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RECALIBRATING AI ACCEPTANCE AMONG MID-TO-LATE-CAREER EFL TEACHERS THROUGH GUIDED AI ENGAGEMENT

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Abstract
Research has described EFL teachers' views of artificial intelligence (AI), but less is known about how mid-to-late-career university teachers' teaching-related, learning-related, and ethical perceptions change after guided classroom use. Eighteen university EFL teachers in Vietnam participated in a four-week intervention using human-reviewed, AI-supported teaching materials. AI acceptance was measured before and after the intervention, and post-intervention interviews were used to explain the quantitative patterns. The results showed an upward tendency in teaching-related perceptions. Learning-related perceptions showed no statistically detectable change, while ethical perceptions showed a statistically significant pre-post difference. Interview data were organised according to the three questionnaire domains to help explain the quantitative findings. Participants reported greater confidence in using AI for teaching, continued caution about student use, and more conditional judgments about responsible use. The findings suggest that AI acceptance among experienced teachers may change differently across teaching-related, learning-related, and ethical domains.

Keywords: AI acceptance, artificial intelligence, belief recalibration, professional development, teacher cognition

Introduction

For mid-to-late-career EFL teachers, artificial intelligence (AI) presents both an opportunity and a source of pedagogical disruption. AI-powered tools are often presented as ways to improve teaching efficiency, personalise learning, and reduce teachers' workload (Floris, 2025). However, the same tools may affect key aspects of the teaching process that teachers are responsible for. Floris (2025) conducted a qualitative analysis of 150 posts in three public Facebook groups with teachers from different countries and found concerns related to overreliance on AI, privacy risks, unequal access, and less teacher-student interaction. In a study of 46 English language teachers from several countries, Al-khresheh (2024) reported perceived benefits for personalised learning alongside concerns about linguistic accuracy and

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reduced creativity. These benefits and concerns raise questions about how experienced teachers evaluate AI in relation to their current practices and responsibilities for student learning.

Mid-to-late-career EFL teachers often assess new practices through their accumulated experience or established teaching practices and current professional responsibilities. Teacher cognition research shows that teachers interpret new practices in the light of beliefs and knowledge developed from their prior experience (Borg, 2015). Their reservations about AI should not automatically be interpreted as resistance or unwillingness to change. Such reservations may reflect questions about whether AI-supported activities serve their teaching goals, preserve teacher judgement and support student learning. Career stage is therefore relevant to understand the professional experience that teachers bring to these decisions.

In Vietnam, this issue is evident in research on veteran EFL teachers. Lap et al. (2025) used narrative responses from eight teachers and a survey of 116 teachers in primary and secondary education in southern Vietnam. The teachers valued the benefits of AI but also reported concerns about their digital skills and ethical issues. The authors called for structured training to support classroom use. However, the study examined existing perceptions and reported use rather than changes following a guided intervention.

Studies outside Vietnam also indicate that teachers may perceive AI differently for teaching and learning. In a cross-sectional survey of 321 university teachers in Spain, Cabellos et al. (2024) found that teachers had more positive views on AI in their own teaching role than on AI in students' learning processes. These judgments were related to pedagogical beliefs and previous use of AI. There was no statistically detectable relationship with teaching experience. This finding cautions against explaining AI acceptance through career stage alone. It also supports examining different areas of acceptance separately. However, cross-sectional survey designs capture teachers' views at one point in time but cannot show how those views may change after classroom use.

The remaining gap concerns how mid-to-late-career university EFL teachers' teaching-related, learning-related, and ethical perceptions change after guided classroom use. The studies reviewed above describe existing views, reported practices, or online discussions, but do not follow any groups before and after a structured period of classroom engagement. Evidence of perceived teaching benefits also does not establish whether concerns about student learning and responsible use change in the same way. Examining baseline perceptions and subsequent changes across these three areas can therefore provide a clearer basis for planning professional development programmes for experienced EFL teachers.

