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Mejorar y Transformar la ensañanza y el aprendizaje del inglés como lengua extranjera EFL a través del pensamiento de diseño: Una revisión de la Literatura

Enhancing and Transforming EFL Teaching and Learning through Design Thinking: A Literature Review

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Resumen

Esta revisión de literatura explora cómo se ha aplicado el Design Thinking (DT) para mejorar y transformar la enseñanza y el aprendizaje del inglés como lengua extranjera (EFL). Su propósito es sintetizar tanto estudios empíricos como evidencias basadas en la práctica sobre la integración del DT en EFL, con énfasis en identificar su aplicación, beneficios, desafíos y vacíos de investigación. Para ello, se realizó una exploración bibliográfica y una revisión temática que abarcó el período 2019–2025 en diferentes bases de datos y fuentes. La revisión estuvo guiada por criterios de inclusión y exclusión claramente definidos, lo que garantizó la selección de los estudios más relevantes para el alcance del DT en contextos de EFL.

Los hallazgos indican que el DT promueve de manera consistente la creatividad, la comunicación oral y escrita, la autonomía y el pensamiento crítico en el aprendizaje del inglés como lengua extranjera. Sin embargo, persisten desafíos como las limitaciones de desarrollo lingüístico sostenido, la transferibilidad de competencias y las restricciones institucionales y de recursos. En todos los contextos, se identifican vacíos de investigación relacionados con la evidencia longitudinal, el alcance metodológico y la escalabilidad de la metodología en escenarios diversos. La revisión concluye que el DT ofrece un potencial transformador para el EFL, pero su implementación exitosa requiere apoyo institucional, formación docente y estudios empíricos más sólidos.

Palabras clave: Design Thinking (DT); inglés como lengua extranjera (EFL); creatividad y comunicación; autonomía y pensamiento crítico; vacíos de investigación

Abstract

This literature review explores how Design Thinking (DT) has been applied to enhance and transform English as a Foreign Language (EFL) teaching and learning. Its purpose is to synthesize both empirical studies and practice-based evidence on the integration of DT in EFL, with a focus on identifying its application, benefits, challenges, and research gaps. To achieve this, a bibliographic exploration and thematic review covering the period 2019–2025 was conducted across different databases and sources. The review was guided by clearly defined inclusion and exclusion criteria, ensuring the selection of studies most relevant to the scope of DT in EFL contexts.

Findings indicate that DT consistently promotes creativity, oral and written communication, autonomy, and critical thinking in EFL learning. However, challenges persist, including limitations in sustained linguistic development, transferability of competencies, and institutional and resource constraints. Across all contexts, research gaps are identified regarding longitudinal evidence, methodological scope, and scalability of DT in diverse settings. The review concludes that DT offers transformative potential for EFL, but its successful implementation requires institutional support, teacher training, and stronger empirical studies.

Keywords: Design Thinking (DT), English as a Foreign Language (EFL), creativity and communication, autonomy and critical thinking, research gaps

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INTRODUCTION

Improving English as a Foreign Language (EFL) remains an essential priority across higher education because English proficiency exposes academic mobility, access to research, and employability in globalized labour markets. In many systems, particularly where English is learned as a foreign language rather than used as a societal lingua franca, students often complete required coursework without reaching the communicative autonomy needed for study, internships, or entry-level professional roles. (Karim et al., 2023; Daqiq et al., 2024). Typical gaps include limited fluency and interactional skills, weak control of academic writing conventions, and low confidence when speaking beyond rehearsed contexts. These gaps are not exclusively linguistic; they are also pedagogical, reflecting how learning tasks are framed, practiced, and assessed.

Universities face additional obstacles that make EFL improvement difficult, including large class sizes, heterogeneous proficiency levels, restricted contact hours, and curricular overload, which collectively limit the opportunities for meaningful language practice and individual support (Khatri, 2025). These structural constraints make it difficult for instructors to provide differentiated instruction and timely feedback to all learners. As a result, traditional teacher-centered delivery can cover prescribed content but rarely secures durable gains in language performance, particularly when feedback is delayed or remains generic. (Moslem et al, 2023). Moreover, many students have fragmented digital practices—using social media in English, but with few sustained opportunities to produce extended messages, collaborate on authentic tasks, or refine their work iteratively. As a result, learners may accumulate vocabulary and grammatical knowledge without developing the ability to strategically mobilize language for real audiences and purposes (Zakian et al., 2022).

Strengthening EFL outcomes therefore requires a coherent shift: from transmission to creation, from isolated drills to purposeful tasks, and from single-shot assignments to cycles of practice, feedback, and revision. This shift is not only about "making classes engaging." It is about aligning classroom activity with the authentic ways in which languages are used—problem-solving with peers, presenting to stakeholders, writing to persuade or inform, and iterating based on feedback (Brown & Katz, 2019; Swallow & Tomalin, 2024). When courses are designed around these uses, students practice the very moves that matter for academic success (organizing arguments, referencing evidence, negotiating meaning) and for workplace readiness (collaboration, adaptability, and audience awareness). In short, improving EFL is as much a design question as it is a linguistic one: we must design learning experiences that elicit meaningful language use, surface thinking for feedback, and build soft skills alongside communicative competence.

Active methodologies such as project-based learning (PBL), flipped learning, problem-based learning, data-driven learning (DDL), and design-based learning empower students as creators rather than recipients of knowledge. Their value in EFL lies in how they turn language from an object of study into a tool for achieving goals (Chen Hsieh, Wu, & Marek, 2017; Beckett & Slater, 2018).

In PBL, for instance, learners research a real challenge, propose solutions, and present outcomes to an audience. English becomes the medium through which the project advances (reading sources, negotiating roles, drafting texts, and delivering pitches). Because tasks are authentic and audience-oriented, students have reasons to monitor clarity, tone, and accuracy, and they receive feedback that is concrete and consequential. Research confirms that project-based language teaching (PBLT) creates opportunities for meaningful interactive language use and helps learners assume more autonomous roles in their learning (Grant, 2017). Moreover, studies highlight that PBL strengthens not only linguistic outcomes but also life skills such as communication, mutual respect, confidence, and self-regulation (Ghosheh

Wahbeh et al., 2021). More recent evidence shows that when implemented in EFL contexts, PBLT significantly enhances students' competences in English, provided that teachers can design and assess projects effectively and motivate learners throughout the process (Sun & Zhu, 2023).

In flipped learning, first exposure to input happens outside of class reserving in-class time for practice, feedback, and troubleshooting. This structure increases time on task for speaking and writing, while enabling instructors to diagnose misconceptions early. Data-Driven Learning (DDL), in turn, equips learners to analyse real language use (corpora and examples) to notice patterns, test hypotheses, and refine output. These approaches share a common grammar: they require clear outcomes, scaffolded processes, explicit criteria, and iterative cycles of production and revision. Research supports that flipped learning enhances language learners' speaking, writing, and grammar skills, especially when in-class time is used for higher-order cognitive tasks, feedback, and active learning rather than mere presentation (Dinçer & Polat, 2022; Qi, et al., 2024). Similarly, systematic reviews of DDL show that corpus-based tasks promote noticing, pattern detection, hypothesis testing, and refinement of learner output which are core components in inductive grammar learning (Pérez-Paredes & Boulton, 2025).

For instructors, active methodologies also offer a practical route to integrate digital literacies and soft skills. Collaborative tools support co-authoring, version control, and peer review; visual frameworks (storyboards, canvases) help students plan content and structure arguments; and rubrics make expectations visible, enabling targeted feedback on both language and process (e.g., idea development, cohesion, evidence). The challenge is implementation. Effective active learning does not happen by adding activities at random; it demands intentional sequencing, time for iteration, and alignment between assessment and what is practiced. Without that alignment, tasks risk becoming busywork.

This is where a unifying design frame helps. A shared process that guides need-finding, idea generation, prototyping, and testing allows teachers to coordinate active strategies coherently across a course. Students then experience a repeatable cycle—explore, plan, create, get feedback, refine—that mirrors how communication improves in the real world. The result is a double gain: measurable progress in EFL skills (fluency, accuracy, organization) and the development of transferable skills (collaboration, creativity, resilience) that higher education seeks to foster.

Design Thinking (DT) has the potential to strengthen the practice of Learning Development (LD) by embedding student-centered values and fostering creativity, innovation, and collaboration. Such integration encourages students to take a more active role in service development and in the co-construction of knowledge within LD (Fallin & Turton, 2025). Instead of starting from content coverage, DT begins with learners' needs, problems, and contexts. Students explore real situations, generate ideas, build early versions, and improve them with feedback. In this way, the classroom becomes a studio where learning happens through action and reflection. For EFL, DT turns language into a tool for solving problems, communicating with audiences, and collaborating with peers. It supports meaningful practice across skills—listening, speaking, reading, and writing—while building soft skills such as creativity, teamwork, and resilience. Because DT values process and product, it aligns well with formative assessment and continuous improvement (McLaughlin et al., 2022; Yu et al., 2024).

Design Thinking has roots in design practice, engineering, and innovation studies. Universities and organizations popularized it as a way to approach complex, ill-defined problems that do not have single correct answers. In these settings, designers interview users, observe contexts, and translate insights into clear needs. Then they create multiple solutions, test them quickly, and learn from failure. Education adopted DT because its logic mirrors how professionals solve

problems in real life and because it promotes active learning (McLaughlin et al., 2022; Swallow & Tomalin, 2024).

Core principles guide DT across disciplines. First, empathy: understand users' experiences and constraints before proposing solutions. Second, problem framing: state needs in a focused, actionable way. Third, ideation: produce many ideas before selecting a few. Fourth, prototyping: make ideas tangible early to expose strengths and weaknesses. Fifth, testing and feedback: evaluate with real users and refine. DT is also iterative and collaborative; teams cycle through stages, moving back and forth as they learn. In teaching and learning, these principles help educators design tasks that are authentic, audience-oriented, and openly assessed. They also encourage students to take informed risks, reflect on evidence, and justify decisions. For EFL, the principles connect language practice to meaningful purposes and make progress visible across drafts (Cleminson & Cowie, 2021; Cevikbas & Kaiser, 2022).

