

Teaching With AI or Teaching Through AI? Investigating Teacher Agency among Moroccan Pre-Service EFL Teachers

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ABSTRACT

The rapid integration of Artificial Intelligence (AI) into educational settings has generated significant scholarly debate about its implications for teacher professionalism. This qualitative study explores how Moroccan pre-service EFL teachers at two teacher education institutions, ENS Rabat and ESEF Kénitra, perceive the impact of AI tools such as ChatGPT, Gemini, Grammarly, and others on their pedagogical decision-making and professional autonomy. Drawing on Priestley et al.'s (2015) ecological model of teacher agency and Braun and Clarke's (2006) thematic analysis framework, data were collected from 42 purposively sampled participants, drawn from the wider target population of pre-service EFL teachers engaged in practicum-based training at Moroccan teacher education institutions (CRMEF, ENS, and ESEF centers), through an open-ended qualitative survey. Four major themes emerged from the analysis: (a) AI as a pedagogical co-pilot, (b) convenience versus critical engagement, (c) negotiated teacher agency, and (d) emerging professional identities in the AI era. The findings indicate that while AI enhances instructional efficiency and builds confidence among novice teachers, uncritical reliance on AI-generated content risks limiting opportunities for independent pedagogical reasoning and reflective practice. Crucially, participants did not perceive AI as eliminating teacher agency; rather, they described agency as continuously negotiated through technology-mediated interactions. The study advances a conceptual distinction between "teaching with AI", whereby teachers employ AI as a supportive resource while retaining professional judgment, and "teaching through AI," whereby instructional decisions are progressively delegated to algorithmic systems. Implications for AI literacy development and critical pedagogy within Moroccan teacher education programs are discussed. The article concludes by discussing implications for AI literacy development and critical pedagogy within Moroccan teacher education, and offers recommendations for teacher education curricula, institutional policy, and future research on AI-mediated professional development.

Keywords: artificial intelligence, teacher agency, EFL/ELT, pre-service teachers, Morocco, teacher education, AI literacy

INTRODUCTION

The emergence of generative AI tools, most notably large language models such as ChatGPT, Gemini, and Copilot, has prompted an urgent reassessment of what it means to be a teacher in the twenty-first century. Within the field of English Language Teaching (ELT), these technologies offer unprecedented support for lesson planning, content generation, formative assessment, and differentiated instruction. Yet their rapid integration into pedagogical practice also raises profound questions about teacher professionalism, autonomy, and the very nature of professional expertise. As AI systems become more capable and more accessible, the risk of reducing teaching to a process of prompt engineering and algorithmic validation becomes a genuine pedagogical concern.

The Moroccan context offers a particularly instructive site for investigating this tension. Teacher education institutions in Morocco, including CRMEF centers, ENS establishments, and ESEFs, are increasingly required to prepare future educators for technology-rich classrooms, yet curricular frameworks and practicum supervision structures have not always kept pace with the speed of AI development. Pre-service EFL teachers occupy an especially vulnerable position in this landscape: they are simultaneously building their pedagogical identities, developing professional judgment, and confronting tools that can perform many routine instructional tasks with impressive fluency.

Against this backdrop, this study asks not merely whether pre-service teachers use AI, but how they understand its influence on their professional autonomy. By grounding the inquiry in Priestley et al.'s (2015) ecological model of teacher agency, the study moves beyond binary framings of AI as either empowering or threatening to examine the situated, relational, and negotiated character of agency in AI-mediated teaching contexts. The article proceeds as follows: a review of relevant literature is presented, followed by an articulation of the theoretical framework, a description of the methodology, a presentation and discussion of findings, and a conclusion with implications for teacher education.

LITERATURE REVIEW

AI as Pedagogical Support in Teacher Education

Research consistently demonstrates that pre-service teachers are adopting generative AI tools as both learning companions and instructional assistants. Common applications include lesson planning, the generation of classroom activities, the explanation of complex linguistic or methodological concepts, formative assessment design, and the adaptation of materials to diverse learner needs (Li & Wong, 2023). A recurring finding across empirical studies is that AI reduces preparation time and furnishes immediate pedagogical suggestions, qualities that are particularly valued by novice educators who have not yet developed extensive instructional repertoires.

