

Article**AI-Powered Teaching: Reflective Professional Development for GenAI Integration in Mexican EFL/ESL Contexts**

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Abstract

This article examines how collaborative reflective practice on the integration of AI into English as a Foreign Language (EFL) affects teacher educators' professional learning and identity development. Using Farrell's (2014) framework for reflective practice, the study analyzes written reflections, peer dialogues, and observation records produced by five teacher educators from Mexico, Peru, and the United States. Data were collected as the educators participated in a virtual training-of-trainers course, followed by in-person conferences delivered to EFL/ESL teachers in Mexico. Through a qualitative case study approach, the analysis traces how the participants negotiated personal values, institutional constraints, and sociocultural contexts while taking up roles as trainers, mentors, and learners. The findings show that structured collaboration fostered critical engagement with AI pedagogies and heightened awareness of the ethical and human dimensions of technology in language education. Overall, the study demonstrates that reflective training cycles and peer observation protocols can strengthen teacher identity, agency, and AI literacy while supporting dialogue on ethics and human-centered pedagogy.

Keywords

generative artificial intelligence, English Language Teaching (ELT), teacher educator development, reflective pedagogy, AI literacy, professional identity, Mexico, Global South education

Introduction

Recent studies suggest that English as a Foreign Language (EFL) teachers have been quick to adopt generative AI (GenAI) for creating instructional materials that streamline lesson preparation and assessment design (Bauer et al., 2025). GenAI is not simply a productivity tool. In fact, among pre-service teachers, training on how to use AI pedagogies to support more

collaborative, humanistic approaches to language learning have been proven to be meaningful (Kohnke et al., 2025). Such approaches include pedagogic interventions and scaffolded *learner-as-collaborator* tasks (Wang et al., 2024), or activities developed within a “teacher–AI–student triangular relation” (Miao & Cukurova, 2024, p. 41), that engage both learners and teachers in the learning process. Within this landscape, there is an urgent need for TESOL professionals to guide students in their AI use as a strategy to maximize learning outcomes, given classroom-based evidence that uncritical GenAI use leads to overreliance, ethical concerns, and pedagogical limitations (Lee et al., 2025; Li et al., 2025; Moorhouse & Kohnke, 2024). EFL teachers who can meaningfully integrate AI into instruction are better positioned to design learner-as-collaborator tasks and other pedagogic interventions that enhance engagement and critical reflection (Mishra et al., 2023).

To date, there remains a lack of pre-service training in AI being offered to language educators (Belda-Medina & Calvo-Ferrer, 2022; Chapelle, 2025; Kohnke et al., 2025). However, when EFL teachers do receive targeted professional development on AI integration, they often report increased confidence and instructional efficacy, with AI tools functioning as “confidence bridges” and resources for reflective professional growth (Lin & Tsou, 2025, p. 13). At the same time, professional development in technology integration should respond to local teacher needs, emphasizing hands-on, practice-oriented training (Park & Son, 2022). Park and Son (2022) also note teachers’ prior experiences with technology, often shaped by their educational and socio-economic backgrounds, strongly influence how innovations are adopted in the classroom. Studies from Indonesia, for example, reveal some university lecturers resist AI integration when their current digital tools already meet their teaching needs (Zaim et al., 2024).

Training needs in global South contexts

R’boul (2023) argues that colonial histories have created deep inequalities in ELT and TESOL, leaving Global South perspectives marginalized within the field. Sabieh (2024) expands on this idea, clarifying that Global South educators face problems related to connectivity, educational access, and the digital divide, with realities including poverty, lack of basic needs, and instability. Within this broader context, Latin America exemplifies these challenges while showing emerging momentum toward AI integration in education. The COVID-19 pandemic intensified these complexities, serving as a disruptor that exposed longstanding inequalities in technology integration across the region. Research shows how limited ICT (information and communication technology) access, coupled with uneven institutional adoption, made emergency remote teaching difficult, forcing countries to rely on stopgap measures while educators required urgent training on emerging technologies (Farrell & Stanclik, 2023; Miralrio et al., 2024; Salas-Pilco et al., 2022). This accelerated shift toward technology-mediated education has created a foundation for current AI integration efforts, as educators who rapidly adopted digital tools now navigate the next wave of technological transformation in their classrooms.

In this context, the present training-of-trainers course was designed specifically for EFL teacher educators in Mexico, whose professional realities reflect many of these broader Global South challenges.

Teacher perspectives through reflective practice

While global research on AI in education is expanding, it remains disproportionately focused on student learning rather than teachers’ professional engagement with AI (Zawacki-Richter et al., 2019). China currently leads in publications on AI pedagogy in higher education, while Mexico, where this research is situated, remains significantly underrepresented (Crompton &

Burke, 2023). This imbalance underscores the need for research that foregrounds educators' voices and examines how they make sense of AI in their own teaching contexts.

Developing AI competencies requires context-aware, teacher-led professional learning that situates technology within local pedagogical realities (Miao & Cukurova, 2024). In this kind of environment, peer observation plays an important role as it helps foster teacher agency and professional identity development (Farrell, 2019). When approached in non-evaluative ways, observation also creates space for reflective dialogue around practice (Richards & Farrell, 2005) and highlights the gap between imagined and enacted teaching, encouraging deeper self-inquiry (Farrell & Macapinlac, 2021). These ideas together suggest that reflective practice offers a useful conceptual and methodological frame for understanding how teacher educators engage with AI.

Little is known about the development of AI competencies from the educators' perspective in many countries, including Mexico, which remains underrepresented in the AI-in-education literature (Crompton & Burke, 2023; Zawacki-Richter et al., 2019), while existing research in Latin American higher education has largely emphasized AI applications and systems rather than teachers' professional learning and preparedness (Salas-Pilco & Yang, 2022). The present study addresses this gap by examining how collaborative reflection supported EFL teacher trainers in a Mexican context as they worked to develop AI integration competencies.

