Chabahar Maritime University
Iranian Journal of English for Academic Purposes ISSN: 2476-3187
IJEAP, 2025, 14(2), 79-94 (Previously Published under the Title: Maritime English Journal)

The Impact of AI-Driven Feedback on Iranian EFL Teachers' Reflective Practice

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Research Paper IJEAP-2503-2124

Received: 2025-03-14 Accepted: 2025-05-29 Published: 2025-06-30

Abstract: Reflective practice, vital in teacher professional learning, faces systemic barriers in Iran including insufficient mentoring, large class sizes, and focusing on exam-dominated pedagogies. This mixed-method research study aims to examine how the use of artificial intelligence (AI) in providing AI-driven feedback can combat these barriers and enhance Iranian English teachers' reflective practices. Using a quasi-experimental pretest-posttest design, we experimented with the impact of AI-driven feedback using Mote and ChatGPT, voice feedback tools, on 10 secondary and senior high school teachers for six weeks. Participants were purposively selected to differ by experience and context; they recorded lessons, received AI-supported feedback, and reflected on their teaching practices in journals, supplemented by peer discussions. Reflective quality, which refers to the effectiveness of reflection, was assessed quantitatively via an adapted rubric (Farrell, 2022) on five dimensions: descriptive, critical, perspective-taking, action-oriented, and depth of analysis. Quantitative results showed that the reflective practice quality, measured by Farrell's (2022) rubric, improved significantly (mean increase = 3.6, $p < 0.001$, Cohen's d = 3.3). Qualitative thematic analysis provided main themes: actionable feedback enabling targeted improvements, cultural appropriateness with Iranian classroom realities, improvements in professional development, and collaborative reflection, which fosters professional communities. These findings suggest that available AI technologies like Mote and ChatGPT can improve reflection, bridge resource gaps, and promote professional development in Iran's resource-constrained education settings. Limitations include small sample size and short duration, which necessitate larger-scale studies to improve generalizability.

***Keywords*:** Artificial Intelligence (AI), Reflective Practice, AI-driven Feedback, Mote Platform, ChatGPT, Professional Development

Introduction

Reflective practice is part of teacher education and professional development. It enables teachers to reflect on their teaching approaches, classroom interactions, and general effectiveness (Farrell, 2022). This concept is based on Schön's (1983) work on the reflective practitioner, which calls for educators to reflect systematically on their experiences for continuous improvement. However, there are a few challenges to reflective practices, like time constraints, lack of structured guidance, and subjective biases that may put the depth and accuracy of reflection in ambiguity (Kember et al., 2000). With the advent of artificial intelligence, new opportunities have emerged to bridge such barriers and revolutionize teaching practice (Rassouli & Osam, 2019).

Feedback is the most important variable to transcend such challenges as it provides formal, objective data to guide teachers' reflective practice. Peer observation and self-evaluation are time-consuming, subjective, or not available due to Iran's school resource limitations (Rashidi &

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Javidanmehr, 2012). Artificial intelligence presents an encouraging solution by providing data-driven, scalable feedback to make reflection richer and more accessible. Specifically, AI-driven voice-feedback technologies, such as the combination of Mote and ChatGPT, provide personalized, actionable feedback on teaching practices, with minimal technical infrastructure required (Holmes, Bialik, & Fadel, 2019; Luckin & Holmes, 2016).

AI technologies have been integrated into a variety of educational settings. This has given opportunities for individualized learning, assessment, and development (Holmes et al, 2019; Luckin & Holmes, 2016). In particular, AI-driven tools have huge potential in implementing reflective practices through the provision of objective feedback, analysis of teaching behaviors, and structured reflective guidance. For instance, video analytics by AI can measure class activities such as teacher talk time, student engagement, and the pace of lessons, where data-based feedback could otherwise not be apparent to a teacher (Mavrikis & Holmes, 2016). Another example is the use of algorithms in Natural Language Processing (NLP) to analyze patterns, sentiment, and the depth of thought in reflective journals that help teachers identify their weak points (Shute, 2008).

The integration of AI into reflective practices follows the general trend of using technology to complement and support professional development. Unlike the traditional method-based feedback by peers or self, AI systems can offer scalable, consistent, and unbiased assessments that make the process of reflective practices more accessible and efficient (Chaudhry & Kazim, 2019). This aspect is important in modern large-scale teacher training, especially when personalized mentoring may not be viable. AI permits teachers to pay close attention to deeper reflections, meaningful ones, by automating certain reflective processes, thus improving teaching practices and enhancing learning outcomes.

While promising, integrating AI into reflective practice poses challenges. Ethical concerns—such as data privacy and potential over-reliance on technology—require careful management to ensure AI complements, rather than supplants, human judgment (Williamson, 2017). Although global studies demonstrate AI's potential to enhance reflection (e.g., Chaudhry & Kazim, 2019; Shute, 2008), empirical evidence specific to Iran's unique educational context remains scarce.

