Ukrainian universities case study," *Arab World English Journal (AWEJ) Special Issue on ChatGPT*, 2024. [Online]. Available: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4814759
16. R. Kalra, "Exploring teachers' perceptions toward the integration of AI tools in the language classroom," *NIDA Journal of Language and Communication*, vol. 29, no. 45, pp. 21–36, 2025. [Online]. Available: <https://so04.tci-thaijo.org/index.php/NJLC/article/view/280606>
17. B. Karki and T. M. Karki, "Integrating AI in English language teaching: Challenges and opportunities," *Dristikon: A Multidisciplinary Journal*, vol. 15, no. 1, pp. 13–28, 2025, doi: 10.3126/dristikon.v15i1.77118.
18. L. Kilè, "The integration of generative AI in foreign language teacher education: A systematic literature review," *Pedagogika*, vol. 154, no. 2, pp. 5–26, 2024, doi: 10.15823/p.2024.154.1.
19. D. Kilov, C. Hendy, S. Y. Guyot, A. J. Snoswell, and S. Lazar, "Discerning what matters: A multi-dimensional assessment of moral competence in LLMs," *arXiv*, 2025, doi: 10.48550/arXiv.2506.13082.
20. B. Klimova, M. Pikhart, P. Polakova, M. Cerna, S. Y. Yayilgan, and S. Shaikh, "A systematic review of the use of emerging technologies in teaching English as an applied language at the university level," *Systems*, vol. 11, no. 1, Art. no. 42, 2023, doi: 10.3390/systems11010042.
21. N. A. Koka, "An insight into the efficiency of artificial intelligence (AI)-Chatbot as digital tutors for enhancing learners' motivation and performance in linguistics courses," *Pakistan Journal of Life & Social Sciences*, vol. 22, no. 2, 2024, doi: 10.57239/PJLSS-2024-22.2.001449.
22. O. Köksal and B. N. Z. Kale, "Integration of technology in the teaching of English as a foreign language: A review study," *Turkish Studies – Language and Literature*, vol. 20, no. 3, pp. 2231–2240, 2025, doi: 10.7827/TurkishStudies.82557.
23. J. Lachal, A. Revah-Levy, M. Orri, and M. R. Moro, "Metasynthesis: An original method to synthesize qualitative literature