The present study examines AI acceptance among mid-to-late-career university EFL teachers in Vietnam before and after four weeks of guided AI engagement. In this study, mid-to-late-career refers to teachers aged 40–55 with at least 17 years of English language teaching experience. AI acceptance is viewed not as a fixed belief or simply an intention to use AI, but as teaching-related, learning-related, and ethical perceptions that may change in different ways. Guided AI engagement refers to teachers' structured use of human-reviewed, AI-supported teaching materials in actual classrooms, together with orientation and professional reflection. Pretest and post-test questionnaires from 18 teachers, supported by post-intervention interviews, are used to examine changes in these perceptions and

teachers' explanations of their experiences. The one-group design examines changes following the intervention without establishing that the intervention caused them.

The study also addresses a question relevant to international research on language teacher development: whether guided classroom experience is followed by similar or different changes in teachers' views of AI for teaching, student learning, and responsible use. Evidence from the present university setting can inform the design of professional development in other EFL settings where experienced teachers have limited prior use of AI.

The study addresses the following research questions:

1. What are the baseline levels of teaching-related, learning-related, and ethical perceptions of AI among mid-to-late-career university EFL teachers in Vietnam?
2. How do these perceptions change following guided AI engagement?

Literature review

Technology acceptance and AI among language teachers

AI is increasingly being integrated into language education to support curriculum design, instructional delivery, assessment, feedback, and learner support (Holmes et al., 2019; Kessler, 2018). Li et al. (2024) found that research on ChatGPT in language education has examined both students' learning and teachers' work. Understanding teachers' acceptance of AI therefore requires attention to how they judge its usefulness in relation to their teaching practices and responsibilities.

The Technology Acceptance Model (TAM) (Davis, 1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) have often been used in studies of teachers' technology adoption. TAM focuses on perceived usefulness and perceived ease of use as major factors influencing behavioural intention, while UTAUT explains technology adoption through performance expectancy, effort expectancy, social influence, and facilitating conditions. Scherer et al.'s (2019) meta-analysis of teachers' adoption of digital technology provides support for examining usefulness and ease of use alongside psychological, social, and contextual factors. These concepts help explain why teachers may value AI for their professional work.

TAM and UTAUT are useful in explaining technology adoption, but are mainly concerned with behavioural intention and actual use. Such models may not fully capture the pedagogical, professional and ethical judgements involved in the educational use of AI. This is because, in educational settings, teachers evaluate more than the functionality of AI tools. They also consider whether AI is pedagogically appropriate, ethically acceptable, educationally sound, and consistent with their professional values (Celik, 2023; Holmes et al., 2019). In this case, AI acceptance involves more than judging usefulness or ease of use. Acceptance involves balancing potential instructional benefits with professional and ethical responsibility.

Therefore, AI acceptance is not a matter of choosing or rejecting technology. It also involves professional reflection and evaluation. This view is especially relevant to mid-to-late-career teachers, whose responses may be shaped by beliefs, knowledge, and professional values developed through years of classroom experience (Borg, 2015).

In southern Vietnam, Lap et al. (2025) combined narrative responses from eight veteran EFL teachers with a survey of 116 primary and secondary school teachers. The participants recognised practical benefits of AI while highlighting concerns regarding digital skills and ethical issues. This mixed-methods study shows that favourable views and reservations can coexist among experienced teachers. However, the study examined existing perceptions and reported practices, leaving changes following guided classroom use unexamined.

Sa et al. (2026) examined 27 Vietnamese EFL teachers before and after three weeks of training and coaching to develop AI chatbots. They found a significant increase in chatbot acceptance, while teachers' confidence varied. The study examined chatbot training, but did not address changes in teachers' views of AI for teaching, student learning, and ethical use after guided classroom use of AI-supported materials.

The present study extends the previous studies by examining how university EFL teachers' views of AI for teaching, student learning, and ethical use changes after guided classroom use of AI-supported materials. It does not test the predictive relationships proposed by TAM or UTAUT.

Teaching-related, learning-related, and ethical perceptions of AI integration

Üzüm et al. (2025) categorize teachers' perceptions of AI use in three areas: teaching-related, learning-related, and ethical perceptions. Their scale development study involved school teachers in eastern Türkiye, with separate samples of 424 and 173 for exploratory and confirmatory factor analyses. The final scale comprised 15 items across the three areas. This provides an empirical basis for examining the dimensions separately, although its validation in that setting does not by itself establish validity among university EFL teachers in Vietnam. The present study uses the same three areas to investigate baseline perceptions and changes following guided AI engagement.