Methodology

The aim of the study

The main goal of this study is to examine how collaborative reflective practice can help teacher trainers deliver AI-integrated training for EFL/ESL professionals. Using a qualitative case study approach (Creswell & Creswell, 2023), the study adapts the reflective model developed by Farrell and Macapinlac (2021), which applies Farrell's (2014) five-stage framework (*Philosophy, Principles, Theory, Practice, and Beyond Practice*) to teacher education research. It examines how structured reflection within this framework shapes teacher trainers' understanding of GenAI integration and their roles as professional developers in Mexican contexts.

Specifically, this study addresses three key questions:

1. How did the reflective training design influence the participating teacher educators' professional learning during the GenAI training-of-trainers cycle?
2. In what ways did peer observations contribute to the participating teacher educators' learning and development within the cycle?
3. What factors shaped how the participating teacher educators approached AI integration as they engaged in collaborative reflection?

Participants

The participants in this study consisted of four teacher educators from three higher education institutions in northern Mexico and one teacher educator from the United States. As a team, the five participants were already collaborating on the development of a virtual training-of-trainers course focused on AI integration for EFL teacher educators in Mexico. This existing collaboration provided the context for the reflective activities analyzed in the study.

This collaborative team consisted of (names were changed to maintain confidentiality of participants):

1. "Elena," a Mexican teacher educator working at a public teacher-education institute in northern Mexico.
2. "Diego," a Mexican teacher educator working at a state normal school in northwestern Mexico.
3. "Ana," a Peruvian teacher educator working at a public university in northern Mexico (border region).
4. "Clara," a Mexican teacher educator working at a public university in northern Mexico.
5. "Julia," a U.S. teacher educator working at a Sino-Western university in China.

As researchers, the five participants brought different national, cultural, and institutional backgrounds to the project, which shaped how they interpreted AI integration and teacher development in Mexican contexts. These positional differences informed both the design of the training and the reflections produced during the study. For example, Julia is the only participant who identifies as an L1 speaker of English, while the other four identify as native Spanish or bilingual speakers. Further, Julia was the teacher educator with the least experience teaching in Mexican contexts. At the same time, this cross-cultural collaboration is intentional as it allows for points of divergence to open up space for deeper reflection during the peer observation cycle. Specifically, Julia's position as a U.S.-affiliated educator working in a Sino-Western university context functioned as a comparative lens during peer observation and reflection, making locally situated assumptions about AI use, institutional constraints, and pedagogical norms in Mexican higher education more visible rather than diluting the study's contextual grounding.

Design and procedure

This study combined structured reflection, collaborative training, and peer observation to explore how teacher educators developed reflective practices while designing and implementing AI integration training. The design was informed by Farrell and Macapinlac's (2021) framework for reflective practice, adapted for the context of GenAI professional development.

The five researchers served as both facilitators and participants in a training-of-trainers model. Together, they conducted an online reflective training series for a group of teacher educators who later collaborated to deliver in-person AI integration workshops for pre-service and in-service EFL teachers.

Following Farrell's (2014) five-stage framework (*Philosophy, Principles, Theory, Practice, and Beyond Practice*), the reflective process unfolded across three phases of the virtual and in-person trainings. In the pre-training phase, participants completed a needs analysis survey. In the training phase, they engaged in three structured reflective writing activities. In the post-training phase, they carried out peer observations during the in-person workshops and participated in a final group reflection and discussion.

Needs analysis

Prior to the training cycle, participants completed a brief online needs analysis survey designed to inform the training design. The instrument collected basic quantitative and qualitative data on participants' prior experience, attitudes, and priorities related to AI integration in language teacher education. It focused on three main areas: (1) training content priorities, (2) preferred hands-on activities, and (3) preferences for peer feedback and observation. Responses guided the selection of workshop topics, helped align activities with participants' interests, and informed the development of a peer observation rubric. The survey served a diagnostic purpose,

helping the research team ensure that the training design reflected participants' contexts and established a baseline for collaborative professional development.

Reflective cycle and data collection

The training cycle unfolded over three virtual training sessions followed by a series of in-person workshops. Throughout this process, participants engaged in structured reflection activities aligned with Farrell's (2014) five-stage reflective framework. These reflections were designed to link *Philosophy*, *Principles*, *Theory*, *Practice*, and *Beyond Practice*, allowing the participants to connect their evolving views on AI to their professional identities and pedagogical contexts.

Before the first training, participants reflected on the philosophical foundations of their teaching by completing a Tree of Life activity, in which they traced cultural, familial, and educational influences that had shaped their teaching values. They met in pairs to discuss these reflections, exploring how their professional identities had developed and how these roots informed their emerging beliefs about AI in education. The second reflective cycle focused on teaching principles. Participants completed a beliefs inventory and wrote short reflections connecting their selections to their current teaching contexts and the integration of AI tools. These reflections drew on the *UNESCO AI Competency Framework* (Miao & Cukurova, 2024), encouraging participants to consider the ethical, pedagogical, and institutional dimensions of AI use in language education. The third reflection centered on theory-to-practice connections. Participants examined how theoretical ideas about AI-enhanced pedagogy intersected with their practical experiences designing and facilitating activities during the training cycle. They reflected on shifts in their comfort with AI and on tensions that arose when theoretical ideals met classroom realities.

Each reflective phase was followed by group discussions conducted virtually, where participants revisited and extended their written reflections through collaborative dialogue. These conversations generated rich data on how teacher educators negotiated the meanings of AI integration in relation to their identities and pedagogical beliefs.

Following the virtual training phase, participants facilitated three in-person workshops for pre-service and in-service EFL teachers at their respective institutions. These workshops served as a space to apply the principles explored in earlier reflections, offering hands-on experiences with AI tools and opportunities for collaborative learning. Peer observation played a central role, with participants using shared rubrics and observation protocols developed during the training to provide feedback on one another's facilitation.

The cycle concluded with a final group reflection session, representing Farrell's (2014) *Beyond Practice* stage. Here, participants synthesized their experiences across the entire process—reflecting on the impact of collaborative reflection, peer observation, and hands-on practice on their professional growth and their evolving views of AI in language education.