- in psychiatry,” *Frontiers in Psychiatry*, vol. 8, Art. no. 269, 2017, doi: 10.3389/fpsy.2017.00269.
24. A. Laitinen and O. Sahlgren, “AI systems and respect for human autonomy,” *Frontiers in Artificial Intelligence*, vol. 4, Art. no. 705164, 2021, doi: 10.3389/frai.2021.705164.
25. P. R. Lewis and Ş. Sarkadi, “Reflective artificial intelligence,” *Minds & Machines*, vol. 34, Art. no. 14, 2024, doi: 10.1007/s11023-024-09664-2.
26. J. Liu, A. J. B. Sihes, and Y. Lu, “How do generative artificial intelligence (AI) tools and large language models (LLMs) influence language learners' critical thinking in EFL education? A systematic review,” *Smart Learning Environments*, vol. 12, no. 1, Art. no. 48, 2025, doi: 10.1186/s40561-025-00406-0.
27. C. M. Méndez-Alarcón, O. Adebola Lasekan, and V. Pachava, “Assessing the impact of AI integration course on students' AI competencies and readiness in preservice EFL teacher education,” *Pakistan Journal of Life & Social Sciences*, vol. 22, no. 2, 2024, doi: 10.57239/PJLSS-2024-22.2.001137.
28. M. A. Mohammed, R. J. Moles, and T. F. Chen, “Meta-synthesis of qualitative research: The challenges and opportunities,” *Int. J. Clin. Pharm.*, vol. 38, pp. 695–704, 2016, doi: 10.1007/s11096-016-0289-2.
29. H. Noble and G. Mitchell, “What is grounded theory?,” *Evidence-Based Nursing*, vol. 19, no. 2, pp. 34–35, 2016, doi: 10.1136/eb-2016-102306.
30. S. S. Nykyporets, O. D. Melnyk, S. Y. Piddubchak, M. B. Melnyk, and O. O. Krutchenko, “The efficacy of AI-driven pedagogical strategies for foreign language acquisition in higher education,” *Society and National Interests*, vol. 2, no. 10, pp. 24–36, 2025, doi: 10.52058/3041-1572-2025-2(10)-24-36.
31. A. W. Ou, C. Stöhr, and H. Malmström, “Academic communication with AI-powered language tools in higher education: From a post-humanist perspective,” *System*, vol. 121, Art. no. 103225, 2024, doi: 10.1016/j.system.2024.103225.
32. M. J. Page et al., “The PRISMA 2020 statement: An updated guideline for reporting systematic reviews,” *BMJ*, 2021.
33. M. Passamonti, “Why machines can't be moral: Turing's halting problem and the moral limits of artificial intelligence,” arXiv, 2024, doi: 10.48550/arXiv.2407.16890.
34. M. Pikhart, B. Klimova, and L. H. Al-Obaydi, “Exploring university students' preferences and satisfaction in utilizing digital tools for foreign language learning,” *Frontiers in Education*, vol. 9, Art. no. 1412377, 2024, doi: 10.3389/feduc.2024.1412377.
35. M. Queloz, “On the fundamental limitations of AI moral advisors,” *Philosophy & Technology*, vol. 38, Art. no. 71, 2025, doi: 10.1007/s13347-025-00896-3.
36. N. Sarnovska, J. Rybinska, and Y. Mykhailichenko, “Enhancing university remote language learning through innovative applications of artificial intelligence technologies amidst global challenges,” *Teaching Languages at Higher Educational Establishments at the Present Stage. Intersubject Relations*, no. 44, pp. 151–165, 2024, doi: 10.26565/2073-4379-2024-44-10.
37. K. M. Sheldon, “Recognizing and enhancing sapient agency within AIs: A free will perspective,” *Discover Psychology*, vol. 5, Art. no. 79, 2025, doi: 10.1007/s44202-025-00425-5.
38. N. Schuster and D. Kilov, “Moral disagreement and the limits of AI value alignment: A dual challenge of epistemic justification and political legitimacy,” *AI & Society*, 2025, doi: 10.1007/s00146-025-02427-2.
39. H. L. Shruthi, A. Radhakrishnan, A. D. Veigas, D. J. Railis, and R. S. Dinesh, “Analyzing pedagogy and education in English language teaching using information and communication technology,” *Education and Information Technologies*, pp. 1–23, 2025, doi: 10.1007/s10639-025-13439-2.
40. J. Southworth et al., “Developing a model for AI across the curriculum: Transforming the higher education landscape via innovation in AI literacy,” *Computers and Education: Artificial Intelligence*, vol. 4, Art. no. 100127, 2023, doi: 10.1016/j.caeai.2023.100127.
41. R. Thornberg, L. Perhamus, and K. Charmaz, “Grounded theory,” in *Handbook of Research Methods in Early Childhood Education: Research Methodologies*, vol. 1, 2014, pp. 405–439. [Online]. Available: <http://61.2.46.60:8088/jspui/bitstream/123456789/1393/1/Handbook%20of%20Research%20Methods%20in%20Early%20Childhood%20Education%20Research%20Methodologies,%20Volume.pdf#page=416>
42. Y. C. Tseng and Y. H. Lin, “Enhancing English as a Foreign Language (EFL) learners' writing with ChatGPT: A university-level course design,” *Electronic Journal of e-Learning*, vol. 22, no. 2, pp. 78–97, 2024, doi: 10.34190/ejel.21.5.3329.
43. J. Wang, “Self-awareness, a singularity of AI,” *Philosophy Study*, vol. 13, no. 2, pp. 68–77, 2023. [Online]. Available: <https://www.davidpublisher.com/Public/uploads/Contribute/6454a6a738fa1.pdf>
44. B. Waluyo and S. Kusumastuti, “Generative AI in student English learning in Thai higher education: More engagement, better outcomes?,” *Social Sciences & Humanities Open*, vol. 10, Art. no. 101146, 2024, doi: 10.1016/j.ssaho.2024.101146.
45. J. F. Wolfswinkel, E. Furtmueller, and C. P. Wilderom, “Using grounded theory as a method for rigorously reviewing literature,” *European Journal of Information Systems*, vol. 22, no. 1, pp. 45–55, 2017, doi: 10.1057/ejis.2011.51.
46. M. G. Yaseen and S. S. Alnaakeb, “Exploring the evolution of AI integration in English as a foreign language education:

A Scopus-based bibliometric analysis (1997–2023),” *Mesopotamian Journal of Computer Science*, pp. 143–158, 2023, doi: 10.58496/MJCSC/2023/019.

47. M. Younas, U. Noor, D. A. S. El-Dakhs, and B. Anwar, “Evaluating the effectiveness of digital scenario-based English teaching at the university level using the artificial intelligence generated content (AIGC),” *Frontiers in Education*, vol. 10, Art. no. 1670892, 2025, doi: 10.3389/feduc.2025.1670892.
48. M. Zaim et al., “AI-powered EFL pedagogy: Integrating generative AI into university teaching preparation through UTAUT and activity theory,” *Computers and Education: Artificial Intelligence*, vol. 7, Art. no. 100335, 2024, doi: 10.1016/j.caeai.2024.100335.
49. S. Zaimoğlu and A. Dağtaş, “Teacher cognition and practices in using generative AI tools to support student engagement in EFL higher-education contexts,” *Behavioral Sciences*, vol. 15, no. 9, Art. no. 1202, 2025, doi: 10.3390/bs15091202.
50. Q. Zhou, H. Hashim, and N. A. Sulaiman, “Supporting English-speaking practice in higher education: The impact of AI chatbot-integrated mobile-assisted blended learning framework,” *Education and Information Technologies*, pp. 1–32, 2025, doi: 10.1007/s10639-025-13401-2.