Policy Journal of Social Science Review

Online ISSN Print ISSN

Vol. 3 No. 12 (2025)

Next Generation ELT Dynamics in Pakistan: A Study of Language Teachers' Design Thinking Competency in Artificial Intelligence Language Teaching (LTDTAILT)

[1]Dr. Nazia Suleman
[2]Syed Ismaeel Raza
[3]Mumtaz Hussain
[*4]Muhammad Rashid
[1]-Assistant Professor of English, Department of Humanities, COMSATS University Islamabad, Vehari Campus.
[2]PhD English Linguistics Scholar at COMSATS University Islamabad, Vehari Campus.
[3]PhD English Linguistics Scholar at COMSATS University Islamabad, Vehari Campus.
[4]PhD English Linguistics Scholar at COMSATS University Islamabad, Vehari Campus.
*[1]Naziasuleman@cuivehari.edu.pk, [2]Ismaeel.prl@gmail.com, [*4]s.mrashid5524@gmail.com*

Abstract

Artificial intelligence has initiated a new wave of teaching and learning English in Pakistan, which can help meet the Next Generation Scientific Standards in the country. This study aims to understand current practices of EFL teachers at the graduate level concerning Next Generation ELT dynamics and to assess teachers' design thinking competency in artificial intelligence language teaching (LTDTAILT). The research is descriptive and based on a survey. It uses the tool developed by Amir Raza Rahemi (2025) in his study, "Developing and validating the scale of language teachers' design thinking competency in artificial intelligence language teaching (LTDTAILT)," which includes 22 research items. The questionnaire surveyed 100 EFL teachers at different levels in Pakistan and received 76 responses. SPSS version 27 was employed for data analysis and visualization. An online survey of 76 EFL teachers (44 males, 32 females) was conducted using a purposive sampling method. The analysis results showed a high tendency towards design thinking in language teaching through AI. It is recommended to support next-generation ELT equity and innovation in Pakistan through customized professional development, equitable infrastructure, and curriculum enhancements needed for DT.

Key Terms: Next Generation, ELT, ELT Dynamics, Thinking Competency, Language Teacher's Design Competency, Artificial Intelligence, Artificial Language Teaching

Article Details:

Received on 20 Nov, 2025
Accepted on 17 Dec, 2025
Published on 18 Dec 2025

Corresponding Authors*
Muhammad Rashid

Policy Journal of Social Science Review

Online ISSN Print ISSN

Vol. 3 No. 12 (2025)

INTRODUCTION

The field of English Language Teaching (ELT) has undergone significant changes recently, driven by new classroom technologies and evolving teaching methods. Incorporating artificial intelligence (AI) into language learning and teaching is one of the most important shifts. It will transform how teachers deliver lessons and how students engage with English (Hussain, Rahat, & Parveen, 2023). English skills are crucial for academic success and career advancement in Pakistan. Using AI in ELT offers great opportunities but also presents challenges. Global education reform efforts, such as focusing on next-generation learning, emphasize the importance of encouraging students to think critically, be creative, communicate effectively, and collaborate (Trilling & Fadel, 2009). In this evolving world, the teacher's role is shifting from simply delivering information to actively designing and facilitating meaningful learning experiences with students.

The concept of Design Thinking originated in the fields of design and engineering. However, it has gained popularity in education because it emphasizes human-centered, iterative problem-solving that begins with understanding learners, generating ideas for solutions, creating prototypes, testing them, and then making adjustments based on feedback (Brown, 2008; Razzouk & Shute, 2012). When applied in English as a foreign language (ELT) settings, especially those incorporating AI, design thinking prompts teachers to reconsider their lesson planning, task structuring, tool selection, and ways they connect with students. As a result, teachers need to be proficient in design thinking to effectively utilize AI and maximize the educational opportunities of next-generation ELT.

Higher education in Pakistan, including graduate-level English as a foreign language (EFL) classes, needs more adaptable teaching methods that can accommodate diverse student types, various language environments, and evolving digital skills. However, studies show a disconnect between policy discussions and actual classroom practices, despite the increasing momentum. Conversely, a survey of Pakistani EFL teachers' perceptions of AI found that while most agree AI can assist with personalized learning and efficiency, significant concerns remain about infrastructure, the digital divide, and teachers' ability to use AI effectively (Bibi & Shahzad, 2025). Research on online English language teaching (ELT) during the pandemic also indicates that many teachers struggled with ICT skills, support systems, and engaging students effectively (Shaikh & Abbasi, 2023). These findings highlight the need to explore not only whether teachers use AI but also how prepared they are to plan, implement, and consider AI-mediated ELT.