Data analysis

All written reflections, transcripts, and peer observation rubrics were analyzed using a deductive coding approach in *Atlas.ti*. Following Creswell and Creswell's (2023) guidance for qualitative analysis, first-cycle coding involved labeling excerpts based on conceptual content. In second-cycle coding, these codes were refined and organized within Farrell's (2014) five-stage reflective framework: *Philosophy*, *Principles*, *Theory*, *Practice*, and *Beyond Practice*. *Atlas.ti*'s built-in coding history and timestamped revisions provided an audit trail to document

how codes were applied, reviewed, and adjusted throughout the process. The analysis was explicitly bounded by Farrell's framework; no attempt was made to generate themes beyond this structure. While we refer to these units as "themes" throughout the paper for consistency, they reflect deductively derived codes rather than emergent thematic categories.

During second-cycle coding, the participants reviewed all *Atlas.ti* codes and made several deliberate refinements. We began with a larger set of initial codes drawn from participants' written and spoken reflections, then refined them through collaborative review. We re-examined coded segments, reassigned codes where needed, merged codes when there was obvious overlap, and removed codes that appeared fewer than four times, as four was the lowest frequency that recurred across the dataset. The remaining 17 codes were those that consistently aligned with the content across all data sources while also mapping meaningfully onto Farrell's reflective stages (see Table 1 in Appendix A).

Results

This section presents findings organized by stages of Farrell's (2014) reflective framework, highlighting how participants developed AI-related pedagogical competencies through structured reflection and peer observation.

Philosophy

This section examines the *Philosophy* stage of reflection, focusing on how participants' beliefs about teaching, cultural backgrounds, and professional identities shaped their roles as EFL teacher trainers. These philosophical orientations did not emerge at a single point in the process but were evident across the data collection period and are interpreted here through the lens of the *Philosophy* stage. However, Interview 1 provided the richest data for this stage, as participants were explicitly prompted to reflect on the formative experiences and values that shape their teaching and their engagement with AI in education (see Appendix B for a summary of *Philosophy*-related codes and sample quotations.)

Elena's reflections highlight how her sense of teacher identity is closely tied to meaning-making in her practice. She describes realizing her inclination toward teaching early on, explaining, "And then I realized I was always a monitor for other students. Like in every part of my education, I was either teaching my friends or helping them with their homework" (Interview 1). Later, she connects this orientation to her current work with teacher trainers, asking, "What can I use that is already here to motivate my students? To not say what the computer says" (Interview 1).

Diego's data tend to show how his formative experiences impact his teaching philosophy. In Interview 1, he discusses his motivations that first led him to English language teaching, "being a teacher is...more than just having teaching resources, but also going beyond knowing why...getting to know more about SLA or second language acquisition theories, saying how the brain works" (Interview 1). Similarly, Clara pointed to the formative experiences that shape her teacher identity, also noting the complexity and richness of EFL as a profession that leaves room for personal growth and shifts in understanding, "The early years [at my university] were really formative for me as a professor, as I didn't have a lot of experience with university students. I would say that I learned as much as they did, and those first generations shaped me to become the teacher I am today" (Reflection 1).

Julia and Ana both reflected on how their cultural backgrounds and professional experiences informed their teaching philosophies within the *Philosophy* stage of reflection. Ana's

discussion of her formative experiences, perhaps shaped by her extensive time living in different countries, tended to situate those experiences within a cultural context. In Interview 1, she expands on the ideas she used to fill in her *Reflective Practice Tree*: “I guess that what really was part of my roots that helped me shape my teaching was my experience in Nicaragua when I was studying my major there. We were always taught to be part of a social change and so on and so forth. So all the time my approach in teaching [was] always trying to help people to make a change” (Interview 1).

Julia views herself as someone who is overly aware of the cultural positioning of not only herself but also the students that she teaches. In Interview 1, she attempts to explain how culture manifests in her language classroom, “Well, the thing is that people cannot get separate from what you are—you have all your background, your culture, and you're going to show examples [in the classroom] according to your life experience” (Interview 1).

Taken together, these reflections illustrate how participants’ teaching philosophies, shaped by personal, cultural, and professional experiences, formed the foundation for how they later approached AI integration in teacher education, addressing Research Question 1.

Principles

This section outlines the principles that emerged when the participants reflected on their EFL/ESL teaching training practices. We attempt here to suggest what guides the participants in the decisions they make regarding how best to train EFL teachers on AI-integrated practices. Of note, two themes emerged during the analysis: *Ethical Use of AI* and *Purposeful Use of AI*. Given that the reflective cycle is investigating teacher trainers, we would argue that the emergence of these two themes reflects how teacher trainers, who are guiding teachers and not just students, tend to emphasize the frameworks and responsibilities that guide AI integration rather than the mechanics of classroom use (see Appendix C for a summary of *Principles*-related codes and sample quotations.)

During the virtual trainings, we remained cognizant of the concept of *keeping humans in the loop* in our teacher training of AI pedagogies. This concept resonated throughout the data collection. In Reflection 2, Elena said, “I also believe it is essential to emphasize that AI should not replace the teacher. The human element remains vital in fostering effective and empathetic learning environments.” Echoing this in the First Group Discussion, Julia notes a time when she was invited to engage in real-time translation using AI-assisted technology as part of a casual conversation. Of this experience she recalls, “We talked about this in training one about keeping humans in the loop. That definitely doesn’t keep humans in the loop.” (First Group Discussion)

Clara and Ana both mention the tension GenAI tools like ChatGPT have brought into the classroom. According to Clara, “[Student] use tends to be instrumental and surface-level. They often treat AI like a smarter Google: a shortcut to answers, not a tool for deeper exploration” (Reflection 2). In the Final Group Discussion, Ana expresses her frustration, felt by many educators, of student use of GenAI. She asks, “And how can we approach these situations without being policemen or policewomen, right? We’re not police officers. This is not a question of control [in] the class. [Using GenAI] is just another way that we can integrate technology in the learning process.” (Final Group Discussion)

Ethical Use of AI and *Purposeful Use of AI* do not emerge in the data analysis as two completely distinct phrases. Instead, we argue they work cooperatively to provide a richer description of

the EFL teacher training classroom. Taken together, they show both the current state of student use of AI tools and the manner in which EFL teacher trainers adapt their praxis to guide pre-service teachers.