The aim of this study is, therefore, to fill the gap that it sets out to do by researching how AI-driven feedback affected Iranian teachers' reflective practice as it concerns measurable outputs relating to the quality of reflection. This, therefore, joins the increasing number of studies on the intersection between technology and teacher education. It provides real insights for educators, developers, and policymakers who would like to utilize AI in professional development. This research, therefore, looks to establish exactly how AI would assist teachers to become transformative technology themselves to the end that such teachers are able to engage in reflective practice that is effective and impactful.

Statement of the Problem

It has become a consensus that reflective practice is necessary for the professional development of teachers; it enables instructors to critically assess their teaching practices, pointing out strengths and weaknesses, and changing the patterns of instruction to enable good results for learners (Farrell, 2022; Schön, 1983). Still, today, this is a tough feature to develop in most Iranian instructors. Challenges root in the systemic context of Iranian education, where there is a lack of frameworks guiding professional development, limited possibilities for mentoring and feedback, and a dominance of traditional, teacher-centered pedagogies (Rassouli & Osam, 2019). As such, reflective practices are rarely realized to transform pedagogies and consequently learning outcomes in Iranian classrooms.

Traditional methods of reflective practice, including peer observation and journaling, are less utilized in Iran due to constraints such as a high student-teacher ratio, inadequate training on reflective methodologies, and a culture, that emphasizes examination-oriented teaching rather than professional growth (Rashidi & Javidanmehr, 2012). Besides, professional development opportunities are sometimes not available, especially in rural and underprivileged areas, thereby leaving many teachers without the resources or support necessary for implementing systematic reflection. The situation even gets worse

when there is no objective and timely feedback to enhance meaningful reflective practice (Kember et al., 2000).

Current advances in artificial intelligence offer partial remedies for such constraints through the provision of structured, data-based feedback for supporting regular reflection (Keylani, 2024). In Iranian resource-scarce contexts, low-cost tools (e.g., Mote-ChatGPT's voice-feedback platforms) are accessible to offer meaningful information about teaching behavior. While powerful AI systems (e.g., analysis of classroom interaction via video or journal mood using NLP) hold promise, their applicability in Iran is limited by technical and infrastructural capabilities (Rassouli & Osam, 2019). All these technologies break down barriers in all dimensions: from not having quality mentors to having traditional methods being subjective, such as with reflective activities (Luckin, 2018; Mavrikis & Holmes, 2016).

However, this application of AI in reflective practice is at an initial stage in the Iranian context. This has seen little attention in researching the influence of such AI-provided feedback on the Iranian teacher's reflective potentialities or their impact on quality and the number of reflections made. On the other hand, issues such as concerns regarding privacy in data collection, technology skepticism, and even different levels of digital literacy raise very distinct issues to be handled in particular cultural and contextual conditions (Rassouli & Osam, 2019). Therefore, the present study will fill those gaps and will look at the impact of AI-driven feedback on Iranian teachers' reflective practice. Given how AI machines contribute to the interests of reflective thinking, this work is also bound to contribute to the knowledge of teacher professional development in Iran by offering insights into integrating technology within the Iranian education sector.

Review of the Literature

Reflective practice is considered one of the essential elements of teacher professional development, as it develops self-awareness, critical thinking, and continuous improvement in instructional approaches (Farrell, 2022; Schön, 1983). It makes teachers critically examine their classroom experiences, identify strengths and weaknesses, and adapt their methods to address students' needs effectively. Rooted in Schön's (1983) Reflective Practitioner Model, it encompasses reflection-on-action (post-lesson analysis) and reflection-in-action (real-time adjustments), enabling teachers to identify strengths, address weaknesses, and adapt to student needs (Kember et al., 2000). Globally, reflective practice improves teaching effectiveness, classroom management, and student engagement, as evidenced in studies (Kirpalani, 2017; Zeichner & Liston, 2013). For English as a Foreign Language (EFL) teachers, reflection is particularly vital to navigate linguistic and cultural complexities, improving instructional strategies and learner outcomes (Richards & Lockhart, 1994).

While reflective practice has been eminently considered and incorporated into many varied international contexts, in the Iranian context, it faces other challenges mainly because of several systemic, cultural, and resource-related reasons. There is an increasing interest in using AI to support reflective practices. Yet, few studies to date have explored its application in Iran in teacher education programs.

The Importance of Reflective Practices in Teacher Development

Reflective practice, according to Schun (1983), is the process of engaging in "reflection-on-action" and "reflection-in-action", and "reflection-for-action" where the teacher appreciates past experiences and adjusts what was done in real-time during the delivery of instruction. This loop enhances effectiveness in teaching, independence, and student learning (Farrell, 2022).

Teachers who are reflective are able to recognize more lacunas in their pedagogies, respond to diverse needs of their students, and find new approaches for handling classroom management and lesson delivery (Kember et al., 2000).