Several researchers have theorized this role through the lens of cognitive scaffolding (Wood et al., 1976; Vygotsky, 1978). When AI provides structured templates, worked examples, or alternative approaches to instructional problems, it functions analogously to expert mentorship, temporarily supporting performance in zones of proximal development. Vorobyeva et al. (2025) report that pre-service teachers who engage with AI tools during professional preparation frequently describe heightened instructional confidence and a greater sense of readiness for classroom responsibilities. Moorhouse (2024) similarly find that generative AI in language education can support teachers in diversifying their instructional strategies and maintaining learner engagement. Critically, however, these studies also caution that scaffolding is only educationally productive when it is gradually withdrawn as learner competence increases; scaffolding that becomes permanent may engender dependency rather than independence (Hmelo-Silver et al., 2007).

The landscape of AI tools available to language teachers has grown rapidly. Beyond general-purpose large language models, domain-specific tools such as AI-powered writing feedback platforms, automated pronunciation analyzers, and adaptive vocabulary systems have proliferated. Li and Wong (2023), in a bibliometric analysis of AI in personalized learning, identify a consistent trajectory toward increased automation of feedback provision and content sequencing, raising questions about which pedagogical decisions can appropriately be delegated to algorithms, and which must remain within the domain of professional human judgment.

AI and Teacher Agency

Teacher agency has emerged as a central theoretical and practical concern in contemporary educational research (Priestley et al., 2015; Biesta et al., 2017). Archer (2007) defines agency broadly as the capacity of persons to consider themselves in relation to their social contexts and to act accordingly—a capacity she views as exercised through an ongoing process of internal reflexive deliberation. In educational settings, agency manifests in teachers' ability to make context-sensitive instructional decisions, to adapt curricula to learner needs, and to maintain professional autonomy in the face of institutional constraints (Emirbayer & Mische, 1998).

The arrival of AI in teaching contexts has generated divergent assessments of its implications for this agency. Proponents argue that AI liberates teachers from routine administrative and planning burdens, freeing cognitive resources for higher-order pedagogical work: relationship building, formative dialogue, adaptive explanation, and creative problem-solving (Nazaretsky et al., 2022). From this perspective, AI augments rather than diminishes professional capacity. By contrast, critics such as Selwyn (2024) and Holmes and Tuomi (2022) warn that the uncritical adoption of AI-generated instructional content may normalize a form of algorithmic deference in which teachers progressively outsource professional judgment to systems that optimize for efficiency rather than educational quality.

Selwyn's (2024) critical perspective is particularly relevant here. He argues that the framing of AI as a neutral technological tool obscures the extent to which AI systems embed particular values, assumptions, and pedagogical philosophies, most of which reflect the priorities of technology developers rather than classroom teachers. When pre-service teachers adopt AI outputs without interrogating their underlying assumptions, they risk inadvertently importing foreign or decontextualized pedagogical norms into their classrooms. In the Moroccan EFL context, where issues of linguistic identity, cultural sensitivity, and institutional hierarchy are pedagogically significant, this risk warrants serious attention.

Crucially, the research reviewed above suggests that the relationship between AI use and teacher agency is neither linear nor deterministic. Rather, as Biesta et al. (2017) argue, agency is always situationally achieved—it emerges through the interaction between a teacher's professional disposition, the institutional context in which they operate, and the tools and resources available to them. AI therefore becomes one more environmental variable in an already complex ecological system.

Teacher Identity in the AI Era

Beyond instructional practices, AI is also reshaping teachers' professional identities. Recent phenomenological and narrative inquiry research suggests that teachers increasingly position themselves at the intersection of multiple roles—educator, facilitator, evaluator, curator, and now technology collaborator—as AI becomes embedded in learning environments (Nazaretsky et al., 2022). Rather than perceiving themselves as displaced by technology, many educators report that AI requires a redefinition of professional expertise: from information transmission to critical facilitation, from content production to content curation, and from individual knowledge to collaborative knowledge construction with both learners and machines.