Teaching-related perceptions refer to teachers' beliefs about how AI contributes to instructional effectiveness, classroom practice, lesson preparation, and pedagogical decision-making. In a qualitative analysis of 150 posts and comments from three public Facebook groups involving teachers from various countries, Floris (2025) identified exchanges about teaching activities, assessment, resource sharing, and improving AI tools. The discussions also included concerns about dependence on AI and reduced teacher-student interaction. Derakhshan and Ghiasvand (2024) interviewed 30 research-active EFL teachers in Iran about ChatGPT in language teaching, learning, assessment, and research. The teachers identified possible benefits, including reduced teaching workload and more personalised learning, but also raised concerns about reduced creativity, plagiarism, and cheating in online assessments. These studies describe teachers' views of AI's possible uses and limitations; neither establishes whether AI improves classroom teaching or student learning. In the present study, teachers' use of human-reviewed, AI-supported materials provides a concrete basis for judging instructional value while retaining responsibility for teaching decisions.

Learning-related perceptions refer to teachers' views of AI's possible effects on student learning. The scale used in this study addresses reasoning, motivation, independent learning, and curiosity (Üzüm et al., 2025). In a cross-sectional survey of 321 university teachers in Spain, Cabellos et al. (2024) found more favourable

views of AI for teachers' work than for students' learning processes. Pedagogical beliefs and previous AI use were associated with these views, while teaching experience did not show a statistically detectable relationship. These findings support examining teaching-related and learning-related perceptions separately and caution against treating career stage alone as an explanation of acceptance.

Ethical perceptions represent a third dimension of AI acceptance. Ethical issues related to the use of AI include plagiarism, authorship, bias, transparency, data privacy and accountability (Cotton et al., 2024; Holmes et al., 2019). Empirical evidence shows how these issues enter educators' professional judgments. At a university school of languages in Türkiye, Kamali et al. (2024) analysed 37 educators' metaphors and 11 semi-structured interviews using activity theory. The findings showed tensions between personal ethical standards, professional responsibilities, and institutional expectations, including uncertainty about how ethical principles should guide AI use. The ethical concerns reported by veteran EFL teachers in Vietnam (Lap et al., 2025) further indicate that practical interest in AI can accompany reservations about responsible use. These studies describe concerns in particular settings but do not establish how they change after guided engagement. In the present study, ethical perceptions are examined alongside teaching-related and learning-related perceptions to consider how teachers judge responsible use after classroom experience and reflection.

Research on guided AI learning also suggests that confidence and responsible judgment need to be considered separately. Huynh et al. (2025) randomly assigned 57 pre-service teachers in Vietnam to a one-day workshop covering AI tools with pedagogical and ethical considerations or AI tools alone. The pretest and post-test results did not show a statistically detectable difference between the two groups in AI competence self-efficacy or anxiety. However, participants in the workshop that included pedagogical and ethical considerations referred more clearly to ethical concerns and the limitations of AI in their written reflections. This suggests that questionnaire scores alone may not fully show how teachers respond to guided AI learning. Huynh et al.'s (2025) study involved pre-service teachers in a one-day workshop, so its findings cannot be directly applied to experienced EFL teachers using AI in their classrooms over a longer period.

In the present study, the first research question establishes the participants' baseline perceptions across three areas. The second examines whether these perceptions change in similar or different ways following four weeks of guided AI engagement. The study contributes evidence about this distinction among mid-to-late-career university EFL teachers in Vietnam, without assuming that classroom use produces uniformly more favourable views. Its one-group pretest–posttest design can identify changes following engagement, but cannot establish that the intervention caused them.

Method

Research design

This study employed a one-group pretest-post-test design within a quantitative-dominant mixed-methods approach. It investigated changes in teachers' AI acceptance and their explanations for the observed changes. The quantitative component measured teachers' AI acceptance before and after the intervention, while qualitative interviews after the intervention were used to explain and illustrate

the quantitative findings. As the study did not include a comparison group, the findings indicate changes following the intervention and do not establish its causal effects.