In the Iranian context, reflective practice is gaining recognition as an essential element of teacher professional development. However, its adoption remains limited. Iranian teacher education programs often emphasize theoretical knowledge over practical, reflective competencies, leaving educators ill-prepared to engage in systematic self-assessment (Rassouli & Osam, 2019). Furthermore, the hierarchical nature of Iran's educational system discourages open dialogue and self-critique, which are foundational to effective reflection.

Difficulties in Implementing Reflective Practices in Iran

Several systemic and cultural factors work against the implementation of reflective practices in Iranian teacher education programs. For example, there is no established structure or institutional support for reflection. Reflective practice, in many Western education systems, is incorporated into curricula on teacher training. Iranian programs tend to emphasize the passing of content knowledge rather than the development of critical thinking and self-evaluation (Ghanizadeh & Moafian, 2011).

In a study conducted by Farahian and Rajabi (2022), they found that Iranian EFL teachers have low reflective practice levels. Based on both qualitative and quantitative data, the researchers identified some key obstacles to teachers' reflection such as a top-down, rigid curriculum that limited teacher autonomy, a lack of institutional respect and recognition for teachers' professionalism, and pervasive reliance on conventional, teacher-centered teaching practices. Moreover, a dearth of supportive professional culture, overloading with teaching responsibilities, and insufficient training hours were mentioned as major obstacles too. These findings reflect the system and contextual challenges restricting the promotion and sustenance of reflective teaching practice in Iran's EFL context.

Another challenge is the teacher-to-student ratio in Iranian classrooms, which is very high and does not give teachers much time for reflection amidst their busy schedules. Moreover, rural and underprivileged areas lack access to mentoring and professional development opportunities, which further limits teachers' ability to engage in reflective practices (Ghanizadeh & Moafian, 2011).

Other vital cultural norms influence the teachers' attitude toward reflection. Most schools in Iran tend to hold values that promote authority and hierarchy, as opposed to making teachers open up to themselves or seek feedback from colleagues or superiors. This is not typical of the more collaborative and dialogic approaches to reflective practice common in many other contexts (Rassouli & Osam, 2019).

The literature has documented the benefits of reflective practice for Iranian teachers. A study by Esfandiari et al., (2025) found that engaging in reflective self-assessment, collaborative peer-assessment, and portfolio development enabled pre-service teachers to become more active, cooperative, and flexible in their learning processes. A report by Ghanizadeh and Moafian (2011) established that reflective teaching has a positive correlation with emotional intelligence, job satisfaction, and professional growth. Such findings signal the possibility of reflective practices in bettering the quality of teaching as well as the state of the teachers' minds, which further underpins the urgency for novel solutions to circumvent the already erected barriers. Fathi et al., (2021) found that emotion regulation significantly mediated the relationship between both teacher self-efficacy and burnout, and teacher reflection and burnout. Specifically, higher levels of self-efficacy and reflective practices were associated with better emotion regulation, which in turn was linked to reduced burnout levels among teachers. Farahian and Parhamnia (2022) also examined the knowledge-sharing function of WhatsApp in facilitating reflective practice among Iranian English as a Foreign Language (EFL) teachers. Their findings revealed that participation in WhatsApp professional learning communities enhanced the extent of teachers' reflection significantly. The virtual platform offered participants the chance to work together in discussions, share teaching practices, and receive peer feedback, thereby encouraging higher levels of reflection. The study highlighted that such low-threshold, informal digital spaces can offer a facilitative environment to continuous professional development, and in doing so, allow teachers to reflect more frequently and critically on their teaching practices. The authors summed up that mobile-assisted communication platforms like WhatsApp can be employed as powerful means

for improving reflective practice, especially in environments where possibilities for access to formal professional development courses are limited.

Potential of AI to Enhance Reflective Practices

Artificial intelligence has emerged as a transformative tool in education that offers new possibilities for improving reflective practices. Video analysis software, NLP algorithms, and intelligent feedback systems, powered by AI, provide objective data-driven insights that complement traditional methods of reflection (Luckin, 2018; Holmes, Bialik, & Fadel, 2019).

For example, AI-based video analytics will analyze teacher-student interactions and provide teachers with numerical evidence in terms of the total time teachers talk, their patterns of questioning, and levels of student' engagement. This implies that instructors have a chance to detect cycles in instructional behavior that might not easily be detected using introspective methods (Mavrikis & Holmes, 2016). Algorithms for NLP can also analyze the depth and tones of reflective journals in depth to help instructors refine and adjust their reflective writing and thinking. Studies have shown the efficacy of AI tools in promoting reflective practices globally. Shute (2008) has shown that AI can be used to offer formative feedback, highlighting its capacity to provide timely, personalized recommendations that lead teachers toward improvement. Chaudhry and Kazim (2019) have shown that AI-assisted feedback increases the frequency and depth of reflective practices by educators, especially in large-scale teacher training programs. Alier et al,. (2024) also mention that generative AI can be conducted as an assessment tool by providing feedback to students using generated content. Rezaei et al. (2024) demonstrated that feedback-seeking behavior mediates the relationship between self-regulated writing strategies and writing performance among Iranian EFL learners. Bigverdi and Khalili Sabet (2024) found that online peer feedback significantly improved Iranian EFL learners' writing skills and cultivated a growth mindset, suggesting that digital feedback tools can foster reflective and autonomous learning behaviors.