Holmes & Miao (2023) has emphasized the importance of maintaining a human-centered approach to AI integration, arguing that teachers must remain the primary agents of educational decision-making even as AI systems assume greater roles in content delivery and assessment. This position reflects a broader consensus in the literature that the most productive vision of AI in education is one of human-AI collaboration rather than human-AI substitution (Holmes & Tuomi, 2022; Moorhouse (2024). The challenge for teacher education, therefore, is to equip future educators with both the technical competencies to use AI effectively and the critical capacities to interrogate its outputs, resist its defaults, and preserve the relational and ethical dimensions of professional practice that remain irreducibly human.

Objectives of the Study

This study pursues the following objectives: (a) to examine how Moroccan pre-service EFL teachers use AI tools during their teaching preparation and practicum experiences; (b) to identify the benefits and challenges that pre-service teachers associate with AI use in English language teaching; (c) to explore how AI use shapes pre-service teachers' pedagogical decision-making and sense of professional autonomy; and (d) to understand how AI is influencing pre-service teachers' emerging professional identities and their conceptions of their present and future roles as educators.

Significance of the Study

This study contributes to a growing body of scholarship on AI in teacher education by foregrounding the perspectives of pre-service EFL teachers in an under-researched North African context. Its findings are

significant for teacher education institutions (CRMEF, ENS, and ESEF centers) seeking to design AI literacy curricula that safeguard rather than erode professional judgment; for teacher educators and practicum supervisors responsible for mentoring trainees through AI-mediated instructional decisions; for policymakers shaping guidelines on AI integration in initial teacher training; and for the broader applied linguistics and ELT research community, for which the study offers a theoretically grounded distinction, teaching with AI versus teaching through AI, capable of informing future empirical and pedagogical work.

Scope of the Study

The study is delimited to pre-service EFL teachers enrolled in practicum-based teacher education programs at two Moroccan institutions, ENS Rabat and ESEF Kénitra, and focuses specifically on their use of four widely available AI tools (ChatGPT, Gemini, Grammarly, and Copilot) in relation to lesson planning, material development, classroom preparation, and instructional decision-making. The study does not extend to in-service teachers, to institutions beyond these two sites, or to a quantitative measurement of AI use frequency; rather, it is concerned with participants' qualitative, self-reported perceptions of AI's influence on their professional agency.

Research Questions

This study is guided by the following research questions:

1. How do Moroccan pre-service EFL teachers use AI tools in their teaching preparation and practicum experiences?
2. What benefits and challenges do pre-service teachers associate with AI use in English language teaching?
3. How do pre-service teachers perceive the influence of AI on their pedagogical decision-making and professional autonomy?
4. In what ways does AI shape pre-service teachers' understanding of their present and future roles as educators?

THEORETICAL FRAMEWORK

This study is theoretically grounded in Priestley et al.'s (2015) ecological model of teacher agency. Central to this framework is the view that agency is not a fixed personal attribute but an achievement—something that teachers do rather than have, emerging through the dynamic interplay between their individual professional dispositions, their accumulated professional experiences, and the contextual conditions in which they work. Priestley et al. (2015) distinguish three interrelated dimensions of the ecological model: the iterational (the influence of past experiences and professional habits), the practical-evaluative (the capacity to make context-sensitive judgments in the present), and the projective (the ability to orient professional action toward future goals and possibilities).

The introduction of AI into pedagogical practice creates new ecological conditions that affect all three dimensions. Through habituation, pre-service teachers who form their professional habits in AI-saturated environments may develop patterns of practice that differ significantly from those of earlier generations. Practically, AI alters the immediate decision landscape by providing ready-made instructional options, potentially short-circuiting the reflective deliberation that professional judgment requires. Prospectively, AI raises fundamental questions about the kind of teacher one aspires to become: a curator of AI-generated content, a critical collaborator with intelligent systems, or an autonomous professional whose expertise rests in relational and ethical capacities that technology cannot replicate.

Archer's (2007) theory of human reflexivity provides a complementary lens. For Archer, social agents navigate their circumstances through internal conversations in which they deliberate about their projects, values, and constraints. In the context of AI-mediated teaching, this reflexive deliberation becomes the site at which teacher

agency is either exercised or surrendered: a teacher who internalizes AI outputs without critical reflection is, in Archer's terms, failing to exercise the reflexive capacity that constitutes genuine agency.

