
| RESEARCH ARTICLE

Teacher Perceptions of AI-Assisted Language Learning in Moroccan EFL Contexts

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| ABSTRACT

The rapid development of Artificial Intelligence (AI) has introduced significant opportunities and challenges for English language education, transforming traditional teaching practices and creating new possibilities for learner support and instructional innovation. Despite the increasing adoption of AI-assisted language learning tools, limited research has explored how Moroccan English as a Foreign Language (EFL) teachers perceive their pedagogical value and implications for classroom practice. This study investigates Moroccan EFL teachers' perceptions of AI-assisted language learning, focusing on its perceived opportunities, challenges, and future implications for English language education. The study adopts a qualitative exploratory design involving ten Moroccan EFL teachers and teacher trainees selected through purposive sampling. Data were collected using an online semi-structured questionnaire comprising open-ended questions and were analyzed through Reflexive Thematic Analysis following Braun and Clarke's (2006, 2019) framework. The findings reveal that participants generally perceive AI as a complementary pedagogical tool that enhances lesson planning, instructional material development, learner autonomy, creativity, and teaching efficiency rather than replacing teachers. However, participants also expressed concerns regarding overreliance on AI-generated content, academic integrity, misinformation, privacy, and ethical issues. Furthermore, the study highlights the growing importance of AI literacy, effective prompting, and critical evaluation skills as essential competencies for language teachers in AI-enhanced educational environments. By providing qualitative evidence from the Moroccan EFL context, this study contributes to the emerging literature on AI-assisted language learning and offers practical implications for teacher education, professional development, and educational policy. The findings underscore the need for responsible and pedagogically informed integration of AI technologies while reaffirming the indispensable role of teachers in fostering meaningful and human-centered language learning experiences.

| KEYWORDS

Artificial Intelligence, AI-assisted language learning, English as a Foreign Language, teacher perceptions, digital pedagogy, AI literacy, Morocco

| ARTICLE INFORMATION

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Introduction

The rapid advancement of Artificial Intelligence (AI) has profoundly transformed educational landscapes, introducing innovative opportunities for teaching, learning, and assessment across disciplines. In language education, AI-powered applications such as ChatGPT, Grammarly, QuillBot, and machine translation tools have become increasingly accessible to teachers and learners, offering immediate feedback, personalized learning experiences, and support for various language skills. These developments have prompted educators worldwide to reconsider traditional pedagogical practices and explore new approaches to integrating intelligent technologies into language classrooms.

Within English as a Foreign Language (EFL) education, AI-assisted language learning has attracted growing scholarly attention due to its potential to enhance learner autonomy, improve writing quality, facilitate differentiated instruction, and support communicative competence. At the same time, concerns have emerged regarding academic integrity, overreliance on

technology, the reliability of AI-generated content, and the evolving role of teachers in technology-mediated learning environments. As educational systems continue to adapt to digital transformation, understanding teachers' perspectives becomes essential for ensuring the effective and responsible implementation of AI in language education.

In Morocco, the increasing availability of AI tools has coincided with broader efforts to modernize educational practices and promote digital competencies. Nevertheless, empirical research investigating Moroccan EFL teachers' perceptions of AI-assisted language learning remains limited. While international studies have explored educators' attitudes toward AI integration, relatively little is known about how Moroccan teachers perceive its pedagogical value, the challenges they encounter, and the competencies required for its successful classroom implementation. This lack of context-specific evidence highlights the need for further qualitative inquiry.

Addressing this gap, the present study explores Moroccan EFL teachers' perceptions of AI-assisted language learning and examines how they conceptualize its opportunities, challenges, and implications for English language teaching. By adopting a qualitative exploratory approach based on semi-structured interviews and reflexive thematic analysis, the study seeks to provide a nuanced understanding of teachers' experiences and contribute to ongoing discussions on digital pedagogy, AI literacy, and educational innovation within the Moroccan EFL context.