The study was conducted in a university EFL context in Vietnam, where *General English* is a mandatory course for first-year students. Teachers involved in this study were recruited through a combination of purposive and convenience sampling. They met the following criteria: they were between 40 and 55 years old, had at least 17 years of English language teaching experience, and reported limited prior use of AI tools for educational purposes.

The study focused on teachers with extensive classroom experience because much recent research on AI acceptance has examined pre-service teachers (Castillo-Cuesta et al., 2025; Runge et al., 2025; Zhang et al., 2023), while less is known about how experienced EFL teachers' perceptions change following guided classroom engagement with AI. Also, teachers with extensive professional experience often hold more established pedagogical beliefs and may therefore respond differently to educational changes than novice or early-career teachers (Borg, 2015).

Before participating in the study, all teachers in this study were informed about the purpose of the research, the research procedures, and how the collected data would be used. They all gave their informed consent before taking part in the study. Participation was voluntary, and they could withdraw from the study without penalty. Teachers' identities were kept confidential, and identifying information was removed from the questionnaire data, interview transcripts, and research report.

Twenty teachers initially agreed to participate. However, only 18 participants completed both the pretest and post-test. Two teachers withdrew because of timetable changes and teaching commitments. The quantitative analysis included the 18 teachers who completed both questionnaires.

Teaching materials

The teaching materials used during the intervention were developed primarily using ChatGPT, Gemini, and AI applications for image generation and voice synthesis. The materials were based on the university's *General English* syllabus, which follows communicative language teaching and task-based language teaching principles. It is also aligned with CEFR Level A2. The materials also drew on the university's annual teacher and student feedback on learning activities, lesson topics, classroom interaction, language skills, and language elements. They included classroom activities and listening tasks with AI-generated audio. Before being used in the study, the AI-generated content was reviewed and revised by experienced teacher educators.

The use of AI-supported teaching materials was intended to reflect routine teaching practice more closely than the use of isolated AI-generated activities. In everyday classroom practice, teachers make decisions about lesson planning, materials selection, activity sequencing, assessment, and classroom implementation. The inclusion of AI-generated content within human-reviewed instructional materials therefore allowed participants to assess its pedagogical value as part of classroom teaching rather than as a standalone technological product.

Research instruments

The quantitative instrument was the *AI Acceptance Questionnaire* adapted from Üzüm et al. (2025). The questionnaire comprised 15 items measuring three dimensions: teaching-related perceptions (7 items), learning-related perceptions (4 items), and ethical perceptions (4 items). All items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Üzüm et al. (2025) reported satisfactory validity and reliability for the original instrument. In the present study, internal consistency was examined using Cronbach's alpha before the main analysis. The overall questionnaire yielded a Cronbach's alpha of .715, indicating acceptable internal consistency.

The qualitative instrument was an individual semi-structured interview guide designed to examine participants' experiences during the intervention. The questions focused on AI's strengths, limitations, pedagogical value, influence on student learning, and ethical implications. The interviews provided accounts of teachers' experiences to help interpret the teaching-related, learning-related, and ethical questionnaire findings.

Research procedure

The study consisted of three phases: pre-intervention, intervention, and post-intervention.

Pre-intervention phase

Before the intervention, the participating teachers attended an introductory session during which the study procedures were explained. The session also provided the participants with an opportunity to discuss their initial views of AI use in teaching. These discussions were not treated as formal baseline data. The participants then completed the *AI Acceptance Questionnaire* to establish their baseline levels of teaching-related, learning-related, and ethical perceptions of AI.

Intervention phase

The intervention lasted four weeks. During this period, the participating teachers taught *General English* using AI-supported instructional materials for three hours per week, giving a planned total of 12 classroom hours per teacher. The four-week duration was selected to provide the participants with repeated classroom experience using the materials within the available academic schedule.

The intervention began with an orientation workshop introducing the AI-supported teaching materials. All participants examined a sample unit and discussed its learning objectives, teaching procedures, AI-generated content, supplementary resources, expected learning outcomes, and ethical considerations. Members of the materials development team led the discussion.