In Reflection 2, Elena spoke to this adaption when she said, “I see an opportunity to support more purposeful use of these tools within the classroom, guiding students to leverage AI beyond casual use.” Diego demonstrated more purposeful use of AI tools by engaging students from a learner-as-collaborator frame. Of his practice, he said, “I show my students different functions and different exponents according to register, and then they can make decisions about what they get from AI and make informed decisions” (Group Discussion 1).

Ana and Clara both emphasized that AI has transformed materials creation, offering pre-service teachers an accelerated way to design and adapt resources that strengthens their preparation for classroom practice. According to Ana, “I think the idea of developing materials and resources through the usage of the AI, that’s what for me will be more useful—how we can also teach them that they can make materials or personalize learning through the usage of the AI. I think that is the potential that we need to unleash” (Group Discussion 1). Clara echoed this in her Post-Observation Meeting. She said, “...they are actually creating things using AI tools which, in the past, they didn’t have that. Maybe they used it, but without a guidance from the professor, from me, and now I’m even reviewing their prompts to help them create something more in line to what the assignment is” (Post-Observation Meeting).

Taken together, these accounts highlight the ethical and purposeful orientations that shaped how participants envision AI in teacher education, directly addressing Research Question 2.

Theory

At the *Theory* stage of reflection, we build on Farrell and Macapinlac (2021), who asked pre-service teachers to reflect on their practice through the lens of planning approaches and critical classroom incidents. However, our context is different than that of the teachers in Farrell and Macapinlac (2021). As experienced EFL/ESL teacher trainers working within an AI-focused professional development cycle, we needed to adapt this stage to account for both our training role and the integration of AI pedagogy. For that reason, we developed a distinct protocol for Reflection 3, designed to prompt teacher trainers to reflect on the experience of preparing pre-service teachers to engage with AI in their praxis (see Table 2 in Appendix A for the Reflection 3 protocol and guiding questions).

As with the previous stages, the data were coded across the entire cycle, since themes of reflective practice and teacher training did not appear only in Reflection 3 but surfaced consistently throughout the data collection. What emerged from the data were two prominent themes: *Reflective Practice* and *AI-Pedagogy Integration*.

Clara noted in Reflection 2 the importance she places on reflective practice for the teachers she trains. She said, “Because I encourage pre-service teachers to reflect, adapt, and think critically, AI can be a powerful tool to help them develop those same habits, both for themselves and their future students” (Reflection 2). In this way, Clara is thoughtfully incorporating AI pedagogies into not only her praxis as a teacher trainer, but empowering her pre-service teachers to purposefully integrate AI tools as well. Ana also encourages pre-service teachers to integrate AI tools to support reflective practice, adding an essential critical aspect. In Reflection 2, she noted, “For me, this includes access to curated AI tools designed for EFL/ESL contexts,

opportunities for collaborative experimentation, and spaces to reflect critically on our pedagogical choices as a teaching community.”

With regards to the theme of *AI-Pedagogy Interaction*, the data show how participants in this study are making deliberate connections between their own pedagogical expertise and the preparation of pre-service teachers to integrate AI into their future classrooms. In Reflection 2, Ana confidently positioned herself as a teacher trainer who provides instruction in AI pedagogies. She said:

My beliefs about language teaching as a communicative, learner-centered, and dynamic process make me feel generally comfortable using and modeling AI tools with future teachers. I’m not afraid of AI replacing teachers. I see it as an opportunity to enhance learner agency, support creativity, personalize learning, and also as a way to help teachers reduce time and increase effectiveness of administrative/teaching tasks. (Ana, Reflection 2)

However, in the same reflective statement, she added, “I recognize that fully aligning my AI integration with my beliefs requires additional professional development and institutional support,” addressing a need faced by many EFL teacher training programs.

Referencing the teacher training she conducted as part of the current project, Clara recounted, “specifically in my presentation I brought examples of how they can use AI and they are supposed to also use it and create activities using these specific tools so they can incorporate it into their own practice” (Pre-observation Meeting). In this way, Clara is assuming the teachers she trains will not just learn about AI pedagogies as an abstract concept, but as something they can fully integrate into their classrooms.

Across the data collection, and specifically in the Reflection Protocols for Reflections 2 and 3, participants not only showed evidence of how they negotiate their own AI-integrated praxis but also articulated ways of preparing pre-service teachers to do the same. This highlights how reflective training design fostered both personal professional growth and a forward-looking orientation toward teacher education, directly addressing Research Question 1.

Practice

This section introduces themes from the data that emerged related to each participant’s realization of AI-integrated pedagogies in the EFL teacher training classroom. The evidence comes both from the entire data set, as well as more focused co-constructions of meaning that took place during pre- and post-observation meetings. In the latter, participants were asked directly what AI competencies they would employ in their teacher trainings (see Appendix D for a summary of *Practice*-related codes and sample quotations.)

Regarding *Practice*, the perceptions of the participants in the current study converged around two main themes: *Critical Thinking* and *AI as a Pedagogical Element*. Table 3 in Appendix A details the dominant themes for each participant. For Elena, no dominant themes emerged. This can be attributed to a missing file for the post-observation meeting, which would have included potentially rich data. It could also suggest that Elena was listening to other participants, allowing more space for reflection from others, rather than sharing her own ideas.

In the Final Group Discussion, Clara discusses how she will use AI in a future class:

So I was actually thinking about a rubric in which I can assess good prompting in their assignments. *So, you're going to use ChatGPT. Now, show me your prompts, and I'm going to assess your prompts to see how your prompts generate a final outcome, a final result.* (Clara, Final Group Discussion)

In this way, she will encourage EFL pre-service teachers to not just use AI tools blindly, but to add a step of thinking critically about their function in the language classroom. Similarly, Ana noted during Interview 1, “We don't have to fight AI, but we have to develop that critical thinking. Like it can be your friend, but please think about it. Not everything that says is real.”