Ultimately, the findings are expected to inform teacher education programs, professional development initiatives, and educational policy by identifying the conditions necessary for the meaningful and ethical integration of AI technologies into English language teaching and learning.

Statement of the Problem and Research Gap

Artificial Intelligence has become an increasingly influential component of contemporary education, particularly in language teaching and learning. AI-powered applications provide opportunities for personalized instruction, instant feedback, automated assessment, and enhanced learner engagement, leading many educational institutions to explore their integration into pedagogical practices. In English as a Foreign Language (EFL) education, these technologies have the potential to reshape classroom instruction and foster more learner-centered approaches.

Despite these developments, the successful integration of AI into educational settings depends largely on teachers, who remain central actors in the teaching-learning process. Their beliefs, perceptions, and readiness to adopt emerging technologies significantly influence whether AI tools are implemented effectively and ethically. Understanding teachers' perspectives is therefore essential for designing appropriate training programs and educational policies that support meaningful technological innovation.

Although a growing body of international research has investigated educators' attitudes toward Artificial Intelligence in education, the majority of these studies have been conducted in technologically advanced contexts and often employ quantitative approaches that provide limited insight into teachers' lived experiences and pedagogical reasoning. Furthermore, research specifically addressing AI-assisted language learning within the Moroccan EFL context remains scarce.

The existing literature provides little qualitative evidence regarding how Moroccan EFL teachers perceive the opportunities and challenges associated with AI-assisted language learning, how they envision its impact on their professional roles, and what competencies they consider necessary for its effective classroom integration. Consequently, there is a need for context-sensitive research that captures teachers' voices and experiences within Morocco's evolving educational landscape.

Addressing this gap, the present study adopts a qualitative exploratory approach to investigate Moroccan EFL teachers' perceptions of AI-assisted language learning. By exploring their experiences, expectations, and concerns, the study seeks to contribute to the emerging body of knowledge on AI integration in language education and provide practical recommendations for teacher education, professional development, and educational policy.

Research Objectives

The study aims to explore Moroccan EFL teachers' perceptions of AI-assisted language learning and examine its perceived pedagogical implications for English language education.

More specifically, it seeks to:

- Explore teachers' perceptions of the role of Artificial Intelligence in English language teaching and learning.
- Identify the perceived pedagogical benefits of AI-assisted language learning.
- Examine the challenges and ethical concerns associated with the integration of AI into EFL classrooms.

- Investigate teachers' views regarding the future role of AI and the professional competencies required for its effective implementation.

Research Questions

The study is guided by the following research questions:

1. How do Moroccan EFL teachers perceive the role of AI-assisted language learning in English language education?
2. What pedagogical opportunities do teachers associate with the use of AI tools in EFL contexts?
3. What challenges and concerns do teachers identify regarding the integration of AI into language teaching and learning?
4. How do teachers envision the future role of Artificial Intelligence in EFL education, and what competencies do they consider necessary for its effective use?

Literature Review

The integration of Artificial Intelligence (AI) into education has generated considerable scholarly interest, particularly following the emergence of generative AI applications such as ChatGPT. Recent research has increasingly focused on the pedagogical potential of AI-assisted language learning as well as teachers' perceptions of its integration into English language teaching. This section reviews key empirical studies relevant to the present research.

One of the most comprehensive studies in this area is **"Challenges and Opportunities of AI-Assisted Learning: A Systematic Literature Review on the Impact of ChatGPT Usage in Higher Education"** by Vargas-Murillo et al. (2023). The study aimed to synthesize existing research on the educational impact of ChatGPT in higher education through a systematic literature review. The findings indicated that ChatGPT offers significant opportunities for personalized learning, immediate feedback, and enhanced student engagement. However, the authors also identified concerns related to academic integrity, ethical issues, and excessive dependence on AI technologies, emphasizing the need for responsible pedagogical integration.