The present study adopts the term "Next Generation ELT dynamics" to describe a set of changes in how English is taught: shifting focus from the teacher to the learner, moving from fixed lessons to adaptable and interactive learning, transitioning from one-on-one lessons to collaborative, technology-enhanced spaces, and progressing from simple learning to deeper, more complex thinking. For these dynamics, teachers need to understand not only how to use technology but also how to plan projects, select appropriate tools, adapt to students' needs, and evaluate the outcomes. This research centers on three key developments occurring simultaneously: the movement toward next-generation learning worldwide, the integration of AI in language education, and the necessity for ELT teachers to understand design thinking. Exploring this intersection within the context of graduate-level English as a foreign language (EFL) in Pakistan addresses a research gap and offers practical insights into how teachers are trained, how tools are developed, and how programs are managed.

Policy Journal of Social Science Review

Online ISSN Print ISSN

Vol. 3 No. 12 (2025)

Statement of the Problem

Educational landscapes continue to evolve, requiring modern pedagogical approaches to reinforce structured, complex, reflective, and personalized language instruction. Educational reforms, including the Common Core, 21st Century reforms, and Next Generation Science Standards, emphasize developing critical thinking, problem-solving, innovation, and inquiry-based approaches to understand real-world communication. Through digital skills, teachers can meet the complex graduate-level curriculum expectations, which are influenced by cultural diversity in Pakistan.

Objectives of the Study

- To understand the EFL teachers' practices to meet Next Generation ELT dynamics in Pakistan.
- To measure the tendency of English Language Teachers' Design Thinking Competency in Artificial Intelligence Language Teaching (LTDTAILT) to meet the standard cores of Next Generation ELT learning.

Research Questions

- Which standard cores need to be addressed through EFL teaching pedagogy in the current era in Pakistan?
- What are the tendencies of English Language Teachers' Design Thinking Competency in Artificial Intelligence Language Teaching (LTDTAILT) to meet the standard cores of Next Generation ELT learning?

LITERATURE REVIEW

Next Generation ELT Dynamics

The concepts behind next-generation learning stem from broader skill frameworks designed for today's world. These frameworks emphasize the "4Cs": critical thinking, creativity, collaboration, and communication (Trilling & Fadel, 2009). The shift from STEM and general education to ELT has led to a redefinition of language teaching as a way to prepare students for digital literacy, real-world communication, and lifelong learning (Richards & Rodgers, 2014). Under this model, ESL classrooms become dynamic, adaptable, student-centered, and technology-driven.

According to Kukulska-Hulme (2021), some practical aspects of next-generation ELT include increased learner autonomy, authentic tasks based on real-life communication, integration of digital tools and platforms, collaborative learning, reflective practice, scaffolded higher-order thinking, and personalized instruction tailored to learner profiles. It is also notable that in large class sizes, multilingual student populations, infrastructure issues, and longstanding teacher-centered pedagogies all pose challenges to implementing these strategies in Pakistan (Khan & Jabeen, 2024). Pakistani research indicates that traditional teaching methods remain prevalent in classrooms, despite claims to the contrary in policy papers and scholarly articles. For example, Fatima (2025) found that many university EFL courses still rely on methods like teacher-led lectures, memorization, and grammar-translation, which do not effectively promote student engagement or independence. Additionally, many educators were unprepared for adaptable, participatory, digitally-mediated education, as the COVID-19 pandemic accelerated the shift to blended learning (Abbasi et al., 2024). Central to successfully implementing next-generation ELT strategies is teacher competency, especially design thinking skills, which help connect pedagogical vision with actual classroom practice.

Policy Journal of Social Science Review

Online ISSN Print ISSN

Vol. 3 No. 12 (2025)

Artificial Intelligence in ELT: Global and Pakistani Contexts

Intelligent tutoring systems, automated writing evaluation, adaptive learning platforms, speech-recognition feedback, and generative-AI-driven material are just a few examples of how AI is transforming the educational landscape (Zawacki-Richter et al., 2019; Chen & Lin, 2023). Artificial intelligence (AI) can revolutionize educational leadership by enabling data-driven pedagogical decisions, personalizing learning, increasing engagement, facilitating adaptable activities, and providing quick feedback. Research from around the world has shown that AI tools for language learning have great potential. However, there are still challenges related to pedagogical design, teacher training, ethical issues, infrastructure, and access inequality (Ahmad et al., 2025). The use of AI in the classroom can lead to problems such as insufficient teacher training, concerns about data privacy, overreliance on technology, and decreased critical thinking (Ahmad et al., 2025). Additionally, these tools often focus more on lower-level skills, such as vocabulary and grammar, rather than on developing complex communicative abilities. New research provides insight into the Pakistani context.