These findings suggest that AI could potentially surmount many of the barriers in reflective practices, especially such factors as time constraints and the subjectivity of the traditional methods, within the Iranian context.

AI and Reflective Practice in the Iranian Context

Though AI adoption is still at a very nascent stage in education here in Iran, the potential it holds for improving reflective practice is huge (Hoseini, 2023). Where mentoring, feedback, and support at the school level are often not always accessible, AI-driven feedback systems can make up. For instance, it will be possible for AI-led tools to analyze classroom video footage for teaching strategies or a reflective journal to scan for development needs (Koh et al., 2023).

In a study led by Khajavi and Ezhdehakosh (2025), it was found that AI tools enhance personalized learning, support reflective practices, and improve teachers' technological skills. These tools help preservice teachers engage with real-world teaching scenarios, and promoting innovative teaching methods. The study, on the other hand, notes challenges, including the need for teacher preparedness and the risk of over-reliance on technology.

Derakhshan and Ghiasvand (2024) conducted a research examining the perception of 30 Iranian EFL teachers regarding the integration ChatGPT into second language education. They found that teachers commented on the following positive points as regards its effectiveness in enhancing the learner autonomy, providing personalized learning experience, reducing the workload for teachers, establishing rubrics of assessment, and assisting in condensing lengthy research papers.

Dehghani and Mashhadi (2024) investigated Iranian EFL teachers' acceptance of ChatGPT in English language teaching, utilizing an extended Technology Acceptance Model (TAM). Surveying 234 Iranian EFL teachers, the research incorporated additional parameters such as system characteristics and individual traits. The findings validate suggested relationships that revealed

significant relationships among variables such as perceived ease of use, perceived usefulness, system quality, and behavioral intention to use ChatGPT. Notably, perceived system quality and enjoyment were found to positively influence both perceived usefulness and ease of use, while online course design did not significantly affect perceived ease of use. These results suggested that enhancing system quality and user enjoyment can enhance the adoption of AI applications like ChatGPT in language learning.

Ethical and Practical Issues

Although the use of AI in reflective practice has high potential, some crucial ethical and practical issues do not allow the incorporation of AI in reflective practices, particularly in Iran itself. Data privacy remains an issue since sometimes teachers do not want to share the actual classroom information or their personal reflections with an AI-powered tool. Moreover, it also depends on the level of digital literacy within Iranian teachers' communities.

This calls for careful and context-sensitive considerations that include training programs and particular guidelines regarding data usage besides strategies meant to instill trust in AI systems to rectify the problems (Williamson, 2017). Another concern will be over-dependence on the tools being developed within the era of AI to the disadvantage of undermining humanness in the reflective practice of teachers. With AI offering valued information, usage weighed against peer feedback, mentoring, and collaborative reflection needs to be done.

Conceptual and Theoretical Framework

The current study's conceptual framework integrates reflective practices and AI as complementary mechanisms for enhancing professional development within the Iranian context of teaching. Reflective practice refers to the regular critical analysis of one's experiences of teaching in such a way that the strengths are identified and weaknesses are patched up through deliberate modifications in how they conduct their classes (Farrell, 2022). AI tools are within this framework positioned as facilitators that provide data-driven, objective insights and thus address typical reflection barriers such as time constraints, subjectivity, and lack of opportunities to get feedback on their teaching (Luckin, 2018).

In Iran, systemic challenges such as large class sizes, limited mentoring opportunities, and traditional top-down educational structures have made the adoption of reflective practices a real challenge (Safari and Rashidi, 2015). This study integrates AI within the reflective practice framework to allow for a twofold approach: teachers self-reflect on their practice based on feedback informed by AI, which provides useful insights into their teaching methodologies.

This integration of AI and reflective practice fulfills the overarching goals of professional development by enabling Iranian teachers to adopt a more evidence-based and iterative approach to teaching. Moreover, the ability of AI to provide suggestions on the fly, scalable and context-sensitively, makes it most apt for working within the challenges educators in Iran face, given the country-wide heterogeneity and lack of resources available to work within an educational setting.

This research is built on two main theories: Schön’s (1983) Reflective Practitioner Model and Vygotsky’s (1978) Sociocultural Theory. Vygotsky's Sociocultural Theory (1978) provides a good theoretical ground to describe the ways in which AI-based feedback, delivered by Mote-ChatGPT, is facilitative to reflective practices in Iranian EFL teachers, though developed in 1978. According to this theory, development and learning happen in social collaboration within cultural communities mediated by artifacts and more knowledgeable persons. Central to this model is the Zone of Proximal Development (ZPD), or the gap between what an individual can accomplish independently and what they can accomplish with guidance (Vygotsky, 1978). In this study, Mote-ChatGPT's voice-feedback using AI is an electronic "more knowledgeable other," facilitating teachers' reflective capacity.