Similarly, Wang et al. (2023), in their study **"Preparing for AI-Enhanced Education: Conceptualizing and Empirically Examining Teachers' AI Readiness,"** sought to investigate teachers' preparedness for AI integration in educational settings. Using a quantitative design, the researchers developed and validated a model of AI readiness among teachers. Their findings revealed that teachers' willingness to adopt AI technologies depends largely on their digital competence, confidence in using AI tools, and institutional support. The study highlights teacher readiness as a prerequisite for successful AI implementation in education.

From a language education perspective, Dilzhan (2024) conducted a study entitled **"EFL Teachers' Perceptions and Use of ChatGPT."** The research explored English language teachers' experiences with ChatGPT through survey methods. The findings demonstrated that teachers generally viewed ChatGPT as a valuable instructional assistant capable of supporting lesson preparation, language practice, and feedback provision. Nevertheless, participants expressed reservations regarding information accuracy and the potential reduction of students' critical thinking abilities, suggesting that AI should complement rather than replace pedagogical expertise.

Another important contribution is the systematic literature review **"Teachers' Perceptions on the Usage of ChatGPT in English Language Teaching (ELT)"** published in 2025. The study reviewed empirical investigations conducted between 2023 and 2024 to identify major trends in teachers' perceptions of ChatGPT integration in English language teaching. The review found that teachers consistently perceived ChatGPT as useful for lesson planning, instructional material development, feedback provision, and supporting students' academic performance. At the same time, concerns about academic dishonesty, reliability, and ethical use remained prominent across the reviewed studies.

More recently, Isaei et al. (2026), in **"Exploring Teachers' and Learners' Perceptions of AI-Supported Language Teaching,"** adopted a mixed-methods approach combining questionnaires and semi-structured interviews to compare teachers' and learners' attitudes toward AI integration in English language teaching. The study reported that both groups recognized AI as an effective tool for personalized learning and instructional support while acknowledging challenges related to overdependence, assessment validity, and teacher professional identity. The authors argued that effective AI integration requires comprehensive teacher training and the development of AI literacy competencies.

Beyond empirical studies, systematic reviews have reinforced the importance of teacher preparation in AI-enhanced education. Woo and Choi (2021), in their review of AI-based language learning tools, concluded that AI applications improve language learning through adaptive feedback and individualized instruction but stressed that teachers require sufficient knowledge and pedagogical guidance to integrate these technologies effectively. The review also identified teacher preparedness as an emerging research priority within AI-assisted language learning.

Collectively, these studies demonstrate that AI-assisted language learning offers considerable pedagogical opportunities, including personalized instruction, enhanced learner engagement, and improved instructional efficiency. Simultaneously, they reveal persistent concerns regarding ethics, academic integrity, reliability, and the evolving professional role of teachers. Despite the growing international literature, most existing research has been conducted in Asian, European, or other international contexts, with relatively limited attention given to North African educational settings. Furthermore, many studies rely predominantly on quantitative methods, leaving teachers' lived experiences and contextualized perspectives underexplored.

Consequently, there remains a significant need for qualitative research that examines Moroccan EFL teachers' perceptions of AI-assisted language learning within their specific educational context. By employing semi-structured interviews and reflexive thematic analysis, the present study seeks to address this gap and contribute context-sensitive evidence to the expanding field of AI in language education.

Research Methodology

Research Design

This study adopts a qualitative exploratory research design to investigate Moroccan EFL teachers' perceptions of AI-assisted language learning. A qualitative approach was considered appropriate because the study seeks to explore participants' beliefs, experiences, and interpretations regarding the integration of Artificial Intelligence into English language education. Given the relatively recent emergence of generative AI technologies in educational settings, an exploratory design allows for an in-depth understanding of teachers' perspectives within their authentic professional contexts.

Participants

The study involved **ten (N = 10) Moroccan EFL teachers and teacher trainees** recruited through purposive sampling. Participants were selected based on their experience in English language teaching or teacher education and their familiarity with AI-assisted language learning tools. The sample included individuals with different levels of teaching experience and professional backgrounds, providing a diversity of perspectives relevant to the research objectives.