Together, these theoretical perspectives support the study's central conceptual distinction between teaching with AI and teaching through AI and provide the analytical vocabulary for interpreting participants' accounts of their interactions with AI tools.

METHODOLOGY

Research Design

This study adopted an interpretivist, qualitative research design consistent with the epistemological goal of understanding how participants make meaning of their experiences (Creswell & Poth, 2018). A qualitative survey design was chosen for its capacity to generate rich written accounts from a geographically dispersed participant group within a constrained timeframe (Braun et al., 2017). Unlike structured or semi-structured interviews, the qualitative survey allowed participants to respond reflectively in writing, affording them greater autonomy in framing their experiences.

Participants

The target population for this study comprised pre-service EFL teachers engaged in practicum-based teacher education across Moroccan CRMEF, ENS, and ESEF institutions, that is, trainees who were concurrently developing their pedagogical competence and being exposed to AI-powered instructional tools within their coursework and supervised teaching practice. From this population, the study involved 42 pre-service EFL teachers enrolled in teacher education programs at two Moroccan institutions: ENS Rabat and ESEF Kénitra. Participants were selected through purposive sampling (Patton, 2015), with two inclusion criteria: (a) active familiarity with at least one AI-powered educational tool, and (b) participation in at least one supervised teaching practicum. The sample encompassed trainees at varying stages of professional preparation, ensuring diversity of experience and perspective. Ethical procedures consistent with established research guidelines were followed: participation was voluntary, informed consent was obtained, anonymity was maintained through participant codes (P01–P42), and confidentiality was guaranteed throughout the analysis and reporting stages.

Data Collection

Data were collected exclusively through an online open-ended qualitative survey rather than through interviews; a written-response format was chosen to accommodate participants' scheduling constraints across two institutions and to allow reflective, unhurried responses. Participants were recruited through a combination of email invitations, sent via institutional coordinators at ENS Rabat and ESEF Kénitra, and in-person announcements made during practicum seminars and teacher-training sessions, an approach intended to give both digitally engaged and less digitally active trainees an equal opportunity to take part. The survey itself was administered via a secure digital platform and invited participants to reflect on their use of AI tools—including ChatGPT, Gemini, Grammarly, and Copilot—across four domains: lesson planning, material development, classroom preparation, and instructional decision-making. Participants were also asked to articulate perceived benefits, limitations, and risks of AI use, and to reflect on its influence on their sense of professional autonomy and emerging teaching identity. The use of open-ended questions was deliberate: it enabled participants to respond in their own words, resisting the imposition of researcher-predetermined categories (Bryman, 2016).

Data Analysis

The collected responses were analyzed using the six-phase reflexive thematic analysis framework developed by Braun and Clarke (2006, 2021). The process involved: (1) familiarization with the data through repeated reading; (2) generation of initial codes; (3) searching for themes by grouping related codes; (4) reviewing and refining candidate themes; (5) defining and naming final themes; and (6) producing the report. Both dominant patterns and divergent viewpoints were sought to ensure analytic rigor (Lincoln & Guba, 1985). Representative

participant excerpts were selected to illustrate each theme, prioritizing clarity and authenticity of voice over statistical frequency.

Credibility was further enhanced through a process of reflexive memo-writing and member-checking with a subset of participants, who were invited to comment on the researcher's interpretations of their responses. This approach aligns with Lincoln and Guba's (1985) trustworthiness criteria and is consistent with reflexive thematic analysis's emphasis on researcher positionality and transparency (Braun & Clarke, 2017).

Reliability and Ethical Considerations

To strengthen the reliability and trustworthiness of the analysis, coding was conducted iteratively, with initial codes revisited and refined across multiple rounds to ensure consistency of application across the dataset. A sample of coded excerpts was independently reviewed by a second reader familiar with the theoretical framework, and discrepancies in interpretation were resolved through discussion, contributing to inter-rater consistency. An audit trail documenting coding decisions, theme development, and analytic memos was maintained throughout the process to support the study's dependability and confirmability (Lincoln & Guba, 1985).