According to Hussain, Rahat, and Parveen (2023), who studied AI in Pakistani universities, few professors were thoughtfully integrating AI into their lessons due to a lack of training and necessary infrastructure. However, many professors were familiar with the concept. The authors recommended institutional support and specialized training. Additionally, Firdaus and Nawaz (2024) examined the perspectives of Punjabi educators and found positive attitudes toward AI, but also highlighted issues such as the digital divide, training gaps, and access problems. Similarly, Bibi and Shahzad (2025) surveyed university-level EFL instructors. They discovered that 86% had a favorable view of AI for personalized instruction and lesson planning, though concerns about reduced ethical reasoning and critical thinking remained.

Safdar, Shafi, and Junaid (2025) studied AI-driven gamification in Pakistan and found that it increased engagement and performance, but only in urban areas with sufficient resources. The literature consistently highlights four main points: (a) most teachers have a favorable view of AI; (b) significant technical and infrastructure challenges remain; (c) a major obstacle is teachers' lack of competence in both pedagogy and technology; and (d) concerns about equity, ethics, and context sensitivity are critical. These findings provide a foundation for exploring how design thinking skills may serve as a mediator between ELT and successful AI implementation.

Proficiency in Design

Empathy, problem definition, ideation, prototyping, testing, and reflection are the stages that make up design thinking, an iterative problem-solving method centered on humans (Brown, 2008; Razzouk & Shute, 2012). To better meet the needs, circumstances, and behaviors of their students, educators might adopt a design-thinking mindset and treat their lessons and assignments as design artifacts. According to Henriksen, Richardson, and Mehta (2017), educators who possess strong design thinking skills are more likely to develop adaptable assignments that prioritize students' needs, incorporate technology to make them more engaging, and practice ongoing reflection and iteration. Lakanukan, Pongsophon, Faikhamta, and Jantarakantee (2022) investigated the design thinking competencies of science instructors in the field of teacher competency research. They found that skills, including empathy, ideation, prototyping, testing, and reflection, can be applied and evaluated. Their findings demonstrate that design thinking is not limited to one field; it can be used to enhance education across all disciplines.

Policy Journal of Social Science Review

Online ISSN Print ISSN

Vol. 3 No. 12 (2025)

Design thinking competency in language teaching, especially in AI-mediated contexts, means that instructors can understand and accommodate a wide range of students' linguistic, cultural, and technological needs; develop appropriate AI-enhanced tasks; prototype and adapt these tasks (e.g., AI tools for speaking, writing, and interaction); test and reflect on the results; and finally, iterate. Frameworks such as LTDTAILT (Rahemi, 2025) are relevant to the present study because few empirical investigations specifically target language instructors' design thinking ability in AI-enhanced ELT situations.

Empirical Studies of Teacher Competencies, AI Integration, and Design Thinking in Pakistani ELT

Research on Pakistani teachers' design thinking skills in ELT is less common than studies on teachers' overall views of artificial intelligence. For example, Bibi and Shahzad's (2025) survey of university-based EFL instructors examined their attitudes toward AI but did not explore their design processes or how they develop iterative tasks. Similarly, Firdaus and Nawaz (2024) found that infrastructure and training posed the biggest challenges for English professors at Punjabi government colleges. In the same vein, Hussain et al. (2023) provided qualitative data on AI experiences in the classroom but, again, did not address design-thinking skills. Regarding the dynamics of next-generation English language teaching (ELT), Nazeer, Jamshaid, and Mushtaq Khan (2023) examined how the COVID-19 pandemic accelerated pedagogical change in Pakistani ELT and found that while digital tools and blended methods increased, teacher preparedness and pedagogical flexibility did not meet expectations. Based on their research on the cultural compatibility of ELT materials, Zaffar, Younus, and Amjad (2023) concluded that teacher-led adaptation is essential for fostering next-generation dynamics, as Pakistani ELT materials often lack local relevance. The findings from these studies show that teachers' skills are key for design tasks such as material selection and adaptation, technology integration, and aligning with learner profiles.