Design Thinking's principles emphasize creativity, empathy, collaboration, and experimentation to generate innovative solutions. Unlike traditional linear models, DT encourages cycles of exploration, prototyping, and reflection that prioritize learners' and users' needs over rigid content delivery (Brown, 2009; Liedtka, 2018). These principles are particularly relevant in English as a Foreign Language (EFL) education, where diverse learner profiles and communicative challenges demand adaptable methodologies.

The first principle of DT is human-centeredness and empathy, which places learners at the core of the process. In EFL contexts, teachers must understand not only linguistic needs but also the cultural, emotional, and motivational aspects of students. Empathy helps educators design learning experiences that resonate with learners' realities, thereby enhancing engagement and reducing affective barriers (Plattner, Meinel, & Leifer, 2010). For example, observing how students interact with authentic texts or digital tools can reveal insights into their preferences and difficulties.

Another principle is collaboration and diversity of perspectives, which promotes teamwork and collective intelligence. In EFL classrooms, collaboration allows learners to co-construct meaning while drawing on their varied cultural backgrounds and linguistic repertoires. This aligns with Vygotsky's sociocultural theory, which highlights the importance of social interaction in learning (Vygotsky, 1978). DT provides a structured framework where learners, teachers, and even external stakeholders can co-design activities that foster communicative competence.

The principle of ideation and creativity underpins the generation of multiple solutions to address identified challenges. In language education, ideation activities can be used to develop interactive speaking tasks, digital storytelling projects, or collaborative writing exercises. By encouraging divergent thinking, students can explore language use beyond traditional grammar-focused drills, moving toward more authentic and meaningful communication (Henriksen, 2017). Creativity in this context not only builds linguistic skills but also nurtures critical and innovative thinking.

Equally important is the principle of experimentation and prototyping, which involves creating tangible representations of ideas for testing and refinement. In EFL classrooms, prototypes might take the form of lesson activities, role-play scenarios, or digital resources designed to improve oral or written production. According to Kelley and Kelley (2013), prototyping reduces the fear of failure and motivates learners to take risks, an essential condition for language development. Through iterative cycles, students can test communicative strategies and adjust them based on feedback.

DT also highlights the principle of iteration and continuous improvement, recognizing that solutions evolve through multiple refinements. In EFL learning, iterative practice mirrors the language acquisition process, where learners progress by revising, reformulating, and improving their output over time. Teachers adopting an iterative mindset can scaffold

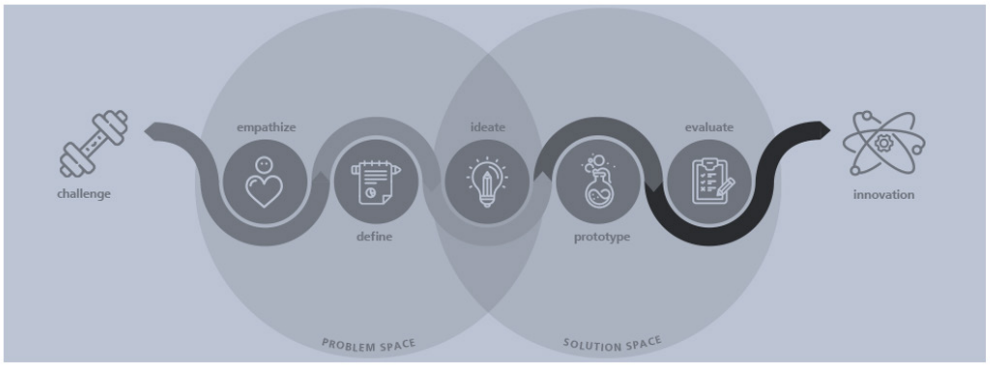
learners' progress by offering feedback loops, formative assessments, and opportunities for reflection (Razzouk & Shute, 2012). This process supports not only linguistic accuracy but also fluency and autonomy.

Finally, DT principles encourage action-oriented problem reframing, shifting the focus from fixed assumptions to redefining challenges based on evidence. In EFL contexts, this means reframing problems like "students lack vocabulary" into broader opportunities such as "students need meaningful contexts to activate vocabulary." By redefining problems, educators can align instructional strategies with learners' authentic communicative needs (Liedtka, 2018). This reflective stance empowers both teachers and students to become agents of innovation in the learning process.

The Design Thinking process is typically organized into five interconnected stages—Empathize, Define, Ideate, Prototype, and Test—which together provide a flexible and iterative framework for addressing complex challenges in education and beyond.

Figure 1

Design Thinking five stages



Note. Adapted from *Design Thinking in the Classroom: Easy-to-Use Teaching Tools to Foster Creativity, Encourage Innovation, and Unleash Potential in Every Student* by D. Lee, 2022, Simon & Schuster. Copyright 2022 by Simon & Schuster.

Empathizing means stepping into the user's shoes to understand needs, goals, and pain points. In education, "users" can be classmates, campus stakeholders, or community partners. Students collect information through interviews, observations, surveys, and quick desk research. They look for patterns: what people say, do, think, and feel. This stage reduces assumptions and keeps the project grounded in real contexts. It builds listening skills, curiosity, and respect for diverse perspectives. Empathize also sets a positive tone for collaboration, since team members share findings and negotiate what matters most. Clear empathy work prevents "solution jumping" and prepares the group to define a problem that is both relevant and feasible (McLaughlin et al., 2022; Swallow & Tomalin, 2024).

In EFL, empathize provides natural reasons to use English. Learners write interview guides, ask follow-up questions, and paraphrase answers to confirm meaning. They read background sources and take notes in English. They also develop intercultural awareness by comparing how people express needs across contexts. Teachers can scaffold language with sentence starters for questions, clarifying moves ("Do you mean…?"), and note-taking frames. Products from this stage include empathy maps and user profiles written in accessible English. Because students listen actively and report findings, they practice vocabulary for feelings, functions, and constraints. Empathize thus strengthens both communicative competence and the habit of viewing problems through others' eyes (Cleminson & Cowie, 2021; Nazim & Mohammad, 2022).

Define turns messy data into a focused problem statement. Teams synthesize insights, identify tensions, and choose a target user and need. A good definition avoids vague goals and expresses a clear gap between the current state and the desired outcome. It is specific enough to guide action but open to creative solutions. Tools include point-of-view statements, "How might we…?" questions, and criteria lists. This stage rewards analysis and prioritization: not every insight can lead the project. When groups commit to a sharp definition, they save time later, because ideas and evaluations will be aligned with agreed-upon aims and constraints (McLaughlin et al., 2022; Yu et al., 2024).

In EFL classes, define invites purposeful language use for reasoning and consensus. Students discuss findings, justify choices, and negotiate scope using hedging ("It seems that…") and stance ("We argue that…"). They write a short problem statement and audience description in English, which will later guide genre and tone. Teachers can model how to transform insights into "How might we…?" prompts and provide checklists for clarity, feasibility, and relevance. The output is a shared brief that frames communicative goals (e.g., inform, persuade, instruct). This brief connects language decisions—lexis, register, cohesion—to the project's needs, making later drafts easier to evaluate against explicit criteria (Al-Zebdyah, 2022; Cleminson & Cowie, 2021).

Ideate expands the solution space before narrowing it. Teams generate many possibilities through brainstorming, brainwriting, SCAMPER, or analogies. The rule is to separate idea generation from evaluation: first go for quantity and variety, then cluster and select. Visual tools—sticky notes, sketches, storyboards—help externalize thinking and invite contributions from all members. After divergence, teams use criteria from the define stage to choose promising options. They also plan small experiments to test assumptions. Ideation values play and imagination, but it is purposeful; ideas are judged by how well they address the defined need and how feasible they are within time and resource limits (McLaughlin et al., 2022; Cevikbas & Kaiser, 2022).

For EFL, ideate creates rich opportunities to speak and write with fluency. Learners pitch ideas briefly, build on peers' proposals, and ask clarifying questions. Sentence frames ("What if we…?", "Could we combine…?") support turn-taking and polite disagreement. Teams document ideas in simple English and label clusters with thematic headings, which practices cohesion and summarizing. When selecting options, students justify choices using comparisons and reasons ("Option A better meets the users' time limits"). Teachers can introduce genre choices at this stage—poster, infographic, podcast, op-ed—so language planning aligns with audience and purpose. Ideation thus links creativity with functional language use (Cleminson & Cowie, 2021; Weganofa et al., 2024).

Prototype turns ideas into quick, low-fidelity representations. The goal is to make thinking tangible, not to build a final product. Prototypes may be sketches, mock-ups, wireframes, sample paragraphs, slide outlines, or short audio clips. They allow teams to explore structure, sequence, and key features before investing heavily. Good prototypes are fast, cheap, and easy to change. They invite feedback on the most important assumptions and help teams compare alternatives. By externalizing ideas, prototyping reduces ambiguity and supports evidence-based decisions. It also lowers the cost of failure, because changes are expected and welcomed at this stage of the process (McLaughlin et al., 2022; Yu et al., 2024).

In EFL contexts, Prototype maps directly to drafting. Students create outlines, sample intros, thesis statements, topic sentences, and visual aids. They practice cohesion with signposting and transitions, and they test audience fit by reading drafts aloud. Teachers can provide rubrics for content, organization, and language accuracy, plus checklists for genre conventions. Low-stakes prototypes—storyboards for a video, bullet-point scripts for a pitch—let students focus on meaning first, then refine language. Because prototypes are shareable, they support peer review and teacher conferences. This stage normalizes revision: learners see that quality grows through cycles

of trying, receiving feedback, and improving (Nazim & Mohammad, 2022; Weganofa et al., 2024).

Test collects evidence about how well the prototype meets user needs. Teams invite users or proxies to interact with the draft, observe behaviour, and ask follow-up questions. They capture what works, what confuses, and what could be improved. Feedback should be specific, actionable, and tied to criteria from earlier stages. Testing is not a final exam; it is part of learning. Results may send teams back to empathize, redefine, or ideate. Over time, repeated testing builds a culture of continuous improvement, where decisions are justified with data rather than personal preference or habit (McLaughlin et al., 2022; Yu et al., 2024).