During her pre-observation meeting, Julia described a ChatGPT generation task done in pairs to encourage critical thinking among students. Instead of using ChatGPT once and accepting the results, students are pushed to negotiate with the LLM and then co-create the meaning of the output with their partner. She argued that the AI-mediated instruction “enhances the level of analysis and critical thinking that the students can engage in because they're forced [to], because they have to basically have to talk about it more, and they have to explain it more to each other” (Pre-Observation Meeting).

The theme of *AI as a Pedagogical Element* illustrates well how the participants in this study were, from the beginning of the training cycle, incorporating AI pedagogies into their teacher training praxis. In other words, the participants in the current study approached the training cycle with pre-existing knowledge of AI pedagogies that enriched their experience.

At the end of the training cycle, as a group, the reality of AI tools present in the language learning classroom seemed more inevitable. As Diego noted in Reflection 2, “I see AI as another pedagogical element that can be thoughtfully incorporated into my existing framework rather than something that completely transforms it.” Further, Elena goes into detail in Reflection 2, noticing a shift in her practice:

My perspective on artificial intelligence has undergone significant transformation throughout this training series. Initially, I approached AI primarily as a tool for efficiency and task completion. However, the theoretical grounding provided in Training 2 has shifted my understanding toward viewing AI as a potential mediator within learning environments, similar to Vygotsky's concept of cultural tools that facilitate cognitive development—and to also take into account the human component. (Elena, Final Group Discussion)

Overall, the findings from this stage show how participants applied reflective insights through concrete teaching practices and peer observation, illustrating how collaborative engagement shaped their professional learning and directly addressing Research Question 2.

Beyond practice

This section presents evidence showing that participants entered the training cycle already prepared to critically examine how best to train EFL teachers in AI pedagogies, demonstrating both ability and intent to engage with the stage of *Beyond Practice*. In the final stage of the framework, participants are asked to reflect on the novel ideas they have explored in a training program. However, as has been stated, the participants in this study entered the training cycle with a range of knowledge and competencies regarding AI pedagogies. Findings for *Beyond Practice* are discussed below. Appendix E organizes the progression of *Beyond Practice* themes across phases of the data collection (early, middle, and late), highlighting how

motivation for change and transformation in learning developed over time (see Appendix E for a summary of *Beyond Practice*-related codes and sample quotations.)

In the coding of the data, two central themes emerged: *Motivation for Change* and *Transformation in Learning*. Both reflect how participants have internalized the realities of AI in contemporary education. As early as Group Discussion 1, Ana noted the impact AI is having on education:

We have a lot of questions still, and I think we need to reconsider not only again languages, but everything. What is education, or what education should be for us, for humans? Because again, we've been through a type of education in the past as well. As I'm an old person, I will say that we've been through writing, reading, and developing these skills in in the hard way, you know, just erasing pages once, twice, times, and they wanted to do it perfectly. And that is not going to happen anymore. That is not education anymore. So we really had it in the hard way. And now everything is easy, in a way, but also something is missing. But then the future [students], maybe, [are] not going to need those skills. I just don't know. So everything needs to be reconsidered. Everything needs to be thought again.

Perhaps best poised to speak to the transformation in learning, given their role as teacher trainers, the participants in this study consistently highlighted the profound effect AI is having on education. The most significant insights emerged at the intersection of theoretical understanding and practical observation. For instance, the realization that participants had developed different skills despite engaging in the same training experiences served as a concrete manifestation of situated learning theory and Vygotsky's Zone of Proximal Development. Elena, in Reflection 3, described this as an *aha moment*, underscoring the importance of designing AI applications that respond to individual learning differences and contexts.

Ana, in Group Discussion 1, echoed this by emphasizing the broader transformation underway in classrooms, while Clara, in Reflection 2, reflected on her own evolving process:

I'm aware that I'm still navigating how to do this most effectively. I would benefit from more examples of AI-integrated lesson plans, research-based strategies for using AI in language teacher education, and spaces for professional dialogue with other educators exploring the same issues. A strong ethical framework, alongside case studies and classroom-ready activities, would help me align my values with my practice more closely, and help my students move from passive users of AI to informed, reflective, and intentional educators who know how to apply technology for deeper learning. (Clara, Reflection 2)

Together, these reflections suggest that participants are actively negotiating how AI is reshaping both their own practice and the future of EFL teacher training. The participants illustrate several factors (e.g., prior experience, institutional context, and professional dialogue) that influenced how the participants integrated AI integration through collaboration, addressing Question 3.

Discussion

Teacher training implications

Consistent with previous studies on reflective practice in TESOL, such as Farrell and Macapinlac (2021) and Richards and Farrell (2005), this study demonstrates how structured engagement in reflective frameworks enhances teacher identity development and overall teaching quality (Beauchamp & Thomas, 2009; Korthagen, 2016; Machost & Stains, 2023). In this study, these benefits are evidenced through teacher educators' sustained reflection on beliefs, pedagogy, and professional roles as they engaged with AI integration, providing empirical support for reflective-practice claims within an AI-focused teacher education context (Xerri, 2025). By situating these frameworks within an AI-integrated paradigm, the findings support Farrell's (2014, 2019) call for holistic reflection and suggest that EFL teacher trainers can effectively incorporate AI competencies into their curricula.

Importantly, these results offer significant implications for teacher education programs. Utilizing reflective cycles allows trainers to integrate AI-assisted pedagogies in ways that build teacher agency and confidence while providing pre-service teachers opportunities to critically engage with emerging technologies (Opre, 2022). This approach serves as a model for raising critical questions about AI use and fostering dialogue on ethics and human-centered technology integration, areas that remain underdeveloped in most teacher training programs (Belda-Medina & Calvo-Ferrer, 2022; Gouseti et al., 2025; Kohnke et al., 2025; Salas-Pilco et al., 2022).