Following the workshop, the participants used the materials in their own *General English* classes for four weeks. They were encouraged to use the AI-supported materials as designed but were also permitted to use other AI tools for lesson preparation and classroom planning.

The intervention did not focus primarily on developing technical AI skills. Instead, it provided the participants with opportunities to use AI-supported materials in their normal teaching contexts and to reflect on their pedagogical value. The intervention was therefore designed to examine changes in teaching-related,

learning-related, and ethical perceptions following guided AI engagement. In this study, guided AI engagement involved an orientation workshop followed by classroom use of human-reviewed, AI-supported teaching materials.

Post-intervention Phase

At the end of the intervention phase, the 18 teachers who completed the study answered the *AI Acceptance Questionnaire* for a second time. They were also invited to participate in individual semi-structured interviews to reflect on their experiences using AI-supported teaching materials during the intervention. The interviews focused on their perceptions of AI's strengths, limitations, pedagogical value, influence on student learning, and ethical implications. All interviews were audio-recorded with the participants' consent and transcribed for qualitative analysis.

Data analysis

Quantitative data were analysed using IBM SPSS Statistics Version 22. Descriptive statistics were first calculated to examine the participating teachers' baseline levels of teaching-related, learning-related, and ethical perceptions of AI. Because the questionnaire used Likert-scale responses and the sample was relatively small, medians and interquartile ranges were reported as the primary descriptive statistics. Means and standard deviations were also reported to allow comparison with previous studies.

Differences between pretest and post-test scores were analysed using the Wilcoxon signed-rank test. Separate tests were conducted for teaching-related, learning-related, and ethical perceptions. The Z statistic, two-tailed p value, and effect size (r) were reported for each analysis. Statistical significance was set at $p < .05$.

Qualitative interview data were analysed to complement the quantitative findings. Rather than generating independent themes, the interview data were used to explain and illustrate the quantitative results through examples of the participants' experiences and reflections. The interview excerpts were presented alongside the corresponding teaching-related, learning-related, and ethical findings. These domains were used to organise the presentation rather than treated as themes generated independently from the interviews. The excerpts illustrate possible explanations of the questionnaire patterns; they do not establish how frequently a view occurred across participants.

Findings and Discussion

Findings

Baseline perceptions before guided AI engagement

To address the first research question, descriptive statistics were calculated to examine the participants' baseline levels of AI acceptance before the intervention. As shown in Table 1, the median scores for teaching-related and learning-related perceptions were 3.71 (IQR = 0.75) and 3.63 (IQR = 1.75), respectively. Both were above the midpoint of the five-point response scale, although learning-related perceptions showed greater variation. The ethical dimension had the highest median score, at 4.25 (IQR = 0.75). These scores describe the three dimensions separately and should not be read as a single overall level of acceptance.

Table 1. Baseline scores across the three perception dimensions (N = 18)

Dimension	Mean	SD	Median	IQR
Teaching-related perceptions	3.63	0.57	3.71	0.75
Learning-related perceptions	3.60	0.85	3.63	1.75
Ethical perceptions	4.26	0.48	4.25	0.75

Changes in AI acceptance following guided AI engagement

To address the second research question, Wilcoxon signed-rank tests were conducted to compare the participating teachers' pretest and post-test scores across the three dimensions of AI acceptance. Table 2 presents the test results, and Table 3 shows the direction of individual score changes. The results for each dimension are presented below alongside interview excerpts that help explain the participants' responses.

Table 2. Wilcoxon signed-rank tests of pretest and post-test scores (N = 18)

Dimension	N	Z	p (two-tailed)	Effect size (r)
Teaching-related perceptions	18	-1.946	.052	.46
Learning-related perceptions	18	-0.201	.841	.05
Ethical perceptions	18	-2.731	.006	.64

Table 3. Number of participants by direction of score change (N =18)

Posttest minus pretest	Teaching-related	Learning-related	Ethical
Decrease	3	5	11
Increase	14	10	2
No change	1	3	5
Total	18	18	18

Teaching-related perceptions

Teaching-related scores showed an upward tendency (Z = -1.946, p = .052, r = .46), but the difference did not meet the stated .05 threshold (Table 2). Fourteen teachers reported higher post-test scores, three reported lower scores, and one showed no change (Table 3).