In EFL, Test is structured peer and audience feedback. Students use checklists or comment banks to evaluate clarity, organization, and language control. They practice giving constructive comments ("This part is clear because…", "Consider adding an example here…") and receiving them professionally. Teachers can include short user tasks—"Find the main claim," "Follow these instructions"—to see if communication works. Learners then revise, documenting changes and reasons, which develops metacognitive awareness. Testing also supports assessment for learning: teachers track growth across drafts and provide targeted mini-lessons on common issues. The stage shows that effective communication emerges through iteration (Guamán-Quintanilla et al., 2020)

There are some EL theories behind Design Thinking. One of the theoretical foundations of Design Thinking is Constructivism, originally developed by Jean Piaget and Lev Vygotsky, and later expanded by Seymour Papert. According to Schcolnik, Kol, and Abarbanel (2006), constructivism conceptualizes the mind as an active participant in the learning process, where knowledge is not simply transmitted but actively built through interaction with the environment. This process occurs within activities, cultural settings, and specific contexts that allow learners to create and evaluate meaningful knowledge. While Piaget emphasized the cognitive structures underlying learning, Vygotsky highlighted the social roots of cognition, showing how interaction shapes intellectual development. Together, these perspectives suggest that educational practices should be redesigned to promote active construction of knowledge.

Building on these ideas, Kim & Rah (2021) proposed Constructionism, a theory closely related to constructivism but extending its scope. While constructivism explains how knowledge is formed, constructionism asserts that learning is most effective when individuals engage in making tangible products in the real world. This perspective advocates discovery-based, student-centered learning, where learners expand prior knowledge through hands-on experiences and creative problem-solving. Known as "learning by making," it encourages students to arrive at their own conclusions by designing meaningful, socially relevant artifacts. Teachers adopt the role of facilitators rather than traditional instructors, guiding learners in exploration and collaborative support. Approaches such as problem-based learning embody this principle, as students face complex challenges that promote deeper engagement and foster critical thinking, particularly in fields such as mathematics.

Within EFL, Design Thinking (DT) aligns with and enriches established pedagogical frameworks such as Communicative Language Teaching (CLT), Task-Based Language Teaching (TBLT), and constructivist principles. CLT underscores the value of meaningful communication and interaction (Richards, 2006), both central to DT practices. Similarly, DT resonates with TBLT, which views tasks as the core unit of instruction, requiring learners to use language to achieve concrete goals (Ellis, 2003). The iterative stages of DT—empathize, define, ideate, prototype, and test—parallel constructivist approaches to learning, where exploration, reflection, and adaptation are key drivers of knowledge construction (Schön, 1983). By drawing on these theoretical foundations, DT offers a coherent pedagogical model that strengthens learner

engagement and communicative competence in EFL contexts.

In practice, applying DT in the EFL classroom implies moving beyond scripted dialogues to experiential learning. Students are invited to co-create solutions, give and receive peer feedback, and present outcomes using English as a tool for authentic communication. Such practices nurture autonomy, motivation, and creativity. As Richards (2006) and Brown (2007) observe, language learning thrives in environments that are interactive, meaningful, and socially constructed. DT supports this vision by embedding language use within collaborative, real-world challenges. Recent research also confirms that combining creativity and innovation through DT enhances communicative competence, especially in speaking. (Buphate & Esteban, 2022). Thus, DT transcends its roots in design disciplines to become a powerful framework for enriching EFL pedagogy, fostering authentic language use, and deepening learner engagement. (Cleminson & Cowie, 2021).

In EFL, DT offers a practical scaffold to transform language classes into purposeful studios. "Empathize" can involve interviews or needs analyses in English; "define" helps students articulate communicative goals and constraints; "ideate" produces multiple plans (e.g., outlines, messages, storyboards); "prototype" turns plans into drafts, slides, podcasts, or videos; and "test" structures peer, teacher, or stakeholder feedback using clear criteria. Each cycle requires reading, listening, speaking, and writing for real purposes, so language practice and soft skills grow together. Critically, DT also aligns assessment with process: students demonstrate improvement across iterations, and instructors can evaluate both product quality and design decisions. Used this way, DT is not an add-on activity but a course architecture that organizes active methodologies into a coherent path toward communicative competence. (Alrehaili & Alhawsawi, 2020; Cleminson & Cowie, 2021).

Despite sustained investment, many EFL programs still struggle to move learners from knowledge about English to use of English for authentic purposes. This review argues that Design Thinking (DT) offers a coherent, human-centred process—empathize, define, ideate, prototype, test—that can reorganize EFL courses around purposeful communication and iterative improvement. Early evidence in university EFL shows DT can raise creative and communicative engagement when tasks are framed as solvable problems for real audiences (Cleminson & Cowie, 2021), and that mapping the five DT stages onto writing projects can yield measurable gains in accuracy and organization (Implications of Design Thinking in an EFL Classroom: Writing in Context, 2022).

Latin American practice reports point in the same direction: DT-informed projects in teacher education strengthen collaboration, reflection, and tool adoption. (Alvarado, 2025); active-method initiatives that foreground DT cycles increase student participation and problem solving in higher education (Suárez Lima et al., 2024); and DT principles guide context-responsive materials design (Baum, 2021) and instructional design in hybrid English programs (Faria, 2021). Beyond language performance, DT's studio logic aligns with soft-skill targets—creativity, collaboration, and reflective iteration—identified in broader higher-education syntheses (McLaughlin et al., 2022) and, in technology-mediated settings, has been linked to gains in speaking, enjoyment, and resilience. DT has also been proposed as an anchor for authentic assessment in online university contexts.

Yet the evidence base is fragmented. Many studies rely on intact classes, short interventions, and under-reported implementation fidelity (e.g., how thoroughly each DT stage was enacted), which limits causal claims (Cleminson & Cowie, 2021). There is also a need for standardized measures that connect DT stages to specific EFL outcomes (e.g., interactional competence, coherence and cohesion) and for multi-site or longitudinal designs, particularly in Latin America where institutional conditions vary widely (Suárez Lima et al., 2024). Finally, equity and feasibility questions—time, teacher

preparation, assessment alignment—remain open in resource-constrained contexts (Sürmelioğlu & Erdem, 2025)

Given these issues and gaps, a focused literature review does not pretend to be exhaustive but it is warranted to (a) map the application of Design Thinking in the field of English as a Foreign Language (EFL) across its different stages.", (b) synthesize reported benefits for language and soft skills, and (c) surface recurring challenges that future research and teacher education must address.

METHODOLOGY

This review followed a bibliographic exploration design thinking, a qualitative documentary review approach was employed. This approach supported the analysis of the various selected documents, which included articles, books, doctoral theses, and first-source conference proceedings from different parts of the world.

The review gathered empirical studies and theses on Design Thinking applied to EFL from diverse international and Latin American contexts. These works were retrieved from a range of academic databases and repositories, including Scopus, Web of Science, ERIC, ProQuest, and regional sources such as Dialnet and RedALyC, as well as institutional repositories for theses and dissertations. The inclusion of both peer-reviewed journal articles and graduate research ensures a comprehensive overview of how Design Thinking has been implemented to foster EFL learners' skills. This variety of sources reflects the growing academic interest in linking creative, student-centered methodologies with language education, while also highlighting the methodological and contextual diversity of existing studies.

Inclusion criteria.

The review applied strict inclusion criteria to ensure relevance and accessibility. Publications were limited to the years 2019–2025 and considered if written in Spanish, English, or Portuguese. Only peer-reviewed journal articles, full text available were included. Studies had to demonstrate a clear connection to Design Thinking (DT), either through explicit terminology or the operationalization of its five stages (empathize, define, ideate, prototype, test). To maintain focus, only works addressing EFL/ELT or teacher education were prioritized, although school-level studies were included when the EFL focus and DT application were explicit. Finally, all sources had to be open-access through publisher platforms or institutional repositories and discoverable via Google Scholar, ensuring transparency and replicability of the search process.

Exclusion criteria.

The review also applied exclusion criteria to ensure that only relevant, high-quality, and comparable studies were retained for analysis. These included:

- Studies that mention Design Thinking but do not apply it in EFL contexts.

- Articles focused on general education, STEM, or other disciplines without language learning as a primary objective.

- Purely theoretical or conceptual papers without empirical data, classroom application, or student/teacher perceptions.

- Publications outside the selected timeframe (e.g., before 2015).

- Studies not written in English or Spanish, unless a reliable translation is available.

- Duplicate records retrieved from multiple databases.

- Grey literature (conference abstracts, editorials, opinion pieces) without peer review or methodological detail.

- Research with insufficient information about participants, methodology, or outcomes to support thematic analysis.

RESULTS AND ANALYSIS

This section outlines the findings derived from the documentary analysis, guided by the predefined units of analysis: the implementation of Design Thinking (DT), the benefits and challenges experienced by study participants. Furthermore, table 1 details the type of publication, authors' nationality, year of publication, research context, objectives, and methodological approach of each study.