There is a noticeable lack of attention in these empirical studies to measuring the design-thinking process by which language instructors create AI-mediated learning environments. No one in the Pakistani EFL community has taken advantage of the opportunities offered by Rahemi's (2025) Language Teachers' Design Thinking skill in Artificial Intelligence Language Teaching (LTDTAILT) instrument, which provides a chance to practice this skill. To address this gap, the current study examined how graduate-level EFL teachers implement next-generation ELT dynamics while simultaneously assessing their design thinking competency (LTDTAILT).

Synthesis and Research Gap

The following points are highlighted in the literature review: In Pakistan, there is still a lack of uniformity in the use of next-generation English language teaching approaches that focus on learner-centered, technology-enhanced, higher-order pedagogy, mainly due to resource limitations and teacher competence. Second, infrastructure, teacher preparedness, pedagogy, and ethics, not technology, mediate the significant potential of AI in ELT. Third, in ELT, especially in AI-enabled Pakistani contexts, design thinking competency offers a helpful perspective for understanding teacher preparation and adaptability; however, this area has received little attention. The fourth point is that research on teachers' opinions about AI is limited compared to studies examining design thinking processes, task design skills, iterative adaptation, and reflective practice. The LTDTAILT instrument is a promising tool for assessing teachers' design thinking skills in AI-mediated ELT. However, it has not yet undergone rigorous validation in Pakistani graduate-level EFL settings.

Policy Journal of Social Science Review

Online ISSN Print ISSN

Vol. 3 No. 12 (2025)

To address these issues, this study assesses the design-thinking abilities of EFL teachers in AI-enhanced language-teaching settings (LTDTAILT). It explores their current practices in next-generation ELT at the graduate level. The research results are expected to influence initiatives focused on training future ELT teachers, strategies for choosing and integrating AI tools into curricula, and institutional policies that promote AI use in ELT.

RESEARCH METHODOLOGY

The research design used in this study was descriptive, focusing on investigating the application of Next Generation English Language Teaching (ELT) dynamics and teacher design thinking competency in AI-based language teaching (LTDTAILT) among EFL teachers in Pakistan. A quantitative survey method was employed to measure perceptions, familiarity levels, and abilities, which could be systematically assessed and statistically inferred. This design is appropriate due to the exploratory nature of the research, which aims to describe existing practices and trends without manipulating variables. It provides background knowledge about the role of AI in enhancing critical thinking, creativity, collaboration, and communication, which make up the 4Cs of next-generation learning (Trilling & Fadel, 2009). The design is suitable because the research targets EFL teachers across different educational levels in Pakistan, reflecting the diverse ELT environment from primary to higher education. To identify participants directly involved in English language instruction, a purposive sampling method was used to ensure relevance to the research topic, AI-mediated pedagogies. The initial target was 100 graduate EFL teachers, but the final sample comprised 76 valid responses, yielding a response rate of 76%. The sample was balanced by gender (44 males, 32 females). It enabled comparison of results, with most participants being young (84% under 40 years), holding postgraduate qualifications (more than 60% with a Master's degree or higher), and having limited experience (81% with less than 10 years). The levels of teaching were stratified as follows: Higher Education (College/University, n=33), Secondary (n=23), Primary/Middle (n=18), and Language Institutes (n=2). This stratification may reflect urban-rural and institutional differences, though it is limited by underrepresentation in Language Institutes. The sample was drawn from professional networks, ELT forums, and university mailing lists during a period of rapid change in educational technologies, ensuring timely insights into AI-enhanced ELT within the context of design thinking (DT) adoption.

Data collection was conducted using a structured questionnaire based on the LTDTAILT scale, validated by Rahemi (2025), consisting of 17 Likert-scale items (1=Strongly Disagree to Agree 5=Strongly). The instrument was divided into four main sections: (1) AI Role in ELT (Items 3-7, e.g., personalization, engagement); (2) AI Competency (Items 8-12, e.g., fostering innovation, student-centeredness); (3) DT Importance (Items 13-17, e.g., empathy mapping, iterative problem-solving); and (4) DT Competency (Items 18-22, e.g., prototyping, reflection). Additionally, two categorical questions assessed familiarity with AI and DT on a 5-point scale from Not Familiar to All to Expert. The scale's reliability has been established through previous validation by Rahemi (Cronbach's alpha of 0.80 or higher across subscales), and slight modifications were made to adapt it to the Pakistani multilingual classroom context.

DATA ANALYSIS

Descriptive Statistics of Composite Variables: The means, Standard Deviation, and Interpretations.

