

RETHINKING TEACHER COMPETENCIES: AI LITERACY AMONG ELT TEACHERS IN UZBEKISTAN

Sedigheh Shakib Kotamjani, Maftuna Artikova Abdulpattoyevna

Department of English Language Teaching, Central Asian University, Tashkent, Uzbekistan

The rapid integration of generative AI into higher education has transformed English language teaching (ELT), challenging traditional understandings of teacher competencies. Although the debate on AI tools and student learning has been a subject of research, the impact of AI literacy on teachers' professional roles has received less scholarly attention. This qualitative research is based on the multidimensional framework of AI literacy and examines the views of in-service ELT teachers in Uzbekistan on AI literacy following professional development training. Ten teachers (n=10) from higher education institutions were interviewed using semi-structured methods, with thematic saturation used to determine the number of participants. The results show that AI literacy encompasses more than just knowledge of the technology; it is defined by four interconnected skills: Critical Evaluation of AI-generated content, Prompt Literacy, AI-responsive assessment redesign, and Ethical Mediation. Teachers were more likely to shift their role from a passive user of AI tools to an evaluator and critical mediator. In particular, assessment methods progressed from product assessment to assessments focused on process and transparency. The study suggested the need to introduce the concept of AI literacy as a multi-dimensional professional competency to be incorporated into ELT teacher education programs. Recommendations for curriculum reform, professional development program design, and policy on AI literacy in the context of Higher education in Central Asia are presented.

Keywords: AI literacy, ELT teachers, teacher competencies, generative AI, teacher education, Uzbekistan

Introduction

AI, namely ChatGPT, Gemini, MagicSchool AI, and Diffit, has been a game-changer in higher education with its rapid development. AI tools are being adopted in English language teaching (ELT) to assist teachers with lesson planning, creating lesson materials, evaluation, personalized teaching, and student engagement. The advent of AI technologies introduces novel opportunities for teaching and learning support but also raises questions regarding the role of a teacher and the skills they require (Ebrahimi et al., 2025).

Recent conversations around AI in education have predominantly focused on the advantages and challenges of using AI for learning, students' attitudes towards AI-assisted learning, and ethical issues concerning intellectual honesty (Kasneci et al., 2023; Tlili et al., 2023). Fewer, however, have considered how AI literacy is changing the professional capabilities required of language teachers. Teachers in an environment of teaching with AI no longer only provide content, but they also act as evaluators, mediators, ethical advisors, and pedagogical decision-makers.

AI technologies are being rapidly introduced in teacher education settings without reconceptualizing teacher competencies, making this issue especially salient. AI integration in higher education has introduced a new demand for professional development initiatives in Uzbekistan that prioritize fostering critical and pedagogical engagement with AI tools among teachers. As AI becomes increasingly embedded in higher education, there is a need for

professional development programs in Uzbekistan to cultivate critical and pedagogical understanding of AI tools among educators.

Therefore, this study explores how in-service ELT teachers conceptualize AI literacy after participating in AI literacy training workshops. This study does not just focus on the technical aspects of AI; it seeks to understand its impact on teachers' pedagogy, assessment strategies, and professional identities.

The following research question is explored in the study:

What are the in-service ELT teachers' conceptions of AI literacy and its impact on pedagogy after attending the training?

Literature Review

AI literacy has become a crucial skill in the education system in recent years. AI literacy is defined by Long and Magerko (2020) as the capacity to critically engage, comprehend and assess AI technologies. In language education, AI literacy goes beyond the technical aspect: It encompasses ethical awareness, the critical assessment of AI-generated content, and pedagogical decision-making. On this basis, Ng et al. (2021) suggest a multidimensional AI literacy model that consists of four interconnected strands of competency: (1) Knowledge and understanding of AI systems and their mechanisms; (2) Using and applying AI tools effectively in context; (3) Evaluating and creating with AI, which refers to making critical assessments of the outputs produced by AI; and (4) AI ethics, which involves using AI systems and the tools responsibly, transparently, and equitably. It has become a widely adopted concept in educational research because it encompasses the technical and socio-ethical aspects that teachers and students need to address when interacting with AI. Since then, complementary frameworks have been developed, for instance the European DigComp 2.2 framework (Vuorikari et al., 2022), that expands the digital competency descriptors to incorporate skills related to AI such as interacting with AI systems and understanding algorithmic decision-making, or the adaptations of the classic Technological Pedagogical Content Knowledge model, referred to as TPACK-AI (Celik, 2023).

In other words, the use of generative AI in language teaching and academic writing has been emphasized in previous studies (Kohnke et al., 2023; Zhai, 2022). Generating lessons, providing differentiated instruction, automating feedback, and aiding lesson planning are all ways AI tools can help. But there have been concerns about information hallucinations, algorithmic bias, overreliance on AI, and adverse impacts on students' critical thinking abilities (Kasneci et al., 2023).