Schön’s (1983) approach encourages being reflective and thinking about your actions and decisions before and after acting. Reflection-in-action is when a teacher is a real-time problem-solver, without observing the issue from a distance, the teacher can adjust their strategies during the classroom

interaction. Reflection-on-action happens after the event. Through this method, educators can accurately analyze their choices and thus plan for improvements.

The integration of AI into the model, according to Dias (2002), facilitates a more structured process of both reflections on action and reflection-in-action. For example, AI tools can analyze the data of the classroom that might reveal patterns of students that can be reflected on, while real-time feedback devices, such as intelligent teaching assistants, can become the engines of teacher reflection-in-action. These aspects of them being combined give teachers a chance to be wise in their judgments as well as to choose a better way of instruction.

Objectives and Significance of the Study

The aim of this study is to look into the influence of artificial intelligence-powered feedback on elevating reflective practices among Iranian teachers. The study seeks to find answers to the following questions:

Research Question One: To what extent does the use of AI tools improve the reflective practices of Iranian English teachers?

Research Question Two: What are the perceptions of Iranian English teachers regarding the usefulness and effectiveness of AI tools in enhancing reflective practices?

Methodology

Research Design

A quasi-experimental design with a pretest-posttest approach is applied to evaluate the impact of AI-driven feedback on the reflective practices of Iranian English teachers. This design allowed teachers' reflective practices to be compared systematically before and after a six-week intervention while taking into account their strengths and weaknesses among teachers. The absence of a control group was justified by ethical concerns, as withholding professional development opportunities from teachers could disadvantage their students. Instead, the study focused on within-group changes, comparing baseline and post-intervention reflective practice scores to assess improvement.

Participants and Setting

In this study, 10 Iranian English teachers were chosen as participants. Four of these teachers were females, and six of them were males. The small sample size was appropriate for an exploratory pilot study, allowing in-depth qualitative analysis, though limitations in generalizability are acknowledged. The teachers were selected using purposive sampling to ensure that instructors with little to vast teaching experience (3-25 years) and demonstrating different teaching contexts, including urban and rural schools, were included. All participants had teaching experience of at least three years and were fluent in English. The other criteria were basic digital literacy skills so that they could cope with AI tools. Their digital literacy was assessed during pre-intervention training, where the participants showed ability in using Mote and ChatGPT.

The study was conducted in 5 Iranian junior and senior high schools (four urban, one rural) with English as a foreign language. These schools were characterized by Limited access to technology, defined as poor internet connectivity, and professional development resources (e.g., outdated computers). These conditions reflected the resource limitations in Iranian education, and necessitated the use of Mote and ChatGPT, which are compatible with such poor conditions. Also, the diversity in setting (urban and rural) ensured variety in context.

Reflective Practice Rubric

A Reflective Practice Rubric developed by Farrell (2022) is employed in the design of the study with necessary adjustments. This instrument serves as a systematic way to measure not only the depth but even the quality of teachers' reflective practices. The criteria were centered on the following dimensions:

1. Descriptive Reflection: Be able to tell about destinations in the class honestly and directly. Dedicating oneself to what occurred during class without any of one's own particular opinions or ideas being involved.
2. Critical Reflection: Analysis of teaching strategies, working on strengths and weaknesses
3. Perspective-taking: Reflection on teaching experiences from different points of view such as the teachers', mentors', and learners'.
4. Action-Oriented Reflection: Turning the outcomes of reflection into actions that can improve future performances.
5. Depth of Analysis: Assessment of the extent to which teachers engage in deep thinking about pedagogical issues.

Each dimension was scored on a 1–5 scale (1 = minimal, 5 = exemplary), with a maximum total score of 25. The rubric was applied to pretest and posttest reflective journals by two trained raters, achieving high intercoder reliability (Cohen's kappa = 0.85).

AI Platform: Mote - ChatGPT

Mote, a voice transcription tool integrated with Google Classroom, Docs, and Slides, was selected for its accessibility and low-bandwidth compatibility—key advantages in Iran's resource-limited schools. Unlike advanced AI systems (e.g., video analytics), Mote offers simple, user-friendly audio transcription, requiring minimal setup and technical expertise.

ChatGPT, developed by OpenAI, is a modern language model. It intends to produce comprehensive texts with users so that they have dynamic, context-oriented dialogues. This AI tool's ability to examine written or transcribed input is one of its features that can help with the aim of this study. By using these tools, Teachers recorded lessons, received voice transcription, transferred it into Chat-GPT to receive feedback and used it to inform reflective journals.