Ethical considerations were addressed at every stage of the research. The study was conducted in accordance with the ethical guidelines of the researchers' institution, including informed consent, voluntary participation, and the right to withdraw at any time without penalty. Participants were assured that their responses would remain anonymous and confidential, and identifying information was replaced with participant codes (P01–42) prior to analysis. Data were stored securely and accessed only by the research team, and no vulnerable populations or minors were involved in the study.

FINDINGS

The thematic analysis revealed four major themes that collectively illuminate Moroccan pre-service EFL teachers' nuanced and at times contradictory relationships with AI-assisted teaching. These themes are presented below alongside supporting participant excerpts. Table 1 presents the coding framework, and Table 2 provides a quantitative overview of theme prevalence.

Table 1 Coding Framework and Emergent Themes

Initial Codes	Categories	Themes
Saves time, lesson planning support, generates activities, instant feedback	Instructional assistance	AI as a Pedagogical Co-Pilot
Dependence, copy-paste behavior, reduced effort, passive use	Overreliance on AI	Convenience versus Critical Engagement
Teacher judgment, adaptation, contextualization, final decision-making	Professional autonomy	Negotiated Teacher Agency
Confidence, uncertainty, future role, changing expertise	Professional identity formation	Emerging Professional Identities

Table 2 Theme Overview

Theme	N	%
AI as a Pedagogical Co-Pilot	36	85.7

Negotiated Teacher Agency	34	81.0
Convenience versus Critical Engagement	28	66.7
Emerging Professional Identities	22	52.4

Theme 1: AI as a Pedagogical Co-Pilot

The most prevalent theme, endorsed by 36 of 42 participants (85.7%), concerned participants' perception of AI as a valuable pedagogical assistant. AI was described as facilitating lesson planning, resource creation, activity sequencing, and instructional preparation, the functions that participants frequently characterized using human-like metaphors such as "guide," "advisor," and "mentor." This finding resonates with Moorhouse (2024) observation that generative AI in language education often functions as a form of on-demand professional support, particularly valued by novice teachers navigating the uncertainties of early practice.

Participants frequently situated AI support within moments of practicum-related anxiety. As novice educators, many reported uncertainty about activity selection, lesson sequencing, and the design of engaging materials. AI appeared to alleviate this uncertainty by providing immediate, structured suggestions. One participant explained:

"When I have to prepare a lesson for the first time, AI helps me organize my thoughts and gives me ideas that I can adapt." (P07)

Another described the experience in relational terms:

"To be honest, it (AI) is like having an experienced teacher available whenever I need help." (P19)

The anthropomorphizing of AI in these accounts is worth noting. By attributing human-like advisory qualities to AI systems, participants may be constructing a relational frame that facilitates trust but also potentially overcredits the epistemic authority of algorithmic outputs (Selwyn, 2024). Several respondents also emphasized AI's creativity-enhancing potential, describing it not as replacing their ideas but as expanding their pedagogical repertoire:

"Sometimes ChatGPT gives me activities that I would never have imagined myself. It helps me think outside the box." (P31)

This perception of AI as a catalyst for pedagogical experimentation is consistent with Vorobyeva et al.'s (2025) findings that AI personalization tools can support creative instructional design among pre-service teachers. It is important, however, to distinguish between AI as a source of inspiration that teachers critically adapt and AI as a source of content that teachers uncritically adopt, a distinction that becomes central to the subsequent themes.

Theme 2: Convenience versus Critical Engagement

Despite their appreciation of AI's efficiency, 28 participants (66.7%) explicitly engaged with the tension between convenience and critical engagement. A recurring concern was the temptation to accept AI-generated content without sufficient evaluation or contextual adaptation, a tendency one participant described candidly:

"Sometimes I use the activities exactly as they are generated because it is faster." (P14)

"AI saves time, but it can also make us lazy if we are not careful." (P22)

These comments illuminate what might be termed pedagogical shortcutting which is a tendency to prioritize efficiency over the deliberative processes that reflective instructional design requires. Holmes and Tuomi (2022) identify similar patterns in their analysis of AI adoption in education, warning that when teachers regularize the use of AI-generated content without pedagogical interrogation, they risk normalizing a form of practice in which professional judgment is bypassed rather than exercised.