Recent research indicates that teachers need to acquire new skills to incorporate AI. These include critical AI literacy, the skills to critically assess AI-generated outputs, and ethical mediation (Ng et al., 2021). It is especially pertinent to mention Ng et al. (2021), who present a framework for literacy in AI that treats it as a professional competency rather than a single technical skill, as it entails critical thinking, ethical reasoning, and pedagogical judgment. In addition, the emergence of pedagogical practices of prompt engineering and AI-human collaboration have started to reshape pedagogical practices and assessment design.

In addition to AI literacy frameworks, researchers have started to explore the impact of AI integration on teachers' professional identities. In addition to AI literacy frameworks, researchers have begun investigating the implications of AI integration for teachers' professional identity. In fact, digital technologies and artificial intelligence are not neutral tools, but socially embedded systems that reimagine job roles and power dynamics in education, according to Selwyn (2019). Analogously, Luckin (2018) argues that it is AI that forces us to reimagine what teachers do and to

move beyond the role of knowledge dispenser to that of higher-order facilitator, mentor, and critical guide. This transformation holds especially great promise for ELT contexts where AI tools are increasingly replacing repetitive language-learning tasks, including grammar correction and vocabulary drilling, and where teachers assume the role of creating meaningful, communicative situations and acting as ethical facilitators of AI-infused language learning. This work is therefore not just about technical skills but also about the evolving ideas of teachers' professional self-concepts that develop as they engage critically with AI tools.

Another emerging competency that has garnered increasing interest in the research literature is prompt literacy—the skill of creating, modifying, and assessing prompts that will generate contextually appropriate and pedagogically valuable output from generative AI systems. White et al. (2023) outline patterns of prompts to achieve more effective AI interactions, and Zamfirescu-Pereira et al. (2023) show that even motivated users lack a way to achieve more effective AI interactions without practicing and being metalinguistically aware. In the language-learning context, prompt construction is a skill similar to that of a skilled writer or communicator: accuracy, audience sensitivity, and revision. Although its relevance to language learning cannot be overstated, prompt literacy remains underexplored in the CALL and ELT literature, and this study helps fill this gap.

While there is an increasing body of research on AI in education, there is a relative lack of research examining how AI literacy can impact the competencies of ELT teachers in higher education settings, especially in Central Asia. The region's educational legacy from the Soviet Union, which emphasizes standardization through a top-down approach to curriculum development, a transmission model of pedagogy, and varying levels of digital infrastructure, results in unique challenges and opportunities for AI integration (Khasanov & Sharipov, 2022). This study therefore makes an original contribution to the literature by exploring the pedagogical role redefinition of the in-service ELT teachers in the context of the introduction of AI in the teaching and learning process in Uzbekistan. To analyze the teachers' competency development, the present study uses Ng et al.'s (2021) multidimensional framework of AI literacy as the conceptual lens. The study maps the emerging practices onto the theoretically grounded taxonomy of the AI literacy dimensions.

Methodology

The study employed a qualitative exploratory research design to examine in-service ELT teachers' perspectives on their AI literacy following the AI integration workshops. Ten in-service English language teachers ($n=10$) at HEIs in Uzbekistan were selected based on thematic saturation and interviewed using a semi-structured format.

Participants were selected using purposive sampling, which is appropriate for qualitative research, in which a researcher seeks to identify information-rich cases to illuminate the phenomenon under study (Creswell & Poth, 2018). In particular, participants were selected by the following criteria: (1) being in-service ELT teachers in both higher education and language education institutions in Uzbekistan; (2) actively participating in the professional development workshops on AI. The criterion-based approach ensured that all participants had a first-hand experience of AI integration in a context relevant for the research question, within the last 12 months. Ten teachers were deemed sufficient to achieve thematic saturation, which is recommended for homogeneous qualitative samples (Guest et al., 2006). Demographic information of participants is summarized in Table 1.

Table 1

Participant Demographic Profile (n=10)

Pseudonym	Institution Type	Teaching Context	Experience
Teacher 1	State University	Academic English; ELT Methodology	11–15 years
Teacher 2	State University	General English; Language Skills	6–10 years
Teacher 3	State University	Academic Writing; Curriculum Design	6–10 years
Teacher 4	State University	Academic English; ESP	1–5 years
Teacher 5	University Language Centre	General & Academic English; Oral Skills	11–15 years
Teacher 6	State University	ELT Methods; Pre-service Teacher Training	6–10 years
Teacher 7	State University	Academic English; Research Writing	16+ years
Teacher 8	University Language Centre	Academic English; Materials Development	6–10 years
Teacher 9	Private University	General English; Business English	1–5 years
Teacher 10	Independent Language School	Communicative English; Exam Preparation	1–5 years

As indicated in Table 1, the various institutions represented ranged from state universities to a university language centre, a private university, and an independent language school. The teaching experience ranged widely, from early career (1–5 years) to high experience (16+ years), providing a diversity of teaching perspectives. Before the workshops, all participants had limited experience with the use of generative AI tools in their teaching and mainly used it for their own productivity and personal use.