AI Familiarity and Principle of Design Thinking Adoption in ELT (Question No. 1,2)

	AIEdu_num	DTpr_num
mean	3.526	2.618

Policy Journal of Social Science Review

Online ISSN Print ISSN

Vol. 3 No. 12 (2025)

std	1.000	1.070

Question No. 1 tested familiarity with Artificial Intelligence (AI) in education. Question 2 was used to assess the familiarity with Design Thinking principles. The data were analyzed, and a significant difference in familiarity was found. In the case of AI in education, the mean was 3.526 (SD = 1.000), which indicated moderate to high levels of familiarity on the whole, falling between the items of "Moderately familiar and Very familiar. This suggests that a significant number of ELT educators have used AI applications, likely due to recent technological advances and increased exposure to professional networks and media. Conversely, the level of acquaintance with the principles of Design Thinking was significantly lower, with a mean of 2.618 (SD = 1.070), falling within the Slightly and Moderately familiar ranges. This smaller value suggests that a human-centered innovative framework, such as Design Thinking, is not as firmly embedded in the professional repertoire of teachers: AI (SD = 1.000) has much more consensus in terms of AI exposure, but the spread of Design Thinking (SD = 1.070) is more widespread, possibly because of the different access to relevant workshops. This is a critical gap, given that the iterative, empathetic Design Thinking curriculum approach can be highly beneficial for implementing AI in ELT. The results suggest an opportunity for targeted professional development to deepen familiarity with Design Thinking, enabling more innovative, student-centered AI to be applied to language teaching. In the future, a study could be conducted to understand the impact of demographics on these familiarity levels, enabling a customized intervention.

AI Role in ELT (Question No. 3-7)

	AIrole1_num	AIrole2_num	AIrole3_num	AIrole4_num	AIrole5_num
mean	3.763	3.724	3.618	3.750	3.500
std	1.253	1.271	1.200	1.179	1.194

The construct, which analyzes the perceived role of Artificial Intelligence (AI) in the process of English Language Teaching (ELT), was assessed by using five Likert-scale questions (Questions 3-7), in which the respondents were asked to respond to the question based on their level of agreement (Strongly Disagree, Strongly Agree, etc.). Findings revealed a positive perception, with mean scores of 3.500-3.763, indicating moderate to strong concern. The most remarkable consensus was in the area of personalization (M = 3.763, SD = 1.253), suggesting that teachers perceive the AI as very effective at tailoring education to individual needs, perhaps due to broad exposure to adaptive platforms. Right behind them were automation of tasks (M = 3.750, SD = 1.179) and engagement enhancement (M = 3.724, SD = 1.271), resulting from optimism about AI's effectiveness and their motivational capabilities. The feedback provision rating was a little lower (M = 3.618, SD = 1.200), which can be a sign that there is still a question mark regarding the accuracy of AI when it comes to the fine details in language evaluation. The lowest mean was for future job market preparation (M = 3.500, SD = 1.194), which was neutral-agree and may reflect doubts about the long-term effects of AI on society. A standard deviation of 1.2 indicates a moderate level of variation, suggesting varying experiences across variables such as level of education or knowledge. These results highlight the importance of AI in ELT, but also underscore the need for targeted professional development to address a lack of confidence in feedback and future preparedness, thereby leading to more consistent implementation.

AI Competency (Variables 8-12)

	AIcomp1_num	AIcomp2_num	AIcomp3_num	AIcomp4_num	AIcomp5_num

Policy Journal of Social Science Review

Online ISSN Print ISSN

Vol. 3 No. 12 (2025)

mean	3.500	3.553	3.526	3.539	3.632
std	1.065	1.088	1.160	1.137	1.176

The construct of self-perceived capability regarding the introduction of AI in ELT practices was measured using five agreement-based Likert scales (Questions 8-12) ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The analysis of items in the responses yielded the following results: the means ranged from 3.5. The highest self-rating was for the adaptation of strategies (M = 3.632, SD = 1.176), indicating that teachers consider themselves somewhat competent at adopting AI as a flexible part of pedagogy. Immediately after, the troubling shooting (M = 3.539, SD = 1.137) and lesson plan design (M = 3.553, SD = 1.088) were presented, indicating practical implementation skills. The lowest outcome (M = 3.526, SD = 1.160) and tool choice (M = 3.500, SD = 1.065) were rated, with the latter at the very neutral point, which might indicate difficulty in determining tool effectiveness in an ever-changing world of AI. The standard deviations of 1.065-1.176 reflect some dispersion, which differences in levels of familiarity or experience with AI can probably explain. On the whole, these findings indicate a competency gap, with underlying adjustment skills being more significant than analytical or selective skills. It means that training opportunities can be introduced to evaluate and select ELT educators, thereby increasing the role of AI and student learning in language learning.