Table 1

Review Summary

	Region	Country-Year	Type	Context	Objective	Type of Study & Participants	Student Benefits	Teacher Benefits	Challenges	How DT applied in EFL	APA 7 Citation
1	International	Saudi Arabia-2020	Article	Secondary school EFL writing	To explore the effect of a design thinking–based writing unit on students' writing skills	Quasi-experimental; 30 female secondary school students	Improved writing skills (organization, cohesion, vocabulary, grammar, mechanics); motivation; creativity; satisfaction	Structured process to guide writing instruction; integration of DT stages	Students: limited improvement in grammar/vocabulary; Teachers: need for training	DT applied through 7-stage writing process (empathize, define, ideate, prototype, revise, evaluate, publish)	Alrehaili, T., & Alhawsawi, S. (2020). Writing approach generation: Adapting design thinking to enhance EFL students' writing skills. International Journal of Current Research, 12(8), 13276-13292.
2	International	Indonesia-2024	Article	Undergraduate EFL learners	To develop and validate an instrument to assess design thinking orientation in EFL contexts	Quantitative (instrument development with CFA); 107 undergraduates	Enhanced awareness of DT dimensions (empathy, ideation, prototyping, testing, reflection); improved engagement	Tool for teachers to evaluate DT orientation and adjust pedagogy	Students: limited generalizability; Teachers: need for further training	DT applied through creation and validation of scale measuring DT orientation	Mujiono, M., Weganofa, R., & Herawati, S. (2024). Exploring the Design Thinking Orientation in English as a Foreign Language (EFL) for Learners: An Instrument Development Study. KnE Social Sciences, 216-228.
3	International	Thailand-2022	Article	EFL speaking and critical thinking	To investigate the effects of ideation discussion activities in DT on speaking and critical thinking	Mixed method; 8 undergraduate/vocational students	Improved speaking (fluency, pronunciation, vocabulary); enhanced critical thinking, teamwork, confidence	Teachers gain innovative activities to foster engagement and communication	Students: grammar issues, workload pressure; Teachers: challenges with limited participants	DT applied through ideation discussion activities integrated in 84-hour course	Buphate, T., & Esteban, R. H. (2022). Using ideation discussion activities in Design Thinking to develop EFL students' speaking and critical thinking abilities. LEARN Journal, 15(1), 682-708.
4	International	South Korea-2021	Article	University EFL autonomous learning (flipped classroom)	To develop and test a DT-framed autonomous learning model via e-journaling	Mixed method; 31 undergraduates	Increased motivation, autonomy, confidence, perceived proficiency improvement	Model to foster learner autonomy, motivation, reflective practice	Students: speaking anxiety, journaling difficulties; Teachers: sustaining DT, training needs	DT applied through empathize, define, ideate stages with flipped classroom	Kang, N. (2021). Design-Thinking Framed EFL Autonomous Learning within the Flipped Classroom. STEM Journal, 22(1), 91–106.
5	International	Japan-2021	Article	University EFL classroom	To explore how DT fosters creativity and communicative engagement	Qualitative case study; 2 university classes (~40 students each)	Enhanced creativity, collaboration, communication, motivation, problem-solving	Innovative pedagogy; improved student participation; reflective teaching	Students: adapting to roles, open-ended tasks; Teachers: curriculum/time constraints	DT applied through classroom projects (empathize, define, ideate, prototype, test)	Cleminson, T., & Cowie, N. (2021). Using design thinking as an approach to creative and communicative engagement in the EFL classroom. Journal of University Teaching and Learning Practice, 18, 63-81.

6	International	Indonesia-2024	Article	University EFL writing program	To investigate integration of DT + PBL in writing	Quasi-experimental, post-test only; 65 undergraduates	Improved creative, collaborative, critical writing skills; motivation, engagement	More innovative framework for writing instruction	Students: difficulties due to traditional approaches; Teachers: time/resource constraints	DT applied through empathy, define, ideate, prototype, test phases with PBL	Weganofa, R., et al. (2024). Integrating Design Thinking and PjBL to enhance EFL writing skills. Journal of Didactics, 5(1), 1–20.
7	International	Egypt-2024	Article	University EFL student teachers (creative writing)	To investigate effect of AI-powered DT on creative writing and engagement	Quasi-experimental; 60 sophomores	Improved creative writing (originality, fluency, elaboration); higher motivation	Teachers gain framework to integrate DT + AI	Students: overreliance on AI; Teachers: balance DT and AI	DT applied through empathize, define, ideate, prototype, test with AI support	Gohar, R. H. A. (2024). Using AI-powered design thinking to foster student teachers' EFL creative writing skills and engagement. Journal of Research in Curriculum, Instruction and Educational Technology, 10(4).
8	International	Ethiopia-2024	Article	University EFL writing classes	To investigate effect of DT-based instruction on writing and creativity	Mixed method; 51 second-year university students	Improved essay writing (coherence, cohesion, lexical range, accuracy); creative thinking	Practical framework to scaffold writing with DT	Students: struggles with idea generation, coherence; Teachers: limited training, time	DT applied through 6 stages (empathize, define, ideate, prototype, test, publish)	Mitiku, B. (2024). Effects of design thinking-based instruction on students' writing performance and creative thinking skills. ZKDX Journal.
9	International	SaudiArabia-2022	Article	Preparatory year EFL writing classes	To investigate DT's five-step strategy on writing performance	Quasi-experimental (one group pre/post-test); 25 students	Improved writing accuracy (capitalization, punctuation, spelling, tense, sentence structure); motivation, creativity	Framework for diagnosing and improving writing	Students: persistent grammar/spelling issues; Teachers: lack of training	DT applied through empathize, define, ideate, prototype, test	Nazim, M., & Mohammad, T. (2022). Implications of design thinking in an EFL classroom: Writing in context. Theory and Practice in Language Studies, 12(12), 2723-2730.
10	International	SaudiArabia-2023	Article	University EFL instructors	To explore how intercultural/foreign education shapes pedagogical practices	Qualitative narrative inquiry; 3 instructors	Improved understanding of writing as identity expression; bilingual identity	Teachers gain reflective practice, integration of culture	Students: challenges with identity-focused writing; Teachers: adapting US approaches	DT elements applied indirectly through empathy, reflective writing, cultural integration	Almalki, A. (2023). The impact of integrating design thinking on EFL students' oral performance. International Journal of Language and Linguistics, 11(2), 45–52.
11	LatinAmerica	Colombia-2025	Thesis	University pre-service teachers (academic writing)	To strengthen academic writing in English via ICT, LKT, DT	Action research; 10 pre-service teachers	Improved academic writing competence; communicative, textual, pragmatic skills	Innovative framework integrating DT and ICT	Students: lack of conceptualization of writing; Teachers: time/digital tool management	DT applied through empathy, define, ideate, prototype, test + ICT/metaverse	Bejarano, D. A. G. (2025). Innovación Educativa para el Fortalecimiento de la Escritura Académica en Inglés Mediada por Tecnologías: Design Thinking in Action (Master's thesis, Universidad El Bosque).
12	LatinAmerica	Colombia-2020	Article	Blended learning curriculum reform (EFL, ESP, EAP)	To explore DT in curriculum design and reform	Qualitative exploratory case study; 6 instructors	Clearer structure, engaging tasks, alignment with writing needs	Teachers: collaboration, creativity, reflective practice	Students: adapting to heavy workload; Teachers: time constraints, turnover	DT applied through empathy, define, ideate, prototype, testing in curriculum design	Crites, K., & Rye, E. (2020). Innovating language curriculum design through design thinking: A case study of a blended learning course at a Colombian university. *System*, *94*, 102334.
13	LatinAmerica	Ecuador-2024	Thesis	Secondary school (8th grade)	To evaluate DT + game thinking to improve English reading	Mixed method; 80 students	Improved reading comprehension, fluency, motivation, creativity	Innovative strategies; better student engagement	Students: low prior exposure; Teachers: lack of resources/training	DT applied through 5 phases with ICT/game tools (story cubes, QR/AR, brainstorming)	Hernández Paredes, V. A. (2024). Design thinking y game thinking para mejorar la destreza de lectura en el idioma inglés (Master's thesis, PUCE).

14	Latin America	Brazil-2024	Article	Adult EFL learners	To develop new methodology for adults using DT + AI	Qualitative design-based proposal; adults (sample not specified)	Improved autonomy, communication, fluency, motivation	Teachers: adaptable methodology combining DT + AI	Students: vocabulary issues, study habits; Teachers: need for AI training	DT applied via empathy maps, personas, ideation, prototyping; AI for feedback	Araújo Lopes, A. C. F. de. (2024). Learnings: uma nova abordagem para o ensino de idiomas utilizando Design Thinking e IA. Cadernos de Pedagogia.
15	Latin America	Ecuador-2024	Article	University TEFL students	To analyze DT effectiveness in developing competencies (listening, reading, speaking, writing, vocabulary)	Mixed method; 6 university English teachers + students	Improved vocabulary, writing, speaking confidence; collaboration, creativity	Teachers: reflective practice, innovation strategies	Students: low motivation, resource issues; Teachers: curricular adaptation issues	DT applied through 5 stages in designing TEFL learning activities	Almache Granda, G., Aguilar Parra, J., Ramírez Romero, E., & Coello Vásquez, V. (2024). Design Thinking to Facilitate the Development of TEFL Students' Competencies. Polo del Conocimiento, 9(12). https://doi.org/10.23857/pc.v9i12.8545
16	Latin America	Peru-2020	Thesis	University language center	To determine relation between DT and English teaching	Quantitative correlational, non-experimental; 24 teachers	Indirect student benefits via improved strategies and engagement	Teachers: correlation between DT and practice; innovation	Students: limited exposure to innovation; Teachers: lack of training/resources	DT applied via teacher surveys; DT as framework for methodology	Marroquín Pacheco, R. (2020). Design thinking y enseñanza del idioma inglés de los docentes del Centro de Idiomas de la Universidad de San Martín de Porres.
17	Latin America	Colombia-2022	Thesis	Public secondary school (10th grade)	To systematize DT integration in English to improve communicative competence	Mixed method; 11 students (ages 15–17)	Improved communicative competence; teamwork, empathy, creativity, problem-solving	Teachers: reflective practice, integration of DT + ICT	Students: low proficiency, resource issues; Teachers: lack of training, time	DT applied through 5 phases with ICT tools (Zoom, Padlet, Miro, StoryboardThat)	Mora, A. L. Z. (2022). Procesos de Integración de la Metodología Design Thinking en Clases de Inglés: Sistematización de Práctica Educativa (Doctoral dissertation, Universidad Icesi).
18	Latin America	Peru-2025	Thesis	Primary school (4th grade)	To determine effects of 'Pienso, diseño y aprendo' on English learning	Experimental design (pre/post-test); 68 students (ages 9–11)	Improved listening and speaking; dynamic learning	Teachers: innovative curriculum, planning tools	Students: resource limits, attendance issues; Teachers: need for materials	DT applied through 48 sessions (empathize, define, ideate, prototype, test)	Meza, D. K. G., & Zapata, G. B. C. (2024). Design thinking como estrategia pedagógica para el fortalecimiento de las competencias lingüísticas del idioma inglés en estudiantes Wiwa del séptimo grado del Centro Educativo Indígena Cherua sede Tezhumke de Valledupar, Cesar.