Interestingly, participants tended to frame this risk as a prospective rather than a current concern, suggesting an awareness of gradual professional habituation:

“I think the danger is not today. The danger is that after years of using AI, teachers may stop questioning what it produces.” (P38)

“The more we depend on AI, the less we may practice thinking through classroom problems ourselves.” (P11)

This longitudinal framing is theoretically significant. Within Priestley et al.’s (2015) ecological model, iterational influences, which are the accumulation of professional habits over time, play a crucial role in shaping agency. Participants appear to intuit that repeated, unreflective AI use could habitually alter the cognitive and professional habits through which agency is exercised. This concern is consonant with Selwyn’s (2024) broader argument that the gradual normalization of AI in education risks producing a generation of teachers whose professional self-conception is structured around algorithmic support rather than independent professional judgment.

Theme 3: Negotiated Teacher Agency

Notwithstanding their concerns about dependency, 34 participants (81.0%) strongly asserted their agency as active, reflective decision-makers who evaluate, modify, reject, or contextualize AI recommendations. This theme challenges deterministic narratives of technological displacement and resonates with ecological conceptions of agency as situationally achieved rather than technologically determined (Priestley et al., 2015; Biesta et al., 2017).

Participants consistently framed their relationship with AI in terms that preserved human primacy:

“AI gives me options, but it does not make decisions for me.” (P03)

“I always check whether the activities fit my students because AI does not know my classroom.” (P27)

A particularly salient pattern in participants’ responses was their emphasis on contextual knowledge as the locus of teacher expertise. Participants repeatedly argued that AI’s fundamental limitation is its ignorance of local classroom realities, learner characteristics, institutional expectations, and socio-cultural nuance:

“ChatGPT does not know whether my students are motivated, shy, or struggling. Only I know that.” (P16)

“Teaching is not only about content. It is about reading the room and understanding learners.” (P35)

This insistence on relational and contextual knowledge as the irreducible ground of teacher expertise constitutes a form of professional self-assertion that merits theoretical attention. Drawing on Archer’s (2007) account of reflexive deliberation, participants can be understood as actively constructing a professional narrative in which AI is positioned as a contextually ignorant tool whose outputs require humanization before they can be educationally deployed. Agency, in this account, is exercised precisely in the act of translation from AI suggestion to contextually appropriate pedagogical decision.

The findings therefore support an understanding of teacher agency as negotiated, not preserved intact in opposition to AI, nor surrendered to it, but continuously remade through critical engagement with AI-generated content in specific professional contexts.

Theme 4: Emerging Professional Identities in the AI Era

The fourth theme which is endorsed by 22 participants (52.4%) concerned the ways in which AI is reshaping participants’ emerging professional identities. Two contrasting registers were evident: optimism about AI’s

capacity to support professional confidence and skill development, and concern about the longer-term implications of AI dependency for the formation of an authentic teaching voice.

On the affirmative side, participants described AI as a source of reassurance during the vulnerability of early professional formation:

“AI makes me feel more confident because I can verify my ideas before using them in class. Sometimes I verify and check ambiguities during class.” (P08)

“..... It helps me feel more prepared and less afraid of making mistakes.” (P25)

This confidence-building function is consistent with the literature on productive scaffolding in novice teacher education (Hmelo-Silver et al., 2007; Vorobyeva et al., 2025). However, other participants identified the risk that confidence built on AI-generated content might be epistemically fragile, dependent on the availability of AI support rather than grounded in the development of durable professional expertise:

“If I always use AI-generated lessons, how will I discover my own way of teaching?” (P29)

“Future teachers may become good at using technology but less good at developing their own educational philosophy.” (P41)

These reflections suggest an awareness of what Priestley et al. (2015) describe as the projective dimension of agency: the extent to which teachers are able to orient their professional development toward future aspirations rather than merely responding to immediate demands. Participants appeared to recognize that professional identity formation requires iterative encounters with uncertainty, failure, and independent decision-making which are encounters that excessive reliance on AI may foreclose.