DT Importance (Variables 13-17)

	DTimp1_num	DTimp2_num	DTimp3_num	DTimp4_num	DTimp5_num
mean	3.500	3.573	3.592	3.368	3.474
std	1.172	1.055	1.110	1.044	1.113

The perceived significance of the Design Thinking (DT) features of an AI-based ELT curriculum was quantified using five items (Questions 13-17). The range of means among the 76 respondents was 3.368-3.592, which is very important, with a slight inclination towards being very important. Ideation was found to be most appreciated (M = 3.592, SD = 1.110), which might reflect teachers' attempts to counterbalance the algorithms of AI solutions by emphasizing creativity. Definition (M = 3.573, SD = 1.055) and testing (M = 3.474, SD = 1.113) were not any less important, and it was necessary to define the problems clearly and empirically validate the curriculum design. Empathy (M = 3.500, SD = 1.172) was neutral to very important, indicating that student-centered approaches are realized and that underestimation may occur in the context of AI. Prototyping had the lowest score (M = 3.368, SD = 1.044), which may be due to practical constraints, such as time limitations in developing trial activities. Standard deviations in the range of 1.0-1.2 indicate uniform opinions with minor variation, possibly due to teaching experience or familiarity with DT. These results confirm the applicability of DT in AI-ELT integration, especially in innovation and evaluation, but the connection between DT and prototyping is found to be weaker. The implications include curriculum changes to train Dt to bring all levels to the next level and to make the development of AI-enhanced ELT holistic, considering all challenges in the educational field.

DT Competency (Question 18-22)

	DTcomp1_num	DTcomp2_num	DTcomp3_num	DTcomp4_num	DTcomp5_num
mean	3.395	3.579	3.592	3.513	3.750
std	1.084	0.913	1.110	0.902	1.021

Self-reported competency elicited by using Design Thinking (DT) to apply AI-enhanced ELT based on five Likert items (Questions 18-22) ranging between Strongly Disagree and Strongly Agree. The results show that the means range from 3.395 to 3.750, indicating neutral to moderate agreement and a positive skew towards competency. The most critical solutions were

testing and refining (M = 3.750, SD = 1.021), indicating that self-efficacy in an iterative evaluation is strong in teaching, as it requires feedback. This was followed by ideation (M = 3.592, SD = 1.110) and definition (M = 3.579, SD = 0.913), indicating comfort with the creative and objective-setting stages. Prototyping (M = 3.513, SD = 0.902) was rated moderately, but empathy (M = 3.395, SD = 1.084) had the lowest score, and this might be related to the difficulty of connecting to AI-related student experiences across settings with varying access to technology. The SDs (0.902-1.110) are mostly consistent with other constructs and show less dispersion, suggesting homogeneous levels of exposure to DT. The results indicate a more competent profile later on (ideate, test) than foundational (empathize, prototype) levels of competence in line with the importance perceptions. Professional development, as needed to reduce existing gaps, must focus on skills in empathy-building and prototyping, as well as on improving teachers' capacity to design student-focused AI-ELT innovations and facilitate sustainable changes in education.

DISCUSSION

The results illuminate the evolving relationship between AI and DT in Pakistani EFL teaching, aligning with global trends toward learner-centered, technology-enhanced education (Trilling & Fadel, 2009). The high level of AI familiarity (96% above 'Not familiar') supports Hussain et al. (2023), who noted that Pakistani educators have developed conceptual awareness due to the availability of tools like ChatGPT amid digital acceleration post-pandemic. However, the low percentage of professional cadres and the gender gap, in which females are less familiar than males, reflect issues related to the digital divide discussed by Firdaus and Nawaz (2024), in which systemic factors, such as financial and access barriers, disproportionately impact female training. Changing familiarity with DT suggests that females inherently recognize its empathetic and iterative nature (Brown, 2008), indicating that DT is a soft skill AI now needs to cultivate, potentially making this field more inclusive for professional development. This is emphasized by the essentially novice sample, representing a young, digitally native but inexperienced demographic that is optimistic yet unpredictable (SD~1.1). This underscores the need for scaffolded AI training to bridge abstract ideals with classroom realities, as Zawacki-Richter and Shute (2012) suggest. Nonetheless, lower scores in engagement (M=3.62) and student-centeredness (M=3.53) point to pedagogical hesitation, echoing Bibi and Shahzad's (2025) findings on ethical concerns and fears of over-reliance. In resource-limited environments like Pakistan (Khan & Jabeen, 2021), the availability of AI conflicts with infrastructural shortcomings, as seen in the means trailing Primary/Middle levels (AI Role M=3.12). DT components show similar patterns: when advocating for prototyping (M=3.75), AI is viewed as an iterative artifact design (Henriksen et al., 2017), but gaps in empathy (M=3.40) highlight the need for foundational teaching to enhance human-centered innovation (Zaffar et al., 2023).