Mapping the Application of Dt In EFL Across Its Stages

Design Thinking (DT) has been increasingly applied in English as a Foreign Language (EFL) contexts to foster creativity, problem-solving, and communicative competence. Alrehaili and Alhawsawi (2020) showed that DT enhances writing accuracy and organization, while Kang (2021) linked flipped classrooms and DT to greater learner autonomy. Cleminson and Cowie (2021) emphasized creativity and engagement, and Buphate and Esteban (2022) confirmed DT's role in developing speaking and critical thinking. Similarly, Almalki (2023) highlighted improvements in oral fluency, and Gohar (2024) demonstrated that AI-powered DT strengthens creative writing. Across studies, the five stages—empathize, define, ideate, prototype, and test—emerge as the most common framework guiding EFL integration.

The empathize stage in Design Thinking focuses on identifying students' needs, cultural backgrounds, and learning challenges to design meaningful language tasks. Cleminson and Cowie (2021) illustrate that EFL classrooms using DT foster communicative engagement through observation and collaborative exploration. Almache Granda et al. (2024) emphasize

empathy as central to developing TEFL students' competencies, encouraging reflection on peers' perspectives. Meza and Zapata (2024) extend this view by applying DT in indigenous contexts, where learners negotiate and find meaning through oral practices. Marroquín Pacheco (2020) also stresses the importance of understanding learner realities to make teaching relevant. Collectively, research proves that empathy connects linguistic objectives with authentic learner experiences.

During the define stage, learners resolve problems and articulate goals that guide language learning activities. Kang (2021) shows that in flipped classrooms, DT supports autonomy by helping students set personalized objectives. Mora (2022) highlights how DT integration requires teachers to guide learners in framing academic challenges into achievable language tasks. Hernández Paredes (2024) integrates DT with game thinking, demonstrating how defining reading problems improves literacy development. Crites and Rye (2020) report that blended curriculum reforms in Colombia allowed students to define specific linguistic goals aligned with professional needs. Altogether, the define stage ensures that language tasks are not abstract but grounded in learners' realities.

The ideation stage improves creativity, brainstorming, and collaborative exploration of linguistic possibilities. Buphate & Esteban (2022) found that ideation discussions within DT strengthened speaking fluency and critical thinking in EFL classrooms while Nazim and Mohammad (2022) confirmed that writing in context during ideation improved learners' ability to express ideas authentically. Mitiku (2024) proved that DT-based ideation enhances creative thinking and essay performance, later on, Gohar (2024) introduced AI-powered ideation tasks that encouraged flexibility, fluency, and elaboration in writing. Collaborative ideation boosted communicative engagement (Cleminson & Cowie, 2021). These studies expose that ideation transforms traditional drills into interactive opportunities for linguistic experimentation.

Prototyping in EFL contexts allows learners to create drafts, oral rehearsals, and multimodal products. Alrehaili and Alhawsawi (2020) reported that DT-driven prototypes improved writing organization, vocabulary use, and grammatical range. Weganofa et al. (2024) confirmed that integrating project-based learning with DT enhanced writing quality and creativity. Bejarano (2025) highlighted how technology-mediated prototypes strengthened academic writing, while Araújo Lopes (2024) emphasized AI-driven prototypes that supported interactive learning. Almache Granda et al. (2024) also showed that prototyping tasks help TEFL students develop teamwork and reflection. Collectively, prototypes serve as concrete iterations where learners transform abstract goals into visible oral and written performance.

Testing in DT emphasizes presenting outcomes, receiving feedback, and refining language performance. Almalki (2023) demonstrated that oral testing through DT increased accuracy, fluency, and participation in speaking tasks. Mujiono et al. (2024) developed an instrument to measure DT orientation, showing how testing consolidates reflection and progress tracking. According to Gohar (2024) the use of AI-based testing tasks promoted learner confidence and engagement in creative writing. Mitiku (2024) emphasized that testing fosters critical reflection, leading to stronger organization and clarity in writing. Crites and Rye (2020) showed that testing within blended curricula linked classroom activities to professional needs. Overall, testing strengthens accountability, reflection, and adaptability in EFL contexts.

Benefits of Design Thinking in EFL Contexts-Students

The implementation of Design Thinking (DT) in EFL classrooms has generated a wide range of benefits for learners, extending beyond linguistic outcomes to include motivation, creativity, collaboration, and self-regulation. Research consistently shows that DT provides

opportunities for authentic communication, problem-solving, and reflective learning that make English use more meaningful and engaging. These benefits are organized and summarized in Table 2, which highlights how DT supports the development of communication skills, 21st-century competences, and personal growth in diverse educational contexts.

Table 2

Students' Benefits of Design Thinking in EFL Contexts

Category	Students' Benefits	Authors
Communication Skills	Innovative strategies for oral/written interaction, structured feedback, enhanced participation, and intercultural practice	Alrehaili & Alhawsawi (2020); Nazim & Mohammad (2022); Almalki (2023); Cleminson & Cowie (2021); Buphate & Esteban (2022); Weganofa et al. (2024); Gohar (2024); Mitiku (2024); Almache Granda et al. (2024); Meza & Zapata (2024)
21st Century Cognitive Skills	Foster creativity, critical thinking, problem-solving, reflective learning, digital literacy, and information management	Buphate & Esteban (2022); Weganofa et al. (2024); Mitiku (2024); Mora (2022); Cleminson & Cowie (2021); Gohar (2024); Hernández Paredes (2024); Meza & Zapata (2024); Almache Granda et al. (2024)
Collaboration & Interpersonal	Promote teamwork, empathy, intercultural awareness, and role negotiation in group learning	Cleminson & Cowie (2021); Almache Granda et al. (2024); Meza & Zapata (2024); Crites, & Rye, (2020).Marroquín Pacheco (2020)
Digital & Information Skills	Integrate AI, ICT, and digital platforms for innovative, personalized instruction and blended learning	Gohar (2024); Araújo Lopes (2024); Bejarano (2025); Hernández Paredes (2024); Crites, & Rye, (2020
Personal & Intrapersonal	Support autonomy, motivation, responsibility, leadership, reflection, and accountability	Kang (2021); Mujiono et al. (2024); Buphate & Esteban (2022); Crites, & Rye, (2020; Cleminson & Cowie (2021); Gohar (2024); Almalki (2023); Mitiku (2024); Almache Granda et al. (2024); Meza & Zapata (2024); Araújo Lopes (2024); Marroquín Pacheco (2020)

Note: Created by Mariscal, Reeves & Castro, 2025

Communication skills

In accordance with Mitiku, B. (2024), communication skills are widely recognized as a core outcome of Design Thinking (DT) in EFL context by encouraging collaboration, creativity, and problem-solving, DT provides opportunities for learners to use English meaningfully and purposefully. These practices not only enhance oral and written performance but also strengthen students' confidence in expressing ideas clearly. Across multiple studies, DT has been shown to transform writing tasks into communicative opportunities, allowing learners to negotiate meaning, reflect on their language choices, and produce texts that are coherent and engaging. The following discussion highlights how DT impacts writing as a communicative skill, emphasizing improvements in accuracy, creativity, motivation, and self-expression.

DT contributes significantly to writing accuracy and organization, helping students enhance mechanics such as capitalization, punctuation, and spelling. Alrehaili & Alhawsawi (2020) reported that DT activities enhanced cohesion, vocabulary use, and grammatical range, while also increasing motivation and satisfaction with writing tasks. Similarly, Nazim and Mohammad (2022) found that DT improved sentence structure and tense accuracy, fostering greater confidence in learners. Earlier findings by Alrehaili and Alhawsawi (2020) align with these results, showing that DT-oriented tasks can directly address persistent errors in mechanics while simultaneously stimulating creativity. Collectively, these studies confirm that DT not only refines technical accuracy but also promotes deeper learner investment in producing polished, well-structured texts.

DT also promotes creativity and critical thinking in writing, enabling learners to move beyond formulaic tasks. Mitiku (2024) observed significant gains in essay writing and creative thinking, Henriksen et al., (2017) had an earlier

conclusion that DT fosters originality and idea development. Gohar (2024) claimed that AI-supported DT enhanced creative writing skills such as fluency, flexibility, and elaboration, while simultaneously boosting learner engagement and confidence. Furthermore, Weganofa et al. (2024) linked DT with the development of critical writing abilities, helping students analyze, synthesize, and argue more effectively. Guzmán Bejarano (2025) similarly emphasized that DT encourages reflective practice, leading to stronger critical and analytical writing outcomes. Finally, DT encourages learners to view writing as a tool for identity construction and self-expression. Almalki (2023) highlighted how DT-supported oral and written activities helped students understand writing as part of their bilingual identity, empowering them to articulate personal and cultural perspectives. DT tasks enhanced students' ability to use writing creatively to represent their voices and experiences. Gohar (2024) further noted that DT strategies increased motivation, engagement, and confidence, particularly in creative writing contexts. Together, these findings show that DT not only strengthens the mechanics and structure of writing but also enriches learners' sense of agency and ownership in communication.

Research also demonstrates that Design Thinking (DT) has a strong impact on students' oral production by encouraging communicative engagement and interactive learning. Cleminson and Cowie (2021) emphasize that DT promotes creativity and collaboration, which naturally increase opportunities for spoken interaction. Similarly, Buphate and Esteban (2022) show that ideation discussions designed within DT frameworks strengthen students' ability to articulate ideas while simultaneously enhancing critical thinking. Almalki (2023) further confirms the benefits of DT integration in improving EFL learners' oral performance, highlighting gains in fluency, accuracy, and participation. Collectively, these studies reveal that DT empowers learners to express themselves more confidently and effectively in spoken English.

Beyond individual speaking performance, DT also contributes to collaborative oral practice and the development of broader linguistic competences. Almache Granda et al. (2024) argue that DT promotes problem-solving, reflection, and teamwork, all of which depend heavily on oral communication. This collaborative dimension allows learners to negotiate meaning and co-construct knowledge through spoken English. Meza and Zapata (2024) extend this perspective by showing how DT-based pedagogy motivated indigenous learners to strengthen their oral skills as part of overall linguistic development. Together, these findings demonstrate that DT not only enhances students' technical speaking abilities but also situates oral production within meaningful, collaborative, and culturally relevant learning experiences.