Participants attended a series of professional learning sessions on AI literacy as part of ELT curricula. The workshops familiarized the teachers with different AI tools: ChatGPT, Gemini, Diffit, MagicSchool AI, Quizgecko, Curipod, and Twee. Semi-structured interviews of about 20-30 minutes duration were used to gather data. Interviews focused on participants' experiences of using AI in instruction, evaluation, ethical issues, and professional decision-making.

Thematic analysis, according to the six steps proposed by Braun and Clarke (2006), was employed to analyze the interview data. Initial coding was conducted inductively, and recurring patterns were organized into broader themes of AI literacy and teacher competencies.

In order to increase the trustworthiness of the results, the following strategies were adopted after the rigour criteria of Lincoln and Guba (1985) in qualitative inquiry. Credibility was supported by extended interaction with participants throughout the workshop series, thus contributing to the researcher's contextual familiarity before data collection. To ensure member checking, preliminary versions of the themes were shared with a subsample of participants, who affirmed that the themes were an accurate representation of their experiences. Dependability was ensured by maintaining a reflexive audit trail that documented the analytical decisions made at each stage of the thematic analysis process. To ensure confirmability, a colleague who was familiar with the field of qualitative ELT research checked the coding framework and gave feedback on the themes that emerged. Transferability is recognized as partial because the results are specific to the context of higher education in Uzbekistan, and the themes identified may have relevance to other programs of AI integration in similar contexts of higher education that may exist in other post-Soviet or emerging-economy educational environments.

The researcher's reflexivity was taken into account in the research process as well. The author, as an insider, involved in the design and facilitation of the AI literacy workshops, was cognizant of the potential impact of this role on participants' reactions to the workshops and on interpretations of the findings. During the thematic analysis stage, this positionality was made explicit, and special attention was paid to identifying the participants' voices in their own statements and the researcher's biases regarding the nature of the integration of AI.

This study has been approved for ethical treatment of data collected before data collection by the relevant institutional review board. The objective of the study, voluntary withdrawal rights, and data privacy were explained to all participants. Informed consent was obtained in writing from all participants prior to interviews. Identifying information was deleted during transcription, and pseudonyms were used to guarantee anonymity in the entire process of analysis and reporting.

Findings and Discussion

Critical AI Literacy and Evaluative Judgment

An important finding from the study was that teachers increasingly saw the ability to critically engage with AI-generated content as the core of AI literacy, not just using AI tools. The participants often talked about issues related to hallucinated information, biased outputs, and inappropriate language levels.

One teacher explained:

“With that in mind, I now always check it before applying it to the classroom, as I know it could hallucinate or get biased information. (Teacher 3)

There was a consensus that teachers must be particularly vigilant and careful when deciding what to allow students to see in the classroom, with a focus on rigorous pedagogical research rather than blindly using whatever AI generates (Teacher 7).

This key orientation was also apparent in the way that teachers explained how they assess the suitability of language level. Teacher 1 commented:

“I do find that AI sometimes comes up with outputs that are too high level or too low level for my students, and it's up to me to determine whether the level is appropriate for who I am working

with.” Teacher 5 also noted that AI tools “*don't know my student's individual needs, so I always tweak the output.*”

These findings indicate that AI literacy is not just about the acceptance and use of the technology, but also about the critical evaluation and engagement with it. This directly corresponds to Ng et al.'s (2021) third dimension of AI literacy: 'Evaluate and Create with AI', which emphasizes the ability to critically analyze AI products instead of taking them at their face value. Additionally, the reported worries about hallucination and bias within the participants' discussion align with the results of Kasneci et al. (2023), who list factually unreliable and algorithmic bias as being among the greatest risks of AI use in educational contexts. Overall, these narratives indicate that ELT professionals in Uzbekistan are beginning to adopt a “critical consumer” attitude toward AI, reflecting a balanced and judicious approach rather than an outright rejection or an uncritical embrace.

Prompt Literacy as a New Pedagogical Competency

Prompt literacy was another theme that became evident from the interviews. The importance of crafting contextually relevant prompts was addressed by teachers many times.

Teacher 6 stated:

“If there's no prompt in a particular context, you're not going to get something that's relevant.”