Key Features of Mote

Teachers and mentors can record voice notes for personalized, rich feedback.

This is highly usable in capturing detailed observations that do not require advanced technical competencies. It works in tandem with Google Classroom, Docs, and Slides, allowing teachers to embed feedback into lesson plans or reflective journals. This is usable on all platforms. This, in particular, will increase the ease of use.

Setting up Mote requires very minimal setup. Therefore, it is very accessible to teachers of all levels of digital literacy. The intuitive interface ensures ease of adoption. Either voice or text feedback may be drafted, for example, to align with the dimensions of the Reflective Practice Rubric. Mote's audio-based system consumes very low internet resources and is thus effective for Iranian schools that generally have poor internet connectivity.

Procedure

This study process was mainly divided into three phases: pre-intervention, intervention, and post-intervention. In the pre-intervention period, that took two weeks, participants were asked to complete a pre-test questionnaire to assess their existing reflective practices. Digital literacy was confirmed through practical tasks such as recording their voices. A baseline assessment was also conducted using a reflection training rubric to determine the participants' initial level of reflection. In the training orientation section, participants were trained on using the AI platforms effectively. This included

identifying features, guidance for integration into practice, and orientation to introduce review criteria and learning objectives.

Participants engaged with the AI platforms for six weeks during the intervention process. Teachers recorded one lesson each week and uploaded them to the platforms. Their records were first uploaded to Mote so that it provided the transcriptions. The transcriptions were then transferred to ChatGPT to provide pedagogical feedback aligned with the rubric. Participants used this feedback to write a reflection journal where they highlighted strengths , weaknesses, and planned improvements. They also participated in group discussions to share insights, strategies, and personal reflections on their teaching methods.

Participants in the post-intervention phase were asked to complete a post-test questionnaire. and their reflective practice was reassessed using the reflective practice rubric. Semi-structured interviews were conducted to gather detailed responses about their experiences with the AI tools, providing qualitative insights into the effectiveness of the intervention.

Semi-structured interviews and reflective journals provided qualitative data to analyze teachers' attitudes toward Mote-CharGPT's AI-generated feedback. Weekly journals (200–300 words, six per each participant) were collected, each of which reflected on the impact of feedback, aligned with rubric dimensions (Farrell, 2022). Post-intervention interviews (30–40 minutes, n = 10) were conducted using open-ended questions (e.g., "How did feedback impact your teaching?"), then they were audio-recorded and transcribed.

Data Analysis

To analyze the data for providing an answer to the research questions, first, the descriptive statistics were calculated. Then, the paired samples t-test was used to compare the means of the two groups. Finally, the qualitative data from journals and interviews were analyzed using Braun and Clarke's (2006) thematic analysis, the codes of which were calculated with Nvivo for themes.

Results and Discussions

Quantitative Data Analysis

The Quasi-experimental pretest-posttest design was conducted to gain data from 10 Iranian EFL teachers using Farrell's (2022) Reflective Practice Rubric. The descriptive statistics for the scores that participants gained in the pretest and posttest phases are presented in the table below.

Table 1

Descriptive Statistics of the Mean Scores within the Experimental Group before and after the Intervention

Measure	N	Mean	Std. Deviation	Std. Error Mean
Pretest	10	11.1	1.197	0.379
Posttest	10	14.7	0.949	0.300

A paired-sample t-test was conducted to analyze and compare the pretest and post-test scores so that improvements would be assessed. The following table represents the results.

Table 2

Paired-Samples T-test

	Mean diff.	Std. Deviation	Std. Error Mean	95% Confidence	t	df	Sig. (2-tailed)
Pretest-posttest	-3.6	0.843	0.267	Lower: -4.23	-13.48	9	0.000
				Upper:			

	-2.97

The paired-sample t-test (Table 2) showed a statistically significant improvement from pretest to posttest (mean difference = -3.6, $t(9) = -13.48$, $p < 0.001$), with a large effect size (Cohen's $d \approx 3.3$), suggesting a meaningful enhancement in reflective practice quality.

To provide detailed insights, mean improvements for each rubric dimension were calculated (Table 3). As the table suggests, critical reflection gained the largest improvement (mean increase = 4.1). On the other hand, descriptive reflection's improvement was the least (mean increase = 3.0), which means that probably, teachers' descriptive skills were already quite strong.

Table 3

Mean Improvements by Rubric Dimensions

Dimension	Pretest Mean	Posttest Mean	Mean Increase
Descriptive	12.2	15.2	3.0
Critical	10.5	14.6	4.1
Perspective-taking	11.0	14.5	3.5
Action-oriented	10.8	14.6	3.8
Depth of Analysis	11.0	14.7	3.7

These results indicate that the combination of Mote-ChatGPT's AI-driven feedback enhanced reflective skills, which is crucial for professional growth in contexts where there are constraints in resources.