Finally, this study shows that adapting peer observation protocols can build AI literacy and strengthen professional identity (Richards & Farrell, 2005). In this context, peer observation functioned as a space for examining AI-related pedagogical decisions, rather than solely general teaching behaviors, allowing participants to negotiate ethical use, instructional purpose, and professional agency in relation to AI. This progression is evident in the topics discussed across the reflective stages shown in Appendix A, Table 3, where participants moved from foundational beliefs to applied practices and transformative insights. Appendix A, Table 3 illustrates this developmental movement by mapping how reflection evolved across stages, making visible the shift from values-oriented reflection to enacted AI-integrated pedagogy and longer-term professional transformation (Villarroel Henríquez et al., 2025).

Contextual implications for teacher education

The localized context of this study is central to its significance. Because the trainers navigated a cross-cultural collaboration—incorporating both US and Latin American perspectives to prepare training for Mexican teachers—the observation process became a site for situated knowledge. This context-sensitive dialogue ensures that AI use connects directly with SLA theory and practice, fostering a collaborative engagement with technology that honors the local socio-educational landscape (Kumaravadivelu, 2006). Rather than introducing new models of AI pedagogy, the reflective work documented here shows how existing pedagogical knowledge was reinterpreted through locally situated dialogue (Johnson & Golombek, 2011; Korthagen & Vasalos, 2005).

Although much of the training occurred online, the design was rooted in the realities of Mexican higher education and aimed to prepare trainers to lead in-person AI integration workshops for EFL/ESL teachers across three Mexican cities. This localized, collaborative model reflects the importance of grounding AI professional development in the sociocultural and institutional contexts where teachers work. This finding aligns with research emphasizing that teacher learning is most effective when professional development is closely tied to teachers'

institutional constraints, cultural expectations, and instructional realities (Avalos, 2011; Opfer & Pedder, 2011; Webster-Wright, 2009).

Mexico's ongoing implementation of a national AI strategy (Coalición IA2030Mx, 2020) and emerging policies supporting AI pedagogy (ANUIES, 2025; UNESCO, 2025) provide a policy backdrop for this work. Yet, practical integration in classrooms remains limited (DGESUM, 2022). This gap between policy aspiration and classroom enactment reflects a well-documented challenge in teacher education, where top-down innovation agendas often outpace teachers' access to sustained, context-responsive professional learning (Coburn, 2004; Darling-Hammond & Gardner, 2017). Findings from this study highlight how teacher-led, reflective professional learning can serve as a bridge between national policy and classroom enactment, ensuring that AI integration efforts remain pedagogically and culturally relevant.

Limitations

The current study has potential limitations regarding the quantity and type of data collected. Due to scheduling conflicts, post-observation interviews could not be conducted for three participants, and peer-observation records were not consistently preserved in a form suitable for systematic coding. As a result, evidence for the *Practice* stage is drawn mainly from the interviews, group discussions, and written reflections, and cross-stage triangulation is necessarily limited.

Because this is a self-study, the dual role of authors as participants introduces the possibility of reflexivity and interpretive bias. To mitigate this, all reflections were generated through structured prompts based on Farrell's (2014) framework, and the analysis followed a shared coding process in which the five educators discussed codes, compared interpretations, and worked toward consensus. These procedures helped maintain consistency and reduce idiosyncratic readings, but the absence of independent triangulation remains a limitation for future research.

Conclusion

This paper has described the implementation and analysis of a reflective training cycle for EFL teacher trainers situated within an AI-integrated paradigm. The findings from this study firstly highlight that structured engagement in reflective practice can strengthen teacher identity, agency, and confidence while supporting pre-service teachers in developing critical approaches to emerging technologies.

Second, they indicate the potential of reflective cycles and peer observation protocols to serve as platforms for raising critical questions about AI use, fostering ethical dialogue, and promoting human-centered pedagogies in teacher education.

This potential can only be fully realized when teacher education programs embed AI integration as part of both pre-service and in-service training, equipping teachers and trainers with the skills and metaknowledge to critically analyze and meaningfully implement AI in their professional practice. The insights gained from this research emphasize the importance of adapting teacher training to local contexts, while also addressing global disparities in AI education research, ensuring that educators everywhere are prepared to meet the challenges of language teaching in an AI-mediated world.

Ethics statement

The project was exempt from formal ethics review because the only participants were the researchers themselves, no external human subjects were involved, all reflections were voluntary, and identifying information was anonymized.

Disclosure of AI use

Generative AI tools were used in the production of this manuscript to assist with language refinement.