The teaching-related excerpts describe practical benefits for lesson preparation and the perceived suitability of the materials for classroom use. One teacher explained:

> *Now, I have started using ChatGPT and Gemini to design classroom activities. They save me time and provide many useful suggestions* (T2.1).

For T2.1, the benefit involved both saving preparation time and obtaining ideas for classroom activities. The statement also described starting to use ChatGPT and Gemini, linking the positive evaluation to reported use. Another participant commented:

> *AI tools are genuinely helpful. I may not be as fast as younger colleagues, but once I started using them, I could clearly see their advantages* (T3.2).

T3.2 acknowledged a slower pace than younger colleagues while still identifying benefits after using the tools. This account suggests that perceived usefulness could coexist with reservations about the pace of learning to use AI.

The other teaching-related excerpts concerned the materials themselves. One teacher remarked:

> *I was very impressed by the teaching materials generated for this chapter, especially the listening tasks with native-speaker audio. Before the workshop, I assumed that only native speakers could produce materials like these* (T11.1).

T11.1 contrasted an earlier assumption about who could produce listening materials with a favourable assessment of the materials presented. The reference to native-speaker audio describes the participant's impression of the listening tasks. Another teacher observed:

> *The structure and pedagogical sequencing of the chapter are highly logical and comparable to published textbooks. In fact, they are better tailored to our needs and time constraints, making them more practical for both teachers and students* (T6.2).

T6.2 evaluated the materials against familiar teaching requirements: logical sequencing, classroom needs, and available time. The perceived benefit therefore concerned how well the materials fitted the course, as well as their quality.

Taken together, these comments help explain the upward tendency in teaching-related scores. However, the materials had been reviewed and revised by teacher educators before use, so the favourable judgments concerned AI-supported materials with human review. The excerpts do not show how the teachers would evaluate unreviewed AI output.

Learning-related perceptions

Learning-related scores showed no statistically detectable difference following the intervention ($Z = -0.201$, $p = .841$, $r = .05$). Ten participants reported higher post-test scores, five reported lower scores, and three showed no change. The overall result therefore does not mean that perceptions were unchanged for every participant.

The learning-related excerpts describe concerns about students completing work with limited teacher oversight. One participating teacher explained:

> *AI can be useful, but it may also make my students more passive, especially when we cannot monitor how they use AI at home* (T5.2).

T5.2 acknowledged possible usefulness while questioning how actively students would engage when using AI at home. The concern was tied to a setting in which the teacher could not readily monitor the learning process. Another teacher commented:

> *Students at this level can easily use AI to generate essays or complete homework assignments without our knowledge* (T9.3).

T9.3 focused on whether teachers could tell how an assignment had been completed. An AI-generated essay or homework response could make it difficult to judge the student's own contribution.

These comments help explain why favourable views of AI for lesson preparation could coexist with caution about student use. They are consistent with the absence of a clear overall difference in learning-related scores. However, they describe teachers' concerns about possible behaviour; they do not demonstrate that students became more passive, used AI inappropriately, or learned less during the intervention.

Ethical perceptions

Ethical perception scores decreased following the intervention ($Z = -2.731$, $p = .006$, $r = .64$). Eleven participants reported lower scores, two reported higher scores, and five showed no change.

The ethical excerpts describe acceptance of AI use subject to teacher judgment and guidance. As one teacher explained:

> *It's acceptable for teachers to use AI. Teachers should try it first and then decide when it should and should not be used. Now I'm much more confident using ChatGPT and Gemini when preparing lessons. They are really helpful-much better than simply using Google Search* (T16.1).

T16.1 presented trying AI as a basis for deciding when its use was appropriate. The account linked confidence in lesson preparation with a continuing responsibility to decide when AI should and should not be used. The positive judgment was therefore conditional on the purpose and circumstances of use. Another participant remarked:

> *My students will use AI whether I allow it or not. I'd rather guide and monitor their use than simply prohibit it* (T15.1).