Qualitative Data Analysis

Participants' reflective journals and semi-structured interview data were analyzed using a qualitative approach called thematic analysis. This type of analysis is rooted in a six-step process developed by Braun and Clarke (2006). At the beginning stage, known as familiarization, the researcher read all transcripts and journals in order to extract initial patterns, such as references to self-awareness and feedback utility. At the second stage, the researcher used NVivo software to generate initial codes. Some of these codes included peer learning, specific feedback, self-awareness, and culturally fit. These codes were then categorized into several preliminary themes based on the common meanings they shared. At the third stage, these themes were modified using repetitive comparison with collected data to guarantee accurate representation. Finally, the themes were developed in a way that was in line with the study's aim of exploring teachers' experiences with AI-driven professional development.

Findings

Four key themes which were identified through thematic analysis are summarized below. These themes capture the patterns in teachers' experiences with AI-driven platform and reflective practices.

Theme 1: Self-reflective Growth in Teaching Practice. Teachers' teaching practices through AI-driven feedback and reflective journals led to improved self-assessment and classroom interactions. For example, Teacher 1 stated that: "I never realized the amount of time I allocate for instruction is insufficient until the AI noticed that. Now I try to plan my time accordingly." Similarly, in an interview with teacher 2, she stated that: "Writing reflections made me realize what my weak points are that need to be improved." These statements clearly show how advantageous reflective practices were towards a deeper understanding of strengths and weaknesses of teaching.

Theme 2: The Use of AI-Driven Feedback for Professional Development. Participants appreciated AI platform's detailed, useful feedback. This enabled them to reflect on their specific teaching challenges. Teacher 3, for example, stated that: "The AI would suggest me what methodology I could implement specifically in my teaching session." This specificity supported targeted teaching improvements, which would highlight the platform's role in professional development.

Theme 3: Cultural Relevance of Feedback. The AI-provided feedback was understood to be in line with the Iranian high-school educational context. This would certainly increase the effectiveness

of feedback. Teacher 4 wrote in his journal: “The AI was like a man who felt what challenges were there. It provided feedback to handle those challenges.”

Theme 4: Collaborative Learning through Peer Interaction. Peer-sharing of reflective journals and group discussions encouraged mutual learning and raised inspiration. "Hearing how others used the AI feedback gave me new ideas and motivation for my lessons," Teacher 5 said in an interview. This cooperative approach improved the participation of teachers in the program for professional growth.

Table 3

Summary of Themes

Theme	Mean diff. Std. Deviation Std. Error Mean	Example Quote
Self-Reflective Growth in Teaching Practice	Teachers developed greater awareness and self-assessment skills, improving classroom interactions.	“I never realized the amount of time I allocate for instruction is insufficient until the AI noticed that. Now I try to plan my time accordingly.” (Teacher 1)
The Use of AI-Driven Feedback for PD	Detailed AI-provided, actionable feedback enabled context-specific improvements in teaching	“The AI would suggest me what methodology I could implement specifically in my teaching session.” (Teacher 2)
Cultural Relevance of Feedback	Feedback culturally oriented with Iranian context enhanced relevance	“The AI was like a man who felt what challenges were there. It provided feedback to handle those challenges.” (Teacher 4)
Collaborative Learning through Peer Interaction	Peer interactions strengthened learning and motivation.	. "Hearing how others used the AI feedback gave me new ideas and motivation for my lessons." (Teacher 5)

The thematic analysis shows how reflective practices and AI-provided feedback, along with peer collaboration, can contribute to professional development.

Discussion

This study's results showed that AI in Reflective Teaching practices could significantly enhance professional growth for Iranian EFL teachers. The results of the study showed that all dimensions of the Reflective Practice Rubric were significantly improved among participants, which suggests that AI technology is efficient in assisting individuals to reflect deeper, getting more actionable and culturally relevant feedback, and reflecting in collaboration.

An important output of this study is the significant increase in the depth of reflective practice experienced by participants, especially critical and action-oriented reflection. These results are in line with George (2023) who reported that AI tools contribute to critical thinking by directing evidence-based, data-driven aid. For example, in this study with the help of Anthropology Ally teachers used for patterns in classroom interactions, teachers questioned their practice based on this new data and refined it. In another study, Mehranirad (2025), designed and AI-oriented educational program for teachers and reported that the program enhanced teachers’ instructional practices by fostering critical reflections. AI provides extensive, objective reflection that addresses one of the complaints of conventional reflective practices, which is often (if not always) shallow or intermittent (Farrell, 2022).

The present study also underscored how AI can help in the Iranian case, for example overcoming local challenges like paucity of mentoring resources and professional development opportunities. Participants also benefited from tools like Mote and ChatGPT, a group of systems that delivered consistent, individualized feedback so they were less dependent on external mentors. The implication of this result is consistent with Ghiasvand et al, (2024) who indicated that AI platforms can

facilitate access to effective teacher training in low-income environments. The cultural adaptability of the AI feedback system was also very important, concerning Iranian classrooms being contextual.