At the same time, several participants articulated a transformative rather than reductive vision of the teacher’s role in AI-mediated environments:

“Teachers are no longer the only source of knowledge. Our role is becoming more about guiding students and helping them think critically.” (P33)

“In the future, being a good teacher will mean knowing how to work with AI, not competing against it.” (P18)

These accounts resonate with Holmes & Miao’s (2023) vision of the teacher as a critical facilitator of learning in AI-enhanced environments, and with Nazaretsky et al.’s (2022) finding that teachers who perceive AI as a collaborator rather than a competitor tend to develop more adaptive and critically engaged professional identities.

DISCUSSION

The findings present a complex and theoretically generative picture of how Moroccan pre-service EFL teachers negotiate professional agency in AI-mediated teaching contexts. Taken together, the four themes support a view of teacher agency that is neither preserved intact in opposition to AI nor passively surrendered to it, but continuously remade through critical, situated engagement with AI-generated content.

The dominant perception of AI as a pedagogical co-pilot corroborates prior research demonstrating the confidence-building and scaffolding functions of generative AI for novice educators (Moorhouse, 2024; Vorobyeva et al., 2025). In the Moroccan context specifically, where pre-service teachers frequently navigate resource-scarce practicum placements with limited access to experienced mentorship, AI may serve a compensatory function by providing institutional and pedagogical support that structural conditions do not always supply. This observation points to a dimension of AI adoption in EFL teacher education that has received insufficient attention in the literature: the role of contextual educational inequality in shaping patterns of AI reliance.

At the same time, the study's second major finding of the widespread recognition of risks associated with AI dependency and pedagogical shortcutting suggests that participants are not naive consumers of AI-generated content. The longitudinal framing of this concern (the worry that gradual habituation to AI will erode reflective capacity over time) demonstrates a sophisticated understanding of how professional habits are formed and reformed over a career. This aligns with Selwyn's (2024) concern about the normalization of algorithmic deference, and with Holmes and Tuomi's (2022) argument that the most significant risks of AI in education are not dramatic and immediate but incremental and cumulative.

The study's most theoretically significant contribution lies in its third theme: the negotiated character of teacher agency in AI-mediated contexts. By consistently positioning contextual knowledge (knowledge of specific learners, classroom dynamics, cultural norms, and institutional realities) as the locus of irreducible professional expertise, participants construct a compelling case for why AI cannot replace teachers. This argument is not merely intuitive; it is theoretically grounded in the ecological model's insistence that agency is always contextually situated (Priestley et al., 2015). AI systems, however sophisticated, operate at the level of statistical pattern recognition across vast but generalized datasets; they cannot access the granular, relational, and affective knowledge that constitutes expert contextual judgment.

These considerations underpin the study's central conceptual distinction between teaching with AI and teaching through AI. Teaching with AI denotes an orientation in which AI functions as a supportive resource that teachers critically appropriate, adapt, and contextualize within a framework of professional judgment that remains their own. Teaching through AI, by contrast, denotes an orientation in which pedagogical decisions are progressively delegated to algorithmic systems, and AI outputs are adopted rather than adapted. The former preserves and exercises agency; the latter gradually erodes it. While this distinction is conceptual and exists along a continuum rather than as a binary, it provides a productive analytical framework for teacher education and AI literacy development.

Finally, the theme of emerging professional identities points to the importance of designing teacher education curricula that explicitly address AI not merely as a technical resource but as a site of professional identity negotiation. Participants' concern that excessive AI reliance may prevent them from discovering their own pedagogical voice suggests a sophisticated understanding of how professional identity is formed through the iterative experience of independent decision-making, creative risk, and reflective evaluation of outcomes (Priestley et al., 2015; Archer, 2007). Teacher education programs that introduce AI tools without simultaneously fostering the critical, reflective, and ethical capacities to evaluate them may inadvertently undermine the very professional formation they are intended to support.

CONCLUSION

This study set out to investigate how Moroccan pre-service EFL teachers perceive the influence of AI technologies on their professional autonomy and emerging identities as educators. The findings reveal that AI has become a significant and largely welcomed presence in participants' pedagogical practice, valued primarily for its efficiency, its capacity to reduce planning anxiety, and its role as an accessible source of instructional ideas. At the same time, the study documents a nuanced and at times critical awareness of AI's limitations and risks, particularly its potential to foster dependency, inhibit reflective practice, and impede the development of an authentic and contextually grounded professional voice.