Although the sample size is relatively small, it is appropriate for qualitative exploratory research, where the emphasis is placed on obtaining rich and meaningful insights rather than achieving statistical generalization. Participants were anonymized throughout the study and are identified using the codes P1 to P10.

Data Collection

Data were collected using an online semi-structured questionnaire administered through Google Forms. The instrument consisted of demographic questions followed by open-ended questions designed to explore participants' perceptions of AI-assisted language learning, its pedagogical opportunities, associated challenges, ethical considerations, and future implications for English language teaching.

The online format enabled participants to respond at their convenience while encouraging reflective and detailed answers. Participation was voluntary, and all respondents were informed about the purpose of the study, the confidential treatment of their responses, and their right to withdraw at any stage without consequence.

Data Analysis

The qualitative data were analyzed using **Reflexive Thematic Analysis**, following the framework proposed by Braun and Clarke (2006, 2019). This analytical method was selected because of its flexibility and its suitability for examining participants' experiences and meaning-making processes.

The analysis involved six recursive phases: familiarization with the data, generation of initial codes, construction of themes, review of themes, definition and naming of themes, and production of the final report. Throughout the analytical process, the researcher engaged reflexively with the data to identify recurring patterns while acknowledging the interpretive nature of qualitative analysis.

The final themes were developed inductively from participants' responses and organized around the study's four research questions, providing a coherent representation of Moroccan EFL teachers' perceptions of AI-assisted language learning.

Trustworthiness

To enhance the credibility of the study, the researcher conducted repeated readings of the data and maintained consistency throughout the coding and theme development process. The use of verbatim participant quotations in the findings section provides evidence supporting the identified themes and contributes to the transparency and authenticity of the analysis.

Rather than seeking statistical representativeness, the study aims to provide a contextually grounded and nuanced understanding of teachers' perceptions, consistent with the principles of qualitative inquiry.

Ethical Considerations

The study adhered to accepted ethical standards in educational research. Participation was entirely voluntary, and informed consent was obtained prior to data collection. Participants were assured that their identities would remain anonymous and that all information provided would be treated confidentially and used exclusively for academic purposes. No personally identifiable information was collected, and all data were securely stored to protect participants' privacy.

Findings

Participant Profile

The study included ten ($N = 10$) Moroccan EFL professionals representing different educational contexts and levels of experience. All participants reported prior experience using AI-assisted language learning tools, indicating that their responses were informed by direct interaction with these technologies.

Table 1. Professional Status of Participants

Professional Status	Frequency	Percentage
EFL Teacher	3	30%
Teacher Trainee	3	30%
University Instructor	3	30%
Private Language School Teacher	1	10%
Total	10	100%

The sample reflects a balanced representation of different professional profiles, allowing the study to capture diverse perspectives on the integration of AI into English language education.

Table 2. Teaching Experience

Years of Experience	Frequency	Percentage
1–3 years	6	60%
4–6 years	1	10%
More than 6 years	3	30%
Total	10	100%

The majority of participants (60%) had between one and three years of teaching or training experience, while 30% had more than six years of experience, providing a combination of early-career and experienced perspectives.

Table 3. Experience with AI Tools

Experience with AI-assisted language learning tools	Frequency	Percentage
Yes	10	100%
No	0	0%

All participants indicated that they had previously used AI tools such as ChatGPT, Grammarly, QuillBot, Gemini, Copilot, DeepSeek, or machine translation applications, suggesting a high level of familiarity with AI-assisted language learning.

Overview of Emergent Themes

The reflexive thematic analysis generated four major themes corresponding to the study's research questions.

Table 4. Overview of Themes

Research Question	Emergent Theme
RQ1	Teachers' perceptions of AI-assisted language learning
RQ2	Perceived pedagogical opportunities
RQ3	Challenges and ethical concerns
RQ4	Future implications and required teacher competencies

These themes capture participants' shared understandings while also reflecting the diversity of opinions expressed throughout the dataset.

Theme One: Teachers' Perceptions of AI-Assisted Language Learning

Participants generally perceived Artificial Intelligence as a pedagogical support tool that complements rather than replaces teachers. AI was described as facilitating teaching and learning through personalized assistance, rapid information retrieval, and instructional support.