The theme of culturally relevant context emphasizes Mote-ChatGPT's fit with Iran's exam-driven system, which is crucial for its success. Comments on juggling group activities with curriculum demands show that teachers' reality aligned with feedback suggestions including engagement strategies inside exam-oriented courses. This supports Rassouli and Osam's (2019) demand for context-sensitive professional growth. Mote-ChatGPT's practical, culturally sensitive feedback improved its applicability, unlike generic AI tools, so addressing Safari and Rashidi's (2015) noted challenges to reflective practice adoption.

Significant progress was also made in the area of collaborative reflection. Sharing their AI feedback with peers, the participants indicated that it was a very suitable way for them to have depth in reflective processes by obtaining multiple views on teaching practices. This is in line with Hwang & Chen's (2022) study claiming that the use of AI platforms for peer interaction will bring on a supportive professional learning community. Collaborative features in this study alleviated one of the toughest things I face as a teacher (feeling isolated) from remote under-resourced regions.

There have been studies advocating the positive effects of AI-driven feedback on reflection. Pishtari et al, (2024) stated that the use of AI-driven feedback had a small positive influence on teachers' achievements which fostered their trust and intention on using AI. In another study, Lyanda & Owidi (2025) see artificial intelligence comments, more especially from tools like ChatGPT, as a great improvement to micro-teaching. They underline how well it can offer real-time, tailored, methodical comments on classroom participation, communication, and lesson delivery. They do, however, also warn against too depending too much on others, pointing out things like possible bias, lack of emotional understanding, and limited ability to assess social dynamics or creativity. For more balanced and contextual teacher development, they advise a hybrid model combining artificial intelligence-driven analytics with human mentoring. Ghiasvand and Seyri (2025) conducted a study to find out how AI integration affects teachers' professional roles. The authors argue that AI tools, such as ChatGPT, are instigators of teacher identity reconstruction. By engaging with AI, teachers are prompted to be reflective on their pedagogical practice, adapt to emerging technologies, and renegotiate classroom roles. The engagement facilitates a dynamic process where teachers negotiate and reconstruct their professional identities as they react to AI integration.

Conclusion

This study demonstrated the potential of AI-driven feedback, provided by Mote-ChatGPT, in improving the reflective practices of Iranian EFL teachers within a resource-limited, exam-driven educational context. The significant improvement in reflective practice quality measured by Farrell's (2022) reflective practice rubric, particularly in action-oriented and critical dimensions, highlights the capability of AI to provide deep, evidence-based reflection. Qualitative findings of the study revealed how AI feedback provided by the combination of Mote and ChatGPT can deal with systematic obstacles, such as large class sizes, while they can be aligned with Iranian educational context. These results contribute to the field of applied linguistics by providing empirical evidence of AI's capability in the combination of technology and teacher professional development.

In practice, these findings justify the integration of AI technologies like Mote and ChatGPT into Iranian teacher training. Teachers can deploy Mote in existing classroom environments, leveraging its low-bandwidth support to enable it in areas with weak internet connectivity. Policymakers must develop training modules to enhance teachers' digital literacy and familiarity with AI tools, taking into account varying levels of skills observed in this research. Designing effective data privacy protocols is a must in terms of building trust, in light of teachers' reservations in sharing class data (Williamson, 2017). Encouraging collective reflection can be achieved through the setting up of virtual communities of practice, where teachers share AI-generated feedback to learn from each other, as evidenced by participants' valuing of peer talk. These initiatives can democratize professional development, increasing teaching quality and student success in Iran's exam system.

The demonstration of AI's potential to be contributed to teacher education in culturally distinct, resource-limited contexts is the main significance of this study. By fostering culturally relevant, collaborative reflection, AI tools like Mote and ChatGPT can help enhance teaching quality. Using AI-driven feedback can give teacher opportunities to reflect on their performance, which ultimately benefits students and language learners.

The study's small sample (10 teachers) limits generalizability because reflective practice growth may vary in larger groups. The six-week intervention may be too brief to allow for long-term development, as reflective competencies unfold gradually. Mote's simplicity, while user-friendly, lacks the analytical richness that more advanced AI tools like video analytics or NLP can ensure, and may limit feedback richness. Variation in participants' digital literacy may have influenced engagement, though training mitigated this. Future research must utilize larger samples, longer interventions, and more sophisticated AI systems to guarantee robustness and investigate scalability across diverse Iranian regions.

Acknowledgement

There must be an acknowledgement section even if there was no financial support. You can at least thank those who helped you conduct the research.

Declaration of Conflicting Interests

All the manuscripts must be accompanied by a declaration by the authors that they do not have any conflicts of interest to declare. It should be included in the manuscript under a separate heading, following Acknowledgements.

Funding Details

After the Declaration of Conflicting Interests section, manuscripts should have a funding acknowledgement statement included in the text. The name of the section is Funding Details.

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