21st century skills

Cognitive Skills (Thinking & Learning)

Critical thinking and problem solving have been promoted in various studies through activities such as ideation, prototyping, and proposal evaluation. Research by Almache Granda et al. (2024), Buphate and Esteban (2022), Mitiku (2024), Mora (2022), and Weganofa et al. (2024) demonstrates that task design based on Design Thinking fosters the ability to analyse alternatives, justify decisions, and refine solutions in academic contexts. Likewise, creativity and innovation emerge as key competencies, as students produce original work in writing and oral expression through experimentation with technological tools and collaborative strategies (Almache Granda et al., 2024; Cleminson & Cowie, 2021; Gohar, 2024; Hernández Paredes, 2024; Meza & Zapata, 2024; Mitiku, 2024).

Furthermore, information literacy and critical reading are strengthened by integrating activities that require locating, evaluating, and applying information in writing and reading comprehension tasks, as evidenced in the works of Hernández Paredes (2024) and Meza & Zapata

(2024). These contributions show that Design Thinking not only enhances creative production but also promotes the ability to learn how to learn, linking analytical thinking with the reflective use of information.

Oral and written communication are presented as a transversal skill in most of the reviewed studies. Authors such as Almache Granda et al. (2024), Almalki (2023), Alrehaili and Alhawsawi (2020), Buphate and Esteban (2022), Cleminson and Cowie (2021), Gohar (2024), Meza and Zapata (2024), Mitiku (2024), and Weganofa et al. (2024) demonstrate how the phases of ideation, prototyping, and testing support the clear expression of ideas in multiple formats, both digital and face-to-face. The emphasis is placed on the authentic use of English as a tool for interaction, academic production, and the presentation of solutions to real-world problems.

Communication Skills

Oral and written communication emerge as a transversal skill in most of the studies reviewed. Almache Granda et al. (2024), Almalki (2023), Alrehaili and Alhawsawi (2020), Buphate and Esteban (2022), Cleminson and Cowie (2021), Gohar (2024), Meza and Zapata (2024), Mitiku (2024), and Weganofa et al. (2024). demonstrate how the stages of ideation, prototyping, and testing foster the clear expression of ideas across multiple modes, both digital and face-to-face. The emphasis is placed on the authentic use of English as a tool for interaction, academic production, and the presentation of solutions to real-world problems.

Collaboration & Interpersonal Skills

Collaborative work and intercultural competences are highlighted in the contributions of, who Almache Granda et al. (2024), Cleminson and Cowie (2021), Crites and Rye (2020), Marroquín Pacheco (2020), and Meza and Zapata (2024) report that the Design Thinking methodology enhances peer cooperation and cultural sensitivity in diverse contexts. These experiences promote the joint construction of knowledge, the negotiation of roles, and empathy, thereby strengthening students' ability to interact effectively in multicultural teams and within bilingual and intercultural educational settings.
Digital & Information Skills

Digital literacy and technological innovation are enhanced when Design Thinking (DT) approaches are integrated with digital tools, interactive platforms, and even artificial intelligence. Recent research shows that incorporating DT supports the creation of original content, autonomous learning, and critical awareness regarding the responsible use of information (Araújo Lopes, 2024; Bejarano, 2025; Crites & Rye, 2020; Gohar, 2024; Hernández Paredes, 2024). These studies agree that the application of DT helps shape students who are capable of navigating complex digital environments, where technology is no longer just a support resource but becomes a space for pedagogical innovation and the development of 21st-century skills.

Personal & Intrapersonal Skills.

Design Thinking enhances students' capacity for self-management and autonomous learning in EFL contexts. Kang (2021) showed that flipped classrooms encourage learners to plan time and resources more independently, while Mujiono et al. (2024) emphasized how a design orientation fosters regulation of learning processes. Similarly, Buphate and Esteban (2022) revealed that team discussions strengthen both critical thinking and individual initiative, and Crites & Rye (2020), reported that curriculum reforms allow students to take ownership of meaningful learning.

Cleminson & Cowie (2021) confirmed that creative classroom tasks spark engagement, and Almache Granda et al. (2024), Almalki (2023), Araújo Lopes (2024), Gohar (2024), Meza & Zapata (2024), and Mitiku (2024) all highlighted that motivation grows when students connect tasks to real contexts.

Adaptability and initiative are key competencies promoted through Design Thinking. Kang (2021) demonstrated that students develop flexibility by facing challenges in flipped classrooms, while Crites & Rye (2020), showed that learners adapt to new methodologies and formats within blended curriculum reforms. These findings underline resilience and openness to innovation. Almache Granda et al. (2024) revealed that students also assume leadership roles, guiding peers and making ethical decisions in collaborative projects. Similarly, Crites & Rye (2020), stressed that this involvement nurtures responsibility and belonging, while Marroquín Pacheco (2020) documented learners' readiness to direct activities and support classmates. Collectively, these studies confirm that Design Thinking strengthens adaptability and fosters initiative in EFL learners.

Productivity and accountability illustrate how students manage tasks and commit to performance quality. Alrehaili and Alhawsawi (2020) showed that applying Design Thinking in academic writing enhances organization and responsibility, leading learners to produce coherent and structured texts. Almache Granda et al. (2024) further observed that when students work through all Design Thinking stages, they develop stronger accountability for planning, executing, and evaluating projects. This process instils discipline, goal-setting, and rEFLective practice. Taken together, these findings highlight how Design Thinking not only improves linguistic outcomes but also nurtures professional competencies. Students learn to manage their work effectively and take responsibility for results, preparing them for academic and workplace challenges.

Autonomous learning strategies.

Another key contribution of DT is the development of autonomous learning strategies. Kang (2021) illustrates how DT framed within a flipped classroom encouraged learners to take ownership of their progress, making learning more independent and self-directed. Herawati (2024) and Mujiono et al. (2024) and further contributed by proposing an instrument to measure students' DT orientation, which included self-regulation and autonomy in task completion. Additionally, Buphate and Esteban (2022) demonstrated that DT ideation activities strengthened speaking and critical thinking, helping learners build strategies to learn beyond teacher guidance. Together, these studies underline how DT fosters autonomy, encouraging learners to become more proactive and responsible for their learning.

DT also supports a pedagogical shift from perceiving English as a subject to be studied toward English as an enjoyable and meaningful experience. Cleminson & Cowie (2021) show that creativity and collaboration made learning more engaging and less formal. Similarly, Buphate and Esteban (2022) observed that ideation discussions promoted enthusiasm and enjoyment in speaking tasks. Araújo Lopes (2024) integrates DT with AI to create interactive environments that reduce monotony, while Crites & Rye (2020) report that curriculum reforms through DT increased task relevance and motivation. Likewise, Nazim and Mohammad (2022) argue that contextualized writing through DT transforms classroom routines into enjoyable, student-centered practices.

Enhanced awareness of design thinking dimensions

Research shows that design thinking raises students' awareness of its core dimensions, such as creativity, collaboration, critical thinking, and problem-solving (Almache Granda et al., 2024; Cleminson & Cowie, 2021). This awareness is not limited to knowing the stages but extends to recognizing how each dimension contributes to language learning. In the empathize stage, learners develop sensitivity to others' needs through observation, reading, or teamwork, which fosters perspective-taking and intercultural understanding. Such awareness allows them to link personal and academic contexts with

classroom tasks, making practice more authentic and engaging (Marroquín Pacheco, 2020; Mujiono et al., 2024). Consequently, students begin to value empathy as a foundation for communicative competence.

During the define stage, students learn to organize challenges and specify language goals. Research highlights that framing problems clearly supports autonomy and reflective learning (Kang, 2021; Mora, 2022). In the ideation stage, brainstorming activities foster speaking and critical thinking abilities (Buphate & Esteban, 2022), while collaborative dialogue helps learners explore multiple possibilities for communication tasks (Meza & Zapata, 2024; Nazim & Mohammad, 2022;).

In later stages, students prototype by creating drafts, oral rehearsals, or multimodal products. This process enhances writing, creativity, and engagement, especially when supported by technology (Alrehaili & Alhawsawi, 2020; Gohar, 2024; Hernández Paredes, 2024). Finally, in the testing stage, learners present their work, receive feedback, and refine performance. Evidence shows this iterative process strengthens oral fluency, academic writing, and adaptability (Almalki, 2023; Araújo Lopes, 2024; Bejarano, 2025; Crites & Rye, 2020; Mitiku, 2024; Weganofa et al., 2024).

Benefits of Design Thinking in EFL Contexts--Teachers

The incorporation of Design Thinking (DT) into EFL teaching provides teachers with a wide range of professional benefits, from structured lesson design to reflective practice and curriculum innovation. By adopting DT, educators are empowered to move beyond traditional methods and apply creative, student-centered frameworks that build up both instruction and learning. These contributions are synthesized in Table 3, which highlights how DT strengthens instructional design, professional growth, and curriculum reform while fostering empowerment, collaboration, and sustainable pedagogical practices.

Table 3

Teachers' Benefits of Design Thinking in EFL Context

Category	Teachers' Benefits	Key Authors
Instructional Design	Provides a structured process (empathize, define, ideate, prototype, test) to guide lesson planning and reduce uncertainty; enhances scaffolding and alignment with objectives.	Alrehaili & Alhawsawi (2020); Cleminson (2021)
Creativity & Innovation	Strengthens creativity and innovation in lesson design; promotes dynamic, communicative, and engaging classroom practices.	Cleminson & Cowie (2021); Alrehaili & Alhawsawi (2020)
Addressing Diversity	Enables personalized pathways and adaptation to varied learner needs; supports autonomy and contextualized instruction.	Kang (2021); Mujiono et al. (2024)
Professional Growth	Encourages reflective practice, experimentation, and continuous improvement in teaching.	Almache Granda (2024); Weganofa et al. (2024)
Collaboration	Fosters teamwork, curriculum co-design, and exchange of innovative practices among teachers.	Crites & Rye (2020); Almache Granda et al. (2024)
Teacher Empowerment	Positions teachers as facilitators of autonomous learning and creative problem-solving rather than transmitters of knowledge.	Nazim & Mohammad (2022); Mora (2022); Cleminson & Cowie (2021)
Evaluation Tools	Provides validated instruments and strategies to monitor student progress and DT orientation.	Mujiono et al. (2024); Weganofa et al. (2024)
Curriculum Reform	Aligns curriculum with 21st-century skills, professional demands, and inclusive practices.	Crites & Rye (2020); Marroquín Pacheco (2020); Bejarano (2025); Hernández Paredes (2024); Araújo Lopes (2024); Meza & Zapata (2024)

Note: Created by Mariscal, Reeves & Castro, 2025

Instructional Design and Pedagogical Innovation
The incorporation of Design Thinking (DT) into EFL teaching has opened opportunities for curriculum reform and teacher empowerment, fostering innovation in how instruction is designed and delivered. By adopting DT principles, teachers are able to transcend traditional methods and instead apply structured, student-centered frameworks that emphasize creativity, problem-solving, and adaptation to diverse learning contexts. This paradigm shift positions educators not merely as transmitters of knowledge, but also as facilitators of meaningful learning experiences. In doing so, DT not only transforms classroom practice but also empowers teachers to actively shape curriculum changes that align with 21st-century skills, institutional demands, and evolving learner profiles.