One participant explained:

"AI act as a guider, source of knowledge and a personalized, 24/7 tutor for learners. It provides instant feedback and a low-pressure environment for practice." (P1)

Another participant highlighted AI's practical value:

"AI helps students as well as teachers and instructors to facilitate their work... It saves time and provides a variety of tools that enable them to learn fast and integrate new ways of learning and teaching." (P2)

Similarly, another respondent characterized AI as:

"a complementary tool that helps teachers in lesson preparation." (P10)

These responses reveal a predominantly positive perception of AI, with participants recognizing its capacity to enhance educational practices while preserving the essential role of the teacher.

Theme Two: Perceived Pedagogical Opportunities

Participants identified several pedagogical benefits associated with AI-assisted language learning, including lesson planning, instructional material development, personalized feedback, learner autonomy, creativity, and time efficiency.

Table 5. Main Pedagogical Opportunities Identified

Category	Illustrative examples from participants
Lesson planning	Planning lessons and teaching sequences
Material development	Creating instructional and assessment materials
Time efficiency	Saving preparation and feedback time
Learner autonomy	Supporting independent learning
Personalized support	Providing instant feedback and scaffolding
Creativity	Generating innovative classroom activities

Participant P4 stated:

"For teachers, it can help them develop instructional and assessment materials, plan their teaching sequences and lessons, score students' tests, and provide feedback on writing tasks."

Participant P5 similarly emphasized:

"Planning lessons, prepare remedial work, save time."

These findings suggest that participants view AI as a valuable pedagogical assistant capable of improving instructional efficiency and supporting more learner-centered teaching practices.

Theme Three: Challenges and Ethical Concerns

Despite their positive attitudes, participants expressed concerns regarding the responsible use of AI in education. The most frequently discussed issues included overreliance, reduced critical thinking, ethical considerations, misinformation, privacy, and cultural appropriateness.

Participant P2 observed:

"Students and teachers become increasingly dependent on these technologies to the extent that they may lose the ability to think critically."

Similarly, P4 warned:

"There is also the issue of the distortion of content and misalignment with the objectives, values and the local culture."

Another participant added:

"AI can mislead sometimes and is easily influenced. So you must always double check." (P10)

These responses illustrate that participants advocate a critical and responsible use of AI rather than its unrestricted adoption.

Theme Four: Future Implications and Required Teacher Competencies

Participants unanimously agreed that AI will increasingly influence English language education but rejected the notion that it could replace teachers. Instead, they anticipated a transformation of teachers' professional roles accompanied by new competency requirements.

Participant P1 stated:

"Teaching is more than sharing knowledge. It's a humanistic approach."

Likewise, P9 remarked:

"AI is still not capable of replacing the teacher. There are some values and emotions that the AI is not capable to feel."

Regarding professional development, participants emphasized the need for AI literacy, effective prompting, and critical evaluation skills. P1 identified:

"The skill of prompting."

While P4 argued that teachers require:

"training on effective prompting and the evaluation of the generated content in terms of ethics, privacy and cultural appropriateness."

Overall, participants perceived AI as a transformative educational technology that will redefine rather than replace the role of EFL teachers. Successful integration will depend on teachers' ability to combine technological competence with pedagogical expertise and ethical awareness.

Discussion

Teachers' Perceptions of AI-Assisted Language Learning

The findings indicate that Moroccan EFL teachers and teacher trainees generally perceive Artificial Intelligence as a supportive pedagogical tool that complements rather than replaces human instruction. Participants consistently described AI as an instructional assistant capable of facilitating lesson preparation, providing immediate feedback, and supporting learner engagement while emphasizing that effective teaching remains fundamentally dependent on human interaction and pedagogical expertise.