Appendix A

Table 1

Final Set of 17 Codes Organized by Farrell (2014)'s Reflective Framework

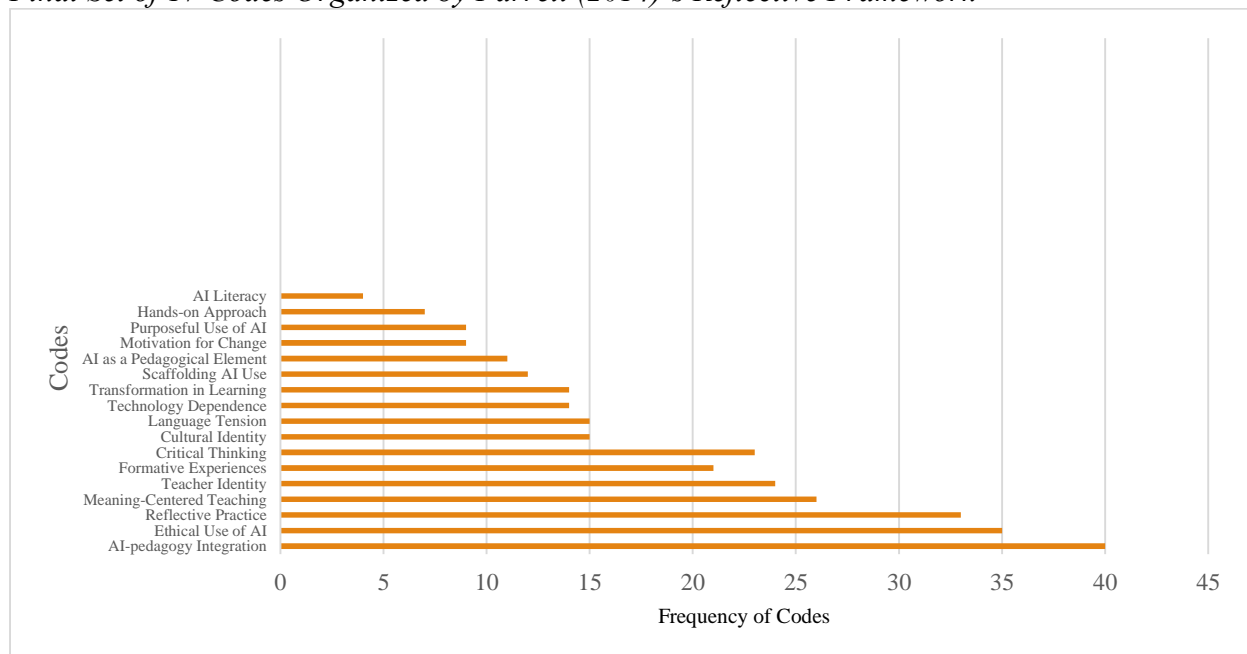


Table 2

Sample Questions and Activities Adapted from Farrell (2014) and Study Protocols

Stage of Farrell's (2014) Reflective Framework	Stage of Training	Activity/Activities	Questions
Philosophy	Before Training (Training Trainers) Virtual 1 of	Tree activity and first reflection interview (participants created a visual "tree" with roots, trunk, and branches to represent influences and beliefs).	<ul style="list-style-type: none"> • What were your general impressions of doing this activity? • Tell me about your roots. • When you're thinking about your identity and cultural background, how does that shape your identity as a teacher? • Of your school experiences, which ones have the most effect on

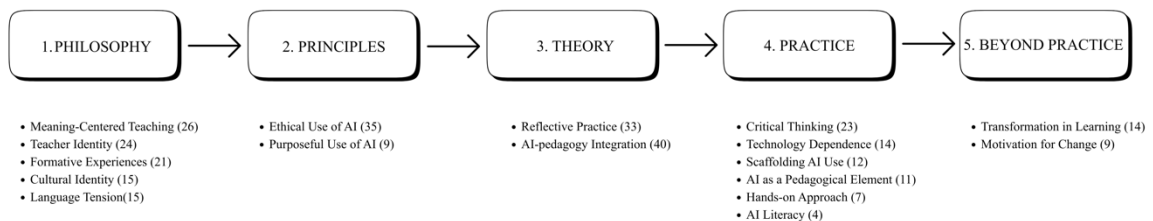
			<p>your identity as a teacher? Why?</p> <ul style="list-style-type: none"> • Tell me about your limbs that you filled out. Choose two or three to explain in more detail.
Principles	Before Virtual Training 2 (Training of Trainers)	Reflection 2 — Beliefs Inventory and AI Pedagogies (participants selected five statements from ESL/EFL beliefs inventory, adapted from Johnson 1992 via Farrell, and connected them to practice and AI use).	<ul style="list-style-type: none"> • Why did you choose these five belief statements, and how do they align with your practice and identity? • Thinking about the five beliefs you selected, how do they connect with the ways your students are already using AI outside of class? In what ways might this influence how you support more purposeful classroom use of these tools (Rebolledo Font de la Vall & González Araya, 2023; Vogt & Flindt, 2024)? • The UNESCO AI Competency Framework outlines different ways teachers might integrate AI: AI-assisted teaching, AI-pedagogy integration, and AI-enhanced pedagogical transformation. Which of these feels most in line with your current approach, and why (Miao & Cukurova, 2024)? • How do your beliefs about teaching shape your comfort level with using and modeling AI tools for your pre-service teachers? What kind of support or resources might help you bring your beliefs and practice closer together (Belda-Medina & Calvo-Ferrer, 2022; U.S. Department of

			Education, 2023)?
Theory	Before Virtual Training 3 (Training of Trainers)	Reflection 3 — Linking theory and practice during Training 2 hands-on work.	<ul style="list-style-type: none"> • What theoretical ideas, assumptions, or models came up during the hands-on activities in Training 2? • How did the theory connect, or not connect, with what you actually experienced? • How are your feelings about AI shifting as we go through this training? • What’s different about how you think about AI now compared to when we started?
Practice	In-Person Teacher Trainings	Peer observation cycle with pre- and post-observation conversations focused on AI pedagogy	<p>Pre-Observation Questions:</p> <ul style="list-style-type: none"> • Do you feel you focus on one more than the others typically? • When I observe your training, will I only see one competency? Why? • Are you modeling pedagogic intervention? Why or why not? • What level of AI literacy do you assume of the teachers you are modeling for me? <p>Post-Observation Questions:</p> <ul style="list-style-type: none"> • In which ways has integrating AI into your practice changed your approach to teaching? • Do you see AI beyond serving as a teaching assistant? • What strategies or ongoing professional development do you think are necessary to maximize AI’s potential in transforming educational practices?

Beyond Practice	Final Group Discussion	Closing discussion with participant-generated prompts.	<ul style="list-style-type: none"> • What knowledge did you have before starting the AI trainings? • What should teacher trainers do about obsolete programs and how can we motivate colleagues to use AI? • How did you feel about and what did you learn from the peer observations? • What do you think about observing AI use in teaching? • How did you feel about being observed while using AI?
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Table 3
Mapping of Codes to Reflective Stages in Farrell’s (2014) Framework

Mapping of Codes to Reflective Stages in Farrell’s Framework



Appendix B
Summary of *Philosophy* Findings

Participant	Guiding Theme(s)	Illustrative Evidence (Source)
Elena	Teacher Identity/ Meaning-Centered Instruction	<p>“And then I realized I was always a monitor for other students. Like in every part of my education, I was either teaching my friends or helping them with their homework.” (Interview 1)</p> <p>“Like what can I use that is already here to motivate my students to go out there? To not say what the computer says.” (Interview 1)</p>
Diego	Formative Experiences	<p>“...being a teacher is more than just having teaching resources, but also going beyond knowing why. [It’s] getting to know more about SLA or second language acquisition theories, saying how the brain works” (Interview 1)</p>