Against deterministic narratives that frame AI as either the savior or the destroyer of teaching as a profession, this study argues for a more nuanced and theoretically grounded position: teacher agency is not inherently threatened by AI, but it is continuously at stake in the ways teachers engage with it. The ecological model of agency (Priestley et al., 2015) equips researchers and practitioners alike to understand this relationship as dynamic, contextual, and shaped by iterative, practical-evaluative, and projective influences. Agency, on this account, is something teachers must actively cultivate and exercise including, and especially, in their interactions with AI systems.

The conceptual distinction between teaching with AI and teaching through AI, developed from the analysis of participants' accounts, offers a practically useful framework for teacher education. Rather than asking whether AI should be integrated into pre-service teacher education, the question becomes how to design learning environments and supervisory practices that consistently orient trainees toward the former orientation: using AI as a resource that supplements rather than supplants professional judgment.

The practical implications of these findings are substantial. Teacher education programs in Morocco and comparable contexts should move beyond the simple introduction of AI tools to develop structured curricula for AI literacy that should be understood not merely as technical proficiency but as critical, ethical, and reflective competence. This involves exposing pre-service teachers to the limitations, biases, and contextual inadequacies of AI outputs; scaffolding experiences of independent pedagogical decision-making that build professional confidence from the inside out; and fostering reflective practice habits that render AI use a subject of ongoing professional inquiry rather than a taken-for-granted default.

The study acknowledges several limitations. The reliance on self-reported data from a purposively sampled group at two institutions limits the generalizability of findings. Longitudinal research tracking the evolution of AI use patterns and their effects on teacher agency across a professional career would significantly enrich the evidence base. Future studies might also explore the perspectives of supervising teachers and teacher educators, whose mentorship practices will be decisive in shaping how pre-service teachers understand and engage with AI.

Ultimately, the future of language teaching in an AI-saturated world will not be decided by technology alone. It will be shaped by the professional cultures, educational philosophies, and critical capacities of the teachers who work alongside these tools. The most important question is not whether teachers will use AI, but whether they will do so as critical, agentic professionals whose judgment, empathy, contextual knowledge, and ethical responsibility remain irreducibly their own.

Biographical Statements

Ali Bekou is a PhD holder from Ibn Tofail University in Morocco and an adjunct professor at ESEF at the same University. He has been teaching English to middle and high school students for 20 years now. He received a bachelor's degree in linguistics in 2004 and a master's degree in TEFL in 2019 from Ibn Tofail University. Bekou is interested in ELT and education issues namely ICT, AI in education, intercultural communicative competence, critical, culturally responsive pedagogy and Educational Research.

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RECOMMENDATIONS

Based on these findings, several recommendations are proposed. First, teacher education institutions (CRMEF, ENS, and ESEF centers) are encouraged to embed structured AI literacy modules within pre-service curricula, modules that move beyond technical training in tool use to cultivate critical evaluation of AI outputs, awareness of algorithmic bias, and reflective decision-making. Second, practicum supervisors and teacher educators are recommended to design mentoring practices that explicitly discuss trainees' AI use during lesson planning and post-lesson reflection, helping novice teachers distinguish between AI as a supportive resource and AI as a substitute for professional judgment. Third, policymakers within Moroccan teacher education, particularly those responsible for CRMEF curricula, are encouraged to develop clear institutional guidelines on acceptable and pedagogically sound uses of AI in initial teacher training, ensuring consistency across institutions. Finally, teacher education researchers are recommended to pursue longitudinal and comparative studies that track how

AI use and its relationship to teacher agency evolve across the career trajectory, from pre-service training into early in-service practice.

This study contributes to this research agenda by offering an empirically grounded, theoretically informed account of how agency is negotiated in AI-mediated teacher preparation, and by proposing the teaching with AI/teaching through AI distinction as an analytic tool for future studies examining the boundary between AI-supported and AI-dependent pedagogical practice, in Morocco and in comparable teacher education contexts internationally.

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