These findings are consistent with Wang et al. (2023), who reported that teachers generally demonstrate positive attitudes toward AI when they perceive it as a tool that enhances instructional effectiveness rather than threatens professional identity. Similarly, Dilzhan (2024) found that EFL teachers viewed ChatGPT as a valuable educational assistant for planning lessons and supporting language instruction while maintaining that teachers remain central to the learning process. The systematic review by Vargas-Murillo et al. (2023) likewise concluded that AI contributes positively to educational innovation when integrated as a complementary resource.

The present study extends these findings by demonstrating that Moroccan EFL teachers adopt a balanced and reflective perspective toward AI. Rather than embracing technological determinism or rejecting AI altogether, participants positioned AI within a human-centered pedagogical framework in which teachers continue to serve as facilitators, mentors, and critical mediators of knowledge. This perspective reflects an understanding of teaching as a relational and contextual practice that cannot be fully replicated by algorithmic systems.

Perceived Pedagogical Opportunities of AI-Assisted Language Learning

Participants identified numerous pedagogical benefits associated with AI-assisted language learning, including lesson planning, instructional material development, personalized feedback, learner autonomy, creativity, and time efficiency. These

findings suggest that AI is perceived as a practical resource capable of improving instructional quality while reducing teachers' administrative workload.

These results corroborate those reported by Vargas-Murillo et al. (2023), whose systematic review identified personalized learning, immediate feedback, and enhanced learner engagement as major educational advantages of generative AI. Likewise, Woo and Choi (2021) argued that AI-based language learning technologies facilitate adaptive instruction and individualized learning experiences by responding to learners' specific needs. Similar conclusions were reached by the systematic review on teachers' perceptions of ChatGPT in English Language Teaching, which emphasized the usefulness of AI for lesson preparation, assessment design, and language practice.

An important contribution of the present study lies in the emphasis participants placed on learner autonomy and instructional creativity. Several respondents considered AI an effective scaffold that enables students to learn independently while allowing teachers to design more innovative classroom activities. These findings support constructivist perspectives that view technology as a means of promoting active learning rather than passive knowledge transmission.

Challenges and Ethical Concerns

Despite recognizing AI's educational potential, participants expressed significant concerns regarding its responsible implementation. The most frequently reported issues included overreliance on AI-generated content, reduced critical thinking, misinformation, ethical considerations, privacy, and the potential misalignment of AI-generated materials with local cultural values.

These concerns are consistent with previous research. Vargas-Murillo et al. (2023) identified academic integrity and ethical responsibility among the principal challenges associated with ChatGPT in higher education. Similarly, the systematic review of teachers' perceptions in English Language Teaching highlighted concerns related to plagiarism, reliability, and excessive dependence on AI-generated responses. Dilzhan (2024) also reported that teachers questioned the accuracy and trustworthiness of AI-generated information despite recognizing its pedagogical usefulness.

However, the present study introduces an additional context-specific dimension by highlighting participants' concerns regarding cultural appropriateness and alignment with local educational values. This finding suggests that AI integration should not merely involve technological adoption but also critical evaluation of AI-generated content within specific sociocultural and educational contexts. Consequently, Moroccan EFL teachers appear to advocate a responsible model of AI integration grounded in pedagogical judgment, ethical awareness, and cultural sensitivity.

Future Implications and Teacher Competencies

The findings further indicate that participants expect Artificial Intelligence to transform language education while rejecting the notion that it will replace teachers. Instead, respondents anticipated an evolution of the teacher's role toward facilitation, supervision, critical evaluation, and ethical guidance.

This perception aligns with Wang et al. (2023), who argued that AI readiness depends not only on technological competence but also on teachers' ability to integrate AI critically into pedagogical practice. Woo and Choi (2021) similarly emphasized that teacher professional development should extend beyond technical skills to include pedagogical decision-making and ethical responsibility.

A particularly significant finding emerging from this study is the importance participants attributed to AI literacy, prompting skills, and critical evaluation of AI-generated outputs. These competencies were viewed as essential for ensuring that AI serves educational objectives rather than undermining learning quality. The emphasis on prompt engineering reflects the emergence of a new dimension of digital competence that has received increasing scholarly attention in recent discussions of AI-enhanced education.