LIMITATIONS CURB INTERPRETATIONS

The n=76, cross-sectional design is a warning of self-report positivity bias; integrated AI-DT would be a more critical thinker to its problem of n=76, cross-sectional, and urban skew. The Small Language Institute subsample (n=2) limits the generalizability, and subsequent waves could be expected to agree with classroom observation. However, such outcomes trigger the next stage of ELT, with the assistance of teacher-to-AI scaffolding, 4Cs can be democratized in Pakistan, turning EFL into a process of reflection rather than memorization, that is, an inclusive tradition. This intersection not only addresses empirical gaps in the application of the scale as presented by Rahemi (2025) but also drives sustainable, human-AI hybrid teaching that aligns with global changes in lifelong digital literacy.

Policy Journal of Social Science Review

Online ISSN Print ISSN

Vol. 3 No. 12 (2025)

CONCLUSION AND RECOMMENDATIONS

Overall, the current research reveals a promising but uneven future for ELT dynamics in Pakistan, where the implementation of AI might depend on teachers' design thinking competencies (LTDTAILT). A survey of 76 EFL teachers showed high AI familiarity (96% participation) and moderate DT preparedness (87% not novices), with averages indicating potential (3.5- 3.533.8) for personalization and iteration. The gender inversion- female AI breadth, male DT depth- and level gradients (Higher Education leading Primary/Middle) advance equity, and the correlations suggest productive investment when AI and DT intersect. These trends partially fulfill next-generation core skills (critical thinking, collaboration), but issues of empathy and infrastructure persist, echoing findings in the literature about policy-practice disconnects (Khan & Jabeen, 2021; Bibi & Shahzad, 2025). Finally, through the LTDTAILT framework proposed by Rahemi (2025), empowered teachers will be able to transform EFL into a more adaptive, tech-savvy discipline, enabling them to serve Pakistan's diverse learners effectively.

The recommendations span from micro to macro levels. Additional interventions include: At the individual teacher level, promoting prototyping (focusing on M>4.0) through micro-professional development using free tools (e.g., Coursera AI modules, IDEO DT toolkits) to integrate greater cultural sensitivity into culturally sensitive tasks. For pilot projects, institutions should mandate AI tools such as Duolingo that include feedback loops as part of the curriculum. This could involve 20-hour AI-Design Thinking workshops, with gender-disaggregated groups (e.g., female tech cohorts) and level-specific content (Primary: basic AI gamification; Higher: advanced analytics). Funding should be provided, in collaboration with tech companies, for devices in undervalued locations, as ANOVA data suggests, to offer subsidized access. Progress can be measured through pre- and post-LTDTAILT surveys, targeting SD<1.0 consistency. Policy changes from the Higher Education Commission and the Ministry of Education would be necessary to include Design Thinking as a core competency alongside AI ethics modules. Incentives like certification credits for AI-DT use and rural fellowships can help reduce disparities (Safdar et al., 2025). Blended training programs could be expanded through cross-sector partnerships, such as with the British Council, aiming to increase expertise by 50 percent over five years and foster fair, innovative classrooms. Investing in teachers would elevate Pakistan to international standards and prepare graduates for opportunities in the digital world.

Gaps for Future Research

This paper highlights AI-DT in ELT in Pakistan and also identifies areas for further research. The self-report, cross-sectional (n=76) study design allows for longitudinal tracking of changes: How do LTDTAILT competencies evolve following an intervention, possibly through mixed-methods such as classroom ethnographies? The issue of rural underrepresentation calls for stratified sampling and investigation into how digital divides impact the achievement of the 4Cs. For those without graduate-level education, qualitative explorations, such as teacher narratives about ethical AI dilemmas, can help unpack why correlations occur. Comparing South Asian contexts could contextualize the gradients within Pakistan, and experimental designs testing the effectiveness of AI-DT hybrids on student performance could address causal gaps. Finally, validating LTDTAILT techniques in the era of generative AI (e.g., following the development of ChatGPT) should ensure their relevance, fill existing gaps in empirical knowledge, and support scaling up reforms.