Ana	Cultural Identity/Teacher Identity	“I guess that what really was part of my roots that helped me shape my teaching was my experience in Nicaragua when I was studying my major there. And we were always taught to be part of a social change and so on and so forth. So all the time my approach in teaching is always trying to help people to make a change.” (Interview 1)
Clara	Formative Experiences	<p>“So basically, I think that is working alongside my colleagues. They do have different backgrounds and experiences. And it has been very enriching for me, like learning from them.” (Interview 1)</p> <p>“The early years [at my university] were really formative for me as a professor, as I didn't have a lot of experience with university students. I would say that I learned as much as they did, and those first generations shaped me to become the teacher I am today.” (Reflection 1)</p>
Julia	Cultural Identity/Teacher Identity	Well, the thing is that people cannot get separate from what you are...you have all your background, your culture, and you're going to show examples that you know, according to your life experience. (Interview 1)

Appendix C

Summary of *Principles* Findings

Participant	Principle	Illustrative Evidence (Source)
Elena	Ethical Use of AI	“I also believe it is essential to emphasize that AI should not replace the teacher; the human element remains vital in fostering effective and empathetic learning environments.” (Reflection 2)
	Purposeful Use of AI	“I see an opportunity to support more purposeful use of these tools within the classroom, guiding students to leverage AI beyond casual use.” (Reflection 2)
Diego	Purposeful Use of AI	“I show my students different functions and different exponents according to register, and then they can make decisions about what they get from AI and make informed decisions.” (Group Discussion 1)
Ana	Ethical Use of AI	“And how can we approach these situations without being policemen or policewoman, right? We're not police officers. This is not a question of control. It's just another way that we can integrate technology in the learning process.” (Final Group Discussion)
	Purposeful Use of AI	“I think the idea of developing materials and resources through the usage of the AI, that's what for me will be more useful—how we can also teach them that they can make materials or personalize. learning through the usage of the AI. I think that is the potential that we need to unleash.” (Group Discussion 1)
Clara	Ethical Use of AI	“[Student] use tends to be instrumental and surface-level. They often treat AI like a smarter Google: a shortcut to answers, not a tool for deeper exploration.” (Reflection 2)

	Purposeful Use of AI	“...they are actually creating things using AI tools which, in the past, they didn't have that. Maybe they used it, but without a guidance from the professor, from me, and now I'm even reviewing their prompts to help them create something more in line to what the assignment is.” (Post Observation Meeting)
Julia	Ethical Use of AI	“We talked about this in training one, about keeping humans in the loop—that definitely doesn't keep humans in the loop.” (Group Discussion 1)

Appendix D

Summary of *Practice* Findings Across All Data Sources

Participant	Guiding Theme(s)	Illustrative Evidence (Source)
Elena	<i>No dominant themes emerged</i>	
Diego	AI as a Pedagogical Element	“I see AI as another pedagogical element that can be thoughtfully incorporated into my existing framework rather than something that completely transforms it.” (Reflection 2)
Ana	Critical Thinking/AI as a Pedagogical Element	<p>“We don't have to fight AI, but we have to develop that critical thinking. Like it can be your friend, but please think about it. Like not everything that says is real.” (Interview 1)</p> <p>“The idea of AI as a ‘tool for amplification,’ rather than replacement, came alive as we worked directly with various AI tools.” (Reflection 3)</p>
Clara	Hands-On Approach/Critical Thinking	<p>“What clicked for me during Training 2 was how much learning by doing matters, something we already know as language teachers, but it hit differently here.” (Reflection 3)</p> <p>“So I was actually thinking about a rubric in which I can assess good prompting in their assignments. <i>So, you're going to use ChatGPT. Now, show me your prompts, and I'm going to assess your prompts to see how your prompts generate a final outcome, a final result.</i>” (Final Group Discussion)</p>
Julia	Critical Thinking/Technology Dependence	<p>“..it enhances the level of analysis and critical thinking that the students can engage in because they're forced, because they have to basically have to talk about it more. And they have to explain it more to each other.” (Pre-Observation Meeting)</p> <p>“...because what we teach and how we learn is changing, you know, and so part of me wants them to come to class with handwritten notes so we can discuss together.” (Interview 1)</p>

Appendix E

Summary of *Beyond Practice Findings*

Phase of Data Collection	Motivation for Change (Examples)	Transformation in Learning (Examples)
Early (First Group Discussion and Reflection 1)	<p>“Well for me it's reconsidering everything, not only learning languages, but learning, education. What? What is the actual aim of education nowadays? We don't know where what the future holds.” – Ana (Group Discussion 1)</p>	<p>“So all the time my approach in teaching is always trying to help people to make a change.” – Ana (Interview 1)</p> <p>“We have a lot of questions still, and I think we need to reconsider not only again languages, but everything. What is education, or what education should be for us, for humans.” –Ana (Group Discussion 1)</p>
Middle (Interview 1, Reflection 2, and Pre-Observation Interview)	No examples	<p>“I'm aware that I'm still navigating how to do this most effectively.” – Clara (Reflection 2)</p>
Late (Post-Observation Interview, Reflection 3, and Final Group Discussion)	<p>“Because sometimes the biggest challenge that we have is not our students. It's our faculty, it's our students, it's our co-workers, and our authorities. What will you do to change that?” – Elena (Final Group Discussion)</p> <p>“I can see how hard it was for everyone to accept criticism to accept that, maybe we need to revise, review the contents, even, and some people, they just... they just believe that this is not the way to go. So, it is something very deep—it's gonna be a very deep discussion.” –Ana (Final Group Discussion)</p>	<p>“This <i>aha</i> moment highlighted the critical importance of designing AI applications that account for individual learning differences and contexts.” – Elena (Reflection 3)</p> <p>My feelings toward AI are definitely shifting. At first, I treated AI like a really smart assistant: handy, efficient, and kind of neutral. Now, I'm starting to see it as something more complex. – Clara (Reflection 3)</p>

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