Taken together, these findings suggest that the future of AI-assisted language learning in Morocco will depend less on technological advancement itself than on teachers' preparedness to integrate AI critically, ethically, and pedagogically. Consequently, teacher education programs and continuous professional development initiatives should incorporate AI literacy as a core component of twenty-first-century language teacher education.

Overall Contribution of the Study

By exploring Moroccan EFL teachers' perceptions through a qualitative exploratory approach, this study contributes to the growing body of research on AI-assisted language learning while addressing an important contextual gap in the literature. Unlike many previous studies conducted in Asian or Western educational settings using predominantly quantitative methods, the present research provides in-depth qualitative evidence from the Moroccan context and highlights the interplay between technological innovation, pedagogical practice, and cultural considerations. These findings contribute to ongoing

discussions on digital pedagogy and provide valuable insights for teacher educators, policymakers, and curriculum developers seeking to promote the responsible integration of Artificial Intelligence into English language education.

Conclusion

This study explored Moroccan EFL teachers' perceptions of AI-assisted language learning through a qualitative exploratory approach. By analyzing participants' responses using reflexive thematic analysis, the study provided valuable insights into teachers' experiences, expectations, and concerns regarding the integration of Artificial Intelligence into English language education.

The findings revealed that participants generally perceive AI as a complementary pedagogical tool capable of enhancing teaching and learning rather than replacing teachers. AI was recognized for its potential to facilitate lesson planning, provide personalized feedback, promote learner autonomy, stimulate creativity, and improve instructional efficiency. At the same time, participants expressed concerns regarding overreliance on AI-generated content, academic integrity, misinformation, privacy, and the need to ensure that AI-generated materials remain culturally and pedagogically appropriate.

Another significant finding concerns the evolving role of English language teachers. Participants emphasized that while AI is likely to transform educational practices, effective teaching continues to rely on human interaction, critical judgment, empathy, and contextualized pedagogical decision-making. Consequently, AI should be viewed as a resource that supports teachers rather than substitutes their professional expertise.

The study also highlights the growing importance of AI literacy within teacher education and professional development. Participants identified competencies such as effective prompting, critical evaluation of AI-generated content, ethical awareness, and responsible technology use as essential for successful AI integration in EFL classrooms. These findings suggest that teacher preparation programs should incorporate AI-related competencies to equip educators with the knowledge and skills required to navigate increasingly technology-rich learning environments.

From a practical perspective, the findings provide useful implications for teacher educators, curriculum designers, educational institutions, and policymakers seeking to promote the responsible integration of AI into language education. Developing structured professional development programs focused on AI literacy and ethical AI use may contribute to more effective and pedagogically sound implementation of AI-assisted language learning in Morocco.

Despite its contributions, this study has certain limitations. The research was based on a relatively small sample of ten participants and focused exclusively on Moroccan EFL teachers and teacher trainees. Therefore, the findings should be interpreted as context-specific insights rather than statistically generalizable conclusions. In addition, the study relied on self-reported perceptions rather than classroom observations or longitudinal evidence of AI implementation.

Future research could extend this work by involving larger and more diverse samples across different educational levels and regions of Morocco. Comparative studies examining students' and teachers' perceptions simultaneously, as well as mixed-methods and longitudinal investigations of AI integration in language classrooms, would provide a more comprehensive understanding of the pedagogical impact of Artificial Intelligence. Further research may also explore the relationship between AI literacy, teacher readiness, and instructional effectiveness in AI-enhanced learning environments.

In conclusion, the rapid development of Artificial Intelligence presents both opportunities and challenges for English language education. The findings of this study suggest that the successful integration of AI in Moroccan EFL contexts will depend not only on technological innovation but also on teachers' professional competence, critical engagement, and ethical responsibility. By placing teachers at the center of AI-enhanced pedagogy, educational institutions can harness the potential of Artificial Intelligence while preserving the human dimensions of language teaching and learning.

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