T15.1 expected students to use AI even if it was prohibited and expressed a preference for guidance and monitoring. This statement describes a proposed response to student use; it does not confirm that monitoring had already occurred or that misuse had been prevented.

These comments offer a possible explanation for the change in ethical scores by showing how participants described acceptable use in relation to teacher

judgment, guidance, and monitoring. However, the post-intervention excerpts do not establish a measured increase in ethical understanding or a shared change among all participants. The decrease in ethical scores coexisted with conditional judgments in these accounts, but the evidence does not establish improved ethical practice.

Discussion

Baseline perceptions before guided AI engagement

The baseline findings challenge the view that experienced teachers with limited prior use of AI are necessarily resistant to it. A similar pattern was reported by Lap et al. (2025), whose veteran EFL teachers in southern Vietnam recognised the practical benefits of AI while also expressing concerns about digital skills and ethical issues. This shows that limited experience with AI does not necessarily mean that teachers are unwilling to consider its use in education. The different views on student learning also show that experienced teachers should not be treated as a group with the same views about AI.

Career stage alone may therefore not explain these perceptions. Cabellos et al. (2024) found that university teachers' views of AI were related to their pedagogical beliefs and previous AI use, but not to their teaching experience. This is relevant to the participants in the present study because long teaching experience does not necessarily mean extensive experience with AI. Their professional experience may help explain how they assess AI, but it should not be treated as the direct cause of their attitudes.

Changes in AI acceptance following guided AI engagement

The teaching-related response is best understood in terms of perceived usefulness for familiar professional tasks. This interpretation corresponds with Floris's (2025) findings of teachers sharing AI resources for teaching activities and assessment in online groups. The present study shows how teachers evaluated such uses within an existing *General English* course. AI may therefore be more acceptable when it is seen as useful for established teaching needs, although this does not mean that teachers support all uses of AI in education.

Human judgment may also help explain this practical acceptance. The AI-supported materials used in the study were reviewed by teachers before they were used in class. Therefore, the positive responses cannot be attributed to AI alone. The professional value of AI may therefore depend partly on teachers' continued control over materials and classroom decisions (Nazaretsky et al., 2022). This interpretation places teacher judgment within the account of acceptance, not as an obstacle in using AI.

The learning-related findings can be understood through the distinction between usefulness for teaching and benefits for student learning. Cabellos et al. (2024) found more favourable views of AI for teachers' work than for students' learning processes. A similar distinction appeared in the present study after the teachers had used AI-supported materials in their classes. A possible explanation is that teachers could assess the immediate usefulness of the materials more readily than their effects on independent learning. Their caution may therefore reflect different grounds for evaluating teacher and student uses of AI.

Ethical perceptions showed the clearest quantitative change following the intervention. The main interpretive issue, however, is how teachers judged acceptable use. The interview accounts point to judgments based on purpose and teacher guidance, rather than a simple division between approval and rejection. This corresponds with Kamali et al.'s (2024) study of language educators in Türkiye, which showed tensions between personal ethical standards, professional responsibilities, and institutional expectations. Both studies suggest that ethical acceptance involves deciding under what conditions AI use is appropriate.

Huynh et al. (2025) offer a comparison with a randomised workshop study of pre-service teachers in Vietnam. Adding ethical and pedagogical content to tool training did not produce statistically detectable differences between the groups in changes in overall AI self-efficacy or anxiety. Written reflections in that condition nevertheless gave more attention to ethical issues and AI's limitations. This suggests that questionnaire results may not fully show how participants think about responsible AI use.

Belief recalibration is proposed to explain how experienced teachers may reconsider their use of AI based on their professional experience. The model suggests that teaching-related, learning-related, and ethical views may change in different ways rather than all moving in the same direction. Its contribution is to distinguish judgments about particular educational uses from general approval of AI. This proposal draws on teacher cognition research linking teachers' beliefs and knowledge with classroom experience (Borg, 2003), and on Cabellos et al.'s (2024) distinction between judgments about teaching and student learning.