One of the key benefits of DT for teachers lies in providing a structured process to guide instruction. Through the iterative stages of empathizing, defining, ideating, prototyping, and testing, educators are equipped with a systematic pathway that reduces uncertainty when designing lessons. This structured approach enhances planning by allowing teachers to clearly identify student needs and establish relevant objectives.

Alrehaili & Alhawsawi (2020) highlights how adapting DT strategies strengthens teachers' ability to scaffold writing tasks, while Cleminson (2021) emphasizes that the process ensures creative yet organized classroom engagement. Together, these findings confirm that DT offers both clarity and flexibility in instructional design. Another benefit of DT is the increased creativity and innovation in lesson design, paired with strategies that strengthen classroom engagement. Cleminson and Cowie (2021) demonstrated that teachers applying DT foster originality by developing activities that encourage communicative and interactive participation, while Alrehaili and Alhawsawi (2020) showed that lesson planning becomes more dynamic and meaningful. Furthermore, DT improves teachers' ability to address diverse learner needs. As Kang (2021) notes, DT frameworks in flipped classrooms enable personalized pathways for student autonomy, and Mujiono et al. (2024) confirm that orientation toward DT enhances teachers' capacity to tailor instruction to varied contexts.

Professional Growth and Reflective Practice

Within the scope of EFL teaching, professional growth and reflective practice have emerged as central benefits of incorporating Design Thinking (DT). The methodology not only equips teachers with innovative tools for instruction but also fosters continuous self-evaluation and collaborative engagement. By applying DT, educators gain structured opportunities to reflect on their teaching practices, identify areas for improvement, and share insights with colleagues. This reflective cycle is essential for strengthening professional identity and promoting collective advancement. Furthermore, DT transforms routine lesson delivery into a dynamic process of experimentation and dialogue, positioning teachers as active learners who evolve alongside their students.

DT offers educators consistent opportunities for reflection and collaborative planning, reinforcing the importance of shared pedagogical experiences. Almache Granda (2024) highlights that DT frameworks enable teachers to evaluate their strategies, analyze student feedback, and adjust methods more effectively. Similarly, Ekarina & Engliana (2025) underscores that collaboration grounded in reflective practice allows instructors to co-design learning experiences that integrate linguistic and cognitive goals. These opportunities create a professional culture where teachers are not isolated practitioners but rather participants in a supportive network. In this way, DT becomes a driver of collective growth, helping teachers to refine their skills and perspectives.

Another relevant contribution of DT is its capacity to promote enhanced collaboration and reflective practice, which strengthens teamwork

and nurtures professional growth. According to Crites & Rye (2020), teachers who embrace DT are more likely to engage in cooperative curriculum development and exchange innovative ideas. Almache Granda et al. (2024) further emphasize that this reflective collaboration leads to improved teaching outcomes. Moreover, DT supports professional development through experimentation, encouraging educators to prototype new methodologies and revise approaches based on outcomes (Almalki, 2023; Weganofa et al., 2024;). Such practices transform the classroom into a laboratory for continuous teacher learning.

Curriculum Reform and Teacher Empowerment
Curriculum reform in EFL, ESP, and EAP contexts has been closely linked to the adoption of Design Thinking as a methodology for innovation. Studies such as Crites & Rye (2020) and Marroquín Pacheco (2020) illustrate how blended curriculum models align programs with current communicative and professional needs, while Bejarano (2025) highlights the role of technology to strengthen academic writing. Similarly, Araújo Lopes (2024) and Hernández Paredes (2024) connect DT with digital literacies, emphasizing its contribution to more inclusive and flexible learning environments. In multicultural contexts, Meza and Zapata (2024) show how DT-based strategies reinforce linguistic development, intercultural awareness, and institutional innovation.

Teacher empowerment has also been a central focus on positioning instructors as facilitators rather than traditional knowledge transmitters. Nazim & Mohammad (2022) and Mora (2022) emphasize how Design Thinking guides teachers toward practices that promote autonomous learning and creative problem-solving. Cleminson & Cowie (2021) illustrate DT as a tool to foster communicative engagement, while Almache Granda et al. (2024) report increased competencies in TEFL contexts. Other contributions highlight empowerment through flipped learning (Kang, 2021), writing improvement (Alrehaili & Alhawsawi, 2020; Almalki, 2023), ideation activities (Buphate & Esteban, 2022; Gohar, 2024), and creativity-oriented assessment (Mitiku, 2024).

Another dimension of teacher empowerment lies in the use of tools to evaluate orientation and student progress in Design Thinking environments. Mujiono et al. (2024) propose a validated instrument for measuring EFL learners' DT orientation, allowing educators to monitor outcomes and guide interventions. Weganofa et al. (2024) explore the integration of project-based learning with DT, providing insights into how teachers can assess writing skills while promoting creativity. Together, these findings demonstrate that curriculum reform and teacher empowerment are intertwined; innovation requires reliable instruments and frameworks that strengthen educators' capacity to design, implement, and assess effective DT-based pedagogical practices.

Future Research and Teacher Education Challenges

While Design Thinking (DT) shows strong potential to enhance EFL learning, its implementation is hindered by several persistent challenges. These difficulties relate not only to students' linguistic and emotional barriers but also to teachers' preparation, institutional constraints, and methodological limitations. Table 4 synthesizes the main obstacles identified in recent studies, including language development gaps, affective factors, resource constraints, and issues of transferability and scalability. Addressing these challenges is essential for DT to become a sustainable and impactful approach in diverse educational contexts.

Table 4

Future Research and Teacher Education Challenges

Category	Main Challenges	Key Authors
Language Development Limitations	Limited progress in grammar and vocabulary during short interventions; DT fosters creativity but not always accuracy.	Alrehaili & Alhawsawi (2020); Buphate & Esteban (2022); Bejarano (2025); Hernández Paredes (2024); Weganofa et al. (2024); Gohar (2024); Crites & Rye (2020); Marroquín Pacheco (2020)
Foundational & Process Gaps	Lack of literacy foundations; confusion about DT stages; need for explicit guidance and systematic integration.	Bejarano (2025); Mitiku (2024); Mujiono et al. (2024); Nazim & Mohammad (2022); Mora (2022); Meza & Zapata (2024)
Affective & Behavioral Barriers	Speaking anxiety, journaling difficulties, overwhelming open-ended tasks, adaptation to new roles, poor scaffolding, over-reliance on AI.	Kang (2021); Cleminson & Cowie (2021); Almache Granda et al. (2024); Almalki (2023); Araújo Lopes (2024)
Transferability Issues	Skills in writing, speaking, and collaboration often do not transfer to broader contexts; contextual and scalability constraints.	Alrehaili & Alhawsawi (2020); Nazim & Mohammad (2022); Weganofa et al. (2024); Buphate & Esteban (2022); Almalki (2023); Cleminson & Cowie (2021); Gohar (2024); Araújo Lopes (2024); Bejarano (2025); Mitiku (2024); Hernández Paredes (2024); Crites & Rye (2020); Marroquín Pacheco (2020); Mora (2022); Almache Granda et al. (2024); Meza & Zapata (2024); Mujiono et al. (2024)
Professional Preparation & Pedagogical Demands	Teachers lack DT training; difficulties aligning DT with curriculum; demand for clearer guidelines.	Alrehaili & Alhawsawi (2020); Mujiono et al. (2024); Buphate & Esteban (2022); Almache Granda et al. (2024); Nazim & Mohammad (2022); Mora (2022); Bejarano (2025); Hernández Paredes (2024)
Institutional & Structural Constraints	Limited time, heavy workloads, high turnover, weak institutional support; fragmented implementation.	Mujiono et al. (2024); Bejarano (2025); Cleminson & Cowie (2021); Kang (2021); Crites & Rye (2020); Marroquín Pacheco (2020)
Contextual & Resource Challenges	Large classes, diverse proficiency levels, lack of resources, unequal access to technology and AI tools.	Bejarano (2025); Almache Granda et al. (2024); (2024); Meza & Zapata (2024); Almalki (2023); Araújo Lopes (2024); Weganofa et al. (2024); Gohar (2024); Mitiku (2024)
Research Scope Issues	Small/localized samples, focus on isolated skills, lack of longitudinal/multi-institutional studies; limited external validity.	Mujiono et al. (2024); Bejarano (2025); Alrehaili & Alhawsawi (2020); Nazim & Mohammad (2022); Almalki (2023); Buphate & Esteban (2022); Mitiku (2024); Gohar (2024); Kang (2021); Cleminson & Cowie (2021); Weganofa et al. (2024); Hernández Paredes (2024); Araújo Lopes (2024); Crites & Rye (2020); Marroquín Pacheco (2020); Mora (2022); Almache Granda et al. (2024); Meza & Zapata (2024)

Note: Created by Mariscal, Reeves & Castro, 2025

Language Development Limitations

Students often show limited progress in grammar and vocabulary when exposed to Design Thinking (DT) in short instructional periods, which creates frustration and workload pressure (Alrehaili & Alhawsawi, 2020; Buphate & Esteban, 2022). Studies such as Bejarano (2025) and Hernández Paredes (2024) stress that technology-mediated DT tasks can strengthen academic writing but still require more time for solid results. Similarly, Gohar (2024) and Weganofa et al. (2024) confirm that DT fosters creativity but does not automatically guarantee linguistic accuracy. In Colombia, Crites & Rye (2020) and Marroquín Pacheco (2020) note that integrating DT into blended curricula requires careful scaffolding to avoid superficial language development.