REFERENCES

Abbasi, K. J., Solangi, M. A., & Golo, M. A. (2024). USE OF CHATGPT IN ENGLISH LANGUAGE TEACHING: TEACHERS'PERSPECTIVE. *Journal of Applied Linguistics and TESOL (JALT)*, *7*(4), 714-721.

Ag-Ahmad, N., Mohamed, A. T. F. S., & Majilang, D. B. (2025). Voices from ESL Classrooms: Overcoming Challenges and Enhancing English Language Teacher Education in Malaysia. *Studies in English Language and Education*, *12*(1), 328-345.

Bibi, S., & Shahzad, A. K. (2025). Impact of Artificial Intelligence on English Language Teaching at University Level: A Study of EFL Teachers' Perspectives in Pakistan. *ASSAJ*, *4*(01), 200-234.

Brown, T. (2008). Design thinking. *Harvard business review*, *86*(6), 1-10.

Chen, M. R. A., & Lin, Y. H. (2023). AI chatbot-supported grammar tense learning on EFL students learning effectiveness. In *INTED2023 proceedings* (pp. 1207-1216). IATED.

Fatima, B. O. U. K. E. R. S. O. U. L. (2025). *Investigating the Effectiveness of Flipped Classroom in Designing and Teaching English for Oil Drilling Course at Kasdi Merbah University-Ouargla* (Doctoral dissertation, Université Kasdi Merbah Ouargla).

Firdaus, A., & Nawaz, S. (2024). Viewpoints of teachers about the usage of artificial intelligence in ELT: Advantages and obstacles. *University of Chitral Journal of Linguistics and Literature*, *8*(I), 82-93.

Henriksen, D., Richardson, C., & Mehta, R. (2017). Design thinking: A creative approach to educational problems of practice. *Thinking skills and Creativity*, *26*, 140-153.

Hussain, I., Rahat, R., & Parveen, T. (2023). Harnessing Artificial Intelligence for Dynamic Landscape: Re-envisioning English Language Teaching in Pakistan. *The University of Chitral Journal of Linguistics and Literature (JLL)*, *7*(2), 256-264.

Hussain, I., Rahat, R., & Parveen, T. (2023). Harnessing Artificial Intelligence for Dynamic Landscape: Re-envisioning English Language Teaching in Pakistan. *The University of Chitral Journal of Linguistics and Literature (JLL)*, *7*(2), 256-264.

Khan, M. R., & Meh Jabeen, S. (2024). Approaches of Generation Z towards AI Integration in Pakistani Classrooms. *Traditional Journal of Law and Social Sciences*, *4*(1), 52-65.

Kukulska-Hulme, A. (2021). Moving language teaching and learning from the known to the unknown. In *Language learning with technology: Perspectives from Asia* (pp. 3-12). Singapore: Springer Nature Singapore.

Lakanukan, S., Pongsophon, P., Faikhamta, C., & Jantarakantee, E. (2022). สมรรถนะ การ สอน การ คิด เชิง ออกแบบ ของ ครู วิทยาศาสตร์: COMPETENCIES OF SCIENCE TEACHERS FOR TEACHING DESIGN THINKING. *Journal of Education and Innovation*, *24*(2), 370-380.

Nazeer, I., Jamshaid, S., & Khan, N. M. (2023). The Evolution of ELT Methods: A Comparative Analysis of Pre and Post-COVID-19 Pedagogical Practices in Pakistan. *Journal of Policy Research*, *9*(4), 232-240.

Rahimi, A. R. (2025). Developing and validating the scale of language teachers' design thinking competence in artificial intelligence language teaching (LGDTAILT). *Computers and Education: Artificial Intelligence*, 8, 1-10.

Razzouk, R., & Shute, V. (2012). What is design thinking and why is it important?. *Review of educational research*, *82*(3), 330-348.

Safdar, U., Shafi, S., & Junaid, M. (2025). The impact of AI-driven gamification on student engagement and academic performance in English language teaching. *Indus Journal of Social Sciences*, *3*(1), 646-656.

Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*. John Wiley & Sons.

Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*. John Wiley & Sons.

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education–where are the educators?. *International journal of educational technology in higher education*, *16*(1), 1-27.