Figure 1 presents the proposed model. Guided AI engagement is proposed to provide opportunities for teachers to reconsider teaching-related, learning-related, and ethical perceptions. Prior professional experience and established pedagogical and ethical beliefs form a proposed professional filter through which teachers assess AI in relation to classroom needs and responsibilities.

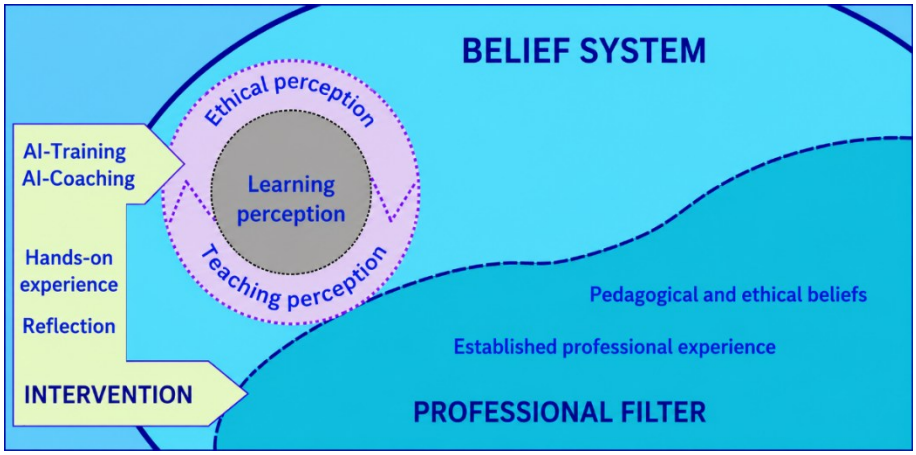


Figure 1. A conceptual model of belief recalibration in teachers' AI acceptance

Implications for teacher professional development

The findings have implications for teacher professional development. AI training should extend beyond technical instruction to include guided classroom use, professional reflection, and opportunities for teachers to evaluate AI in relation to actual teaching needs. Professional learning programmes may include comparisons

between AI-supported and teacher-produced materials, discussion of classroom experiences, and examination of ethical problems. These proposals are consistent with Kamali et al.'s (2024) call for professional development on ethical judgment and Huynh et al.'s (2025) findings on the role of ethical and pedagogical content in teachers' reflections. Sperling et al. (2024) also identified gaps in teachers' practical and ethical AI knowledge in their review of teacher education research.

Professional development should also distinguish between AI for teaching and AI for learning. The concerns found in the present study, together with those reported by Cabellos et al. (2024) and Floris (2025), suggest that attention should be given not only to the quality of students' final work but also to how the work is completed. In a course for pre-service language teachers, Moorhouse et al. (2024) found more evidence of improvement in pedagogical AI competence than in trainees' ability to guide students' responsible use of AI. Training could include ways to make students' own contributions visible, discuss acceptable AI assistance, and check understanding after AI-supported assignments.

Conclusion

This study examined changes in AI acceptance among mid-to-late-career EFL teachers following four weeks of guided engagement with AI-supported teaching materials. Different patterns emerged across the three dimensions. Teaching-related perceptions showed an upward tendency but did not reach the .05 significance threshold, while learning-related perceptions showed no statistically detectable overall change. Ethical perceptions showed a statistically significant pre-post difference. Interview accounts showed greater confidence in AI for teaching, continued caution about student use, and conditional judgments about responsible use.

These findings suggest that experienced teachers may judge AI differently depending on whether it is used for teaching, student learning, or ethical purposes, rather than simply accepting or rejecting AI as a whole. The belief-recalibration model is therefore proposed as a way to interpret these different judgments and should be examined further in future studies. Professional development should include guided classroom use, reflection, and separate attention or discussion of AI use by teachers, AI use by students, and ethical issues.

The findings should be interpreted with several limitations in mind. The study involved a small number of participants from one university, the intervention lasted only four weeks, and there was no comparison group. Participants may also have differed in how they used other AI tools during the study. Future research should examine belief recalibration over longer periods, with larger and more varied samples and in different educational settings. It should also verify the scoring and interpretation of ethical-perception measures and examine how teachers' perceptions relate to classroom practices and student learning outcomes.

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