Foundational and Process-Related Gaps

Another challenge relates to the need for stronger literacy foundations, as students may lack prior skills necessary to benefit fully from DT (Guzmán Bejarano, 2025; Mitiku, 2024). Mujiono et al. (2024) identify that learners often become confused about the stages of writing and the actions expected in DT-based tasks. Nazim and Mohammad (2022) emphasize that writing in context requires explicit guidance, while Mora (2022) highlights the importance of systematic integration to ensure learning flow. Meza and Zapata (2024) found similar difficulties in rural contexts, where DT strengthened participation but revealed gaps in literacy. These findings suggest that structured orientation and clearer instructions are crucial for success.

Affective and Behavioral Barriers

Emotional and behavioral factors also hinder students' performance. Kang (2021) reports that speaking anxiety, difficulties with journaling, and lack of subtitles in audiovisual input reduce students' motivation and confidence. Cleminson and Cowie (2021) show that open-ended DT tasks can overwhelm learners unfamiliar with creative collaboration, while Almache Granda et al. (2024) confirm that some students struggle to adapt to new roles. Almalki (2023) further demonstrates that oral performance can decline when DT activities are not scaffolded properly. Araújo Lopes (2024) highlights that AI-assisted DT could mitigate some of these issues, though careful monitoring is needed to prevent overreliance.

Transferability

In the field of EFL, transferability in Design Thinking (DT) refers to the ability of learners to extend skills and strategies acquired in classroom-based DT activities into new academic, linguistic, and professional contexts. Studies show that while DT enhances writing skills, students often face challenges in transferring these gains beyond specific tasks (Alrehaili & Alhawsawi, 2020; Nazim & Mohammad, 2022; Weganofa et al., 2024). Similarly, improvements in speaking and communicative engagement through ideation and collaboration (Almalki, 2023; Buphate & Esteban, 2022; Cleminson & Cowie, 2021) do not always generalize across broader oral contexts.

Technology- and AI-supported DT initiatives (Araújo Lopes, 2024; Bejarano, 2025; Gohar, 2024) demonstrate potential to foster cross-context application, yet limitations persist as creativity and literacy gains may not automatically extend to other domains (Hernández Paredes, 2024; Mitiku, 2024). Broader curricular reforms and intercultural approaches (Almache Granda et al., 2024; Crites & Rye, 2020; Marroquín Pacheco, 2020; Meza & Zapata, 2024) confirm DT's relevance but highlight contextual and scalability constraints, reinforcing Mujiono et al.'s (2024) observation that transferability remains restricted by local research and practice boundaries.

Professional Preparation and Pedagogical Demands

Teachers often require additional training to effectively design and implement Design Thinking (DT) in EFL classrooms, which generates uncertainty and inconsistent application (Alrehaili & Alhawsawi, 2020; Mujiono et al., 2024). Balancing DT with curriculum requirements remains a recurring challenge, as innovative practices may clash with institutional syllabi (Almache Granda et al., 2024; Buphate & Esteban, 2022;). Studies such as Mora (2022) and Nazim and Mohammad (2022) highlight the need for systematic integration, while Bejarano (2025) and Hernández Paredes (2024) confirm that teachers demand clearer guidelines. Overall, professional preparation is critical to support pedagogical consistency and ensure meaningful adoption of DT.

Institutional and Structural Constraints

Sustainable DT integration is limited by structural barriers such as time restrictions, heavy workloads, and insufficient institutional support. (Cleminson & Cowie, 2021; Guzmán Bejarano, 2025; Mujiono et al., 2024). Kang (2021) emphasizes that sustaining DT practices over time becomes difficult when turnover and systemic pressures are high. Crites & Rye (2020) and Marroquín Pacheco (2020) also show that reforms demand stronger coordination at the institutional level. Without adequate support mechanisms, teachers face constant tension between innovation and administrative demands, leading to fragmented implementation. Thus, structural reinforcement is essential for DT to evolve beyond isolated classroom experiences.

Contextual and Resource-Related Challenges

DT adaptation is further complicated by diverse proficiency levels, large class sizes, and resource limitations that reduce its scalability (Almache Granda et al., 2024; Bejarano, 2025). Meza and Zapata (2024) highlight that technological constraints in public and rural schools restrict full application. Almalki (2023) and Araújo Lopes (2024) suggest that integrating DT with digital or AI-based tools may provide alternatives, though disparities in access persist. Studies such as Weganofa et al. (2024), Gohar (2024), and Mitiku (2024) stress the potential of DT for creativity but underline the need for adequate resources.

Research Scope Issues

In the field of English as a Foreign Language (EFL) teaching, research scope issues in Design Thinking (DT) are mainly linked to methodological and contextual limitations. Several studies have been conducted with small or highly localized samples, which restricts the generalizability of results (Mujiono et al., 2024; Bejarano, 2025). Moreover, much of the research focuses on specific skills such as mechanical writing (Alrehaili & Alhawsawi, 2020; Nazim & Mohammad, 2022) or oral performance (Almalki, 2023), overlooking a more holistic view of linguistic competence. Other studies show that benefits in creativity, motivation, and critical thinking (Buphate & Esteban, 2022; Mitiku, 2024; Gohar, 2024) are not always transferred to authentic communication tasks or broader application contexts.

Complementarily, authors such as Kang (2021), Cleminson and Cowie (2021), and Weganofa et al. (2024) emphasize the need to analyze the sustainability and transferability of DT in autonomous, collaborative, and project-based learning scenarios. Local research supported by technologies or innovative approaches (Araújo Lopes, 2024 & Hernández Paredes, 2024;) shows progress, although its applicability remains limited by context. Despite valuable contributions to curriculum reform and teacher training (Crites & Rye, 2020; Marroquín Pacheco, 2020; Mora, 2022), there is still a lack of longitudinal and multi-institutional evidence to demonstrate the large-scale impact of DT. Finally, Almache Granda et al. (2024) and Meza and Zapata (2024) highlight that while DT fosters intercultural and collaborative competences, the challenge remains to expand the scope and external validity of findings to ensure their relevance across diverse educational contexts.

CONCLUSION

Addressing the topic of Design Thinking (DT) in EFL from a perspective framed by the three units of analysis developed in this review, its application, benefits, challenges, and research gaps, allows us to propose a range of study areas specially interventions in EFL classrooms that may shed new light on scientific writing, particularly in Latin America and Ecuador. By mapping how DT has been integrated into EFL instruction, evaluating its impact on students' linguistic and 21st-century skills, and identifying barriers that limit transferability and scalability, this work highlights both the promise and the constraints of DT in language education. Ultimately, future research grounded in local realities yet connected to broader international perspectives is essential to consolidate DT as a sustainable framework for EFL teaching and learning.

The choice of this topic as a research object stems from the growing need to explore innovative methodologies that strengthen the teaching of English as a Foreign Language (EFL), particularly in contexts where traditional approaches have not yielded sufficient results. For years, pedagogical practices focused on memorization and repetition have limited students' creativity, autonomy, and critical thinking. This situation has motivated the search for alternative approaches that promote active, collaborative, and meaningful learning. Within this framework, Design Thinking (DT) emerges as a methodological approach that

responds to these educational demands with practical and flexible proposals.

This concern has been intensified by the low levels of linguistic competence evidenced in standardized assessments, as well as by students' difficulties in communicating effectively in academic and professional contexts. Added to this are the challenges faced by educational institutions with limited resources, large class sizes, and cultural diversity, which further complicate the teaching of English. The advancement of educational technologies and the increasing demand for 21st-century skills have placed additional pressure on teachers to adopt innovative approaches. Consequently, it has become urgent to implement strategies that address these needs in a comprehensive and sustainable manner.

In a globalized world, the mastery of English as a foreign language becomes, for those who fail to achieve it, a problem that particularly affects university students in public institutions. The lack of communicative competence not only limits their access to updated academic information but also restricts opportunities for mobility, employability, and participation in international knowledge networks. This linguistic gap perpetuates social and educational inequalities, reducing the possibility of insertion into competitive labour markets. Thus, it becomes necessary to rethink teaching methodologies, ensuring that English learning is inclusive, motivating, and relevant.

Design Thinking provides a solution to reconfigure EFL teaching from a student-centered perspective, enhancing both linguistic competences and transversal skills. Through its five phases—empathize, define, ideate, prototype, and test—this methodology fosters creativity, collaboration, and problem-solving, which are key elements in shaping global citizens. Moreover, its flexible and adaptable nature enables the integration of technological resources, interdisciplinary projects, and diverse cultural contexts. In this way, Design Thinking becomes an innovative pedagogical framework that responds to the current challenges of English language teaching in Latin American contexts.

RECOMMENDATIONS

The review highlights the transformative potential of Design Thinking (DT) in EFL education while also underscoring the need for targeted improvements, including:

Design broader and more diverse studies. Conduct longitudinal and multi-institutional research to analyse the sustained impact of Design Thinking (DT) on EFL learning, as most existing studies rely on small samples and short timeframes.

Expand DT applications to diverse contexts. Include rural, indigenous, and low-resource environments to ensure the cultural and contextual relevance of findings.

Address the problem of skill transferability. Investigate how creativity, collaboration, and critical thinking developed in the classroom can be transferred to authentic academic and professional communication settings.

Strengthen teacher training. Provide clear guidelines on how to integrate DT into English curricula, including practical strategies for lesson design, scaffolding, and assessment. Develop approaches to reduce student anxiety and enhance autonomy.

Deepen the role of technology and AI. Examine how digital tools can complement DT without widening existing access gaps.

Develop stronger evaluation frameworks. Measure not only linguistic progress but also transversal skills such as problem-solving, collaboration, and autonomy within DT-based pedagogy.

Promote institutional support and policy initiatives. Encourage mechanisms that facilitate the scalability of DT, reduce teacher workload, and consolidate this methodology as part of sustainable curriculum reforms.

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