Several other participants reported an iterative process of refining the prompts. Teacher 2 explained:

“I write the prompt, I look at what I write and then I rewrite it. I took time to find out that how specific and clear I am is entirely dependent on the quality I get.” Teacher 9 also explained that it was important to have the subject-matter knowledge and linguistic accuracy needed for prompt construction: *“You need subject-matter knowledge enough to tell the AI what you are looking for – the level, the purpose, the context.”*

The result suggests that the ability to build language teaching systems quickly is becoming commonplace. More teachers are editing, modifying and adapting AI-generated products to fit their curricula and students' skill levels. The accounts echo Zamfirescu-Pereira et al.'s (2023) conclusion that effective prompting is a complex skill, one that requires meticulous metalinguistic awareness and repetitive practice. This is also something that is relevant to the identification of reusable prompt patterns by White et al. (2023); teachers in this study seem to be building up a personal repertoire of effective prompting patterns, and this is something that could be more explicitly addressed in professional development courses. Prompt literacy can be seen within the context of Ng et al.'s (2021) framework, which identifies two aspects: the “using and applying” and the “evaluating and creating” aspects of literacy. This indicates that prompt literacy lies somewhere between the technical ability to use literacy and the critical pedagogical judgments it enables.

AI Literacy and Assessment Transformation

There were also major changes identified in assessment practices. Participants made a wide variety of reports regarding the transition from the product-oriented to the reflective and process-oriented assessment.

One participant explained:

Rather than passively receiving a completed piece of written work, I'm now moving to asking my students to share how they used AI tools and what they did or did not accept. (Teacher 4)

Teacher 8 noted:

“No longer assessing their competence, we are assessing how efficacious they are, in getting the tool out of them.”

Teacher 10 gave another voice, stating *“I began assigning marks for the process — for the decisions they're making on AI — not just for what they end up giving me. That's what tells me how they're thinking.”*

This points toward the revolution of assessment literacy in ELT through the use of AI. There is a growing focus on students' thinking processes, critical thinking, and disclosure of AI tools in the classroom. This particular observation by Teacher 8 is of theoretical importance. It represents a paradigm shift in the way competency is understood and measured in AI-powered learning ecosystems: when competency is defined as the ability to call out, filter, and use AI-generated content, rethinking the concept of competency as a learning outcome is required. This also aligns with the ideas of Boud and Molloy (2013), who suggest that sustainable assessment needs to enable learners to think about themselves and their performance, rather than just being assessed against a set of pre-determined criteria. This extends now into the AI age in which students need to be metacognitive about how they interact with the tool. The changes reported here are also connected to Ng et al.'s (2021) fourth dimension of AI literacy: AI ethics, with the teacher holding students accountable for the transparent and responsible use of AI as part of the assessed learning process. The results indicate that the redesign of the assessment is not just a matter of adapting to the new tools and digital technologies of AI but rather a more fundamental pedagogical shift in which agency, transparency, and critical thinking are learning outcomes.

Ethical Mediation and Human-Centered Pedagogy

Finally, teachers highlighted the need to educate students on the proper and ethical use of AI. The functions of participants in the classroom were often described as “active ethical guidance” (Teacher 6) and not merely “passive tool facilitation,” thus focusing on active ethical guidance in the classroom, rather than passive tool facilitation. The mediating role was clearly expressed by Teacher 3: *“Now, I'm not just teaching English, I'm teaching them to use these tools without losing their own thinking if they let AI do everything.”*

Teacher 7 said that he saw some students not trying very hard to think for themselves anymore: *“I noticed that some students were not trying to think for themselves anymore and they were just copying the AI answer.”*

Teachers encouraged students to verify information, acknowledge AI use, •critically evaluate outputs, and avoid relying too heavily on AI-generated material. Importantly, participants positioned themselves as ethically responsible mediators, supporting students as they learn with AI in a critical and responsible manner. This relates directly to the fourth dimension of AI literacy, that is, AI ethics, which includes being responsible, transparent, and equitable with AI systems (Ng et al., 2021). It also aligns with Selwyn's (2019) premise that teachers need to serve as "critical intermediaries" by helping students grasp both how to utilize AI and the values, assumptions, and power dynamics that underpin it. It would seem that the teachers in this study have internalized this role and that ethical mediation is not an adjunct to teaching, but it is at the heart of teaching. This is one of the most significant reported shifts in teacher identity in this study, and should continue to be discussed in future teacher education programs embedded in the context of AI.

Conclusion and Implications

The findings of this study show that AI literacy goes beyond mere technological awareness in ELT. The results show that teachers increasingly view AI literacy as a multidimensional

professional competency that incorporates evaluative judgment, prompt literacy, ethical mediation, and AI-responsive assessment practices.

Moreover, the research underscores the transformation of teacher competencies and professional identities in the context of higher education due to the integration of AI. AI technologies don't seem to be taking the place of teachers, but rather shifting the role of the teacher to become a mediator and pedagogical decision-maker. The results indicate that the ELT teacher training programs in Uzbekistan must go beyond mere technical training in AI and incorporate critical AI skills and values, such as ethical consciousness and AI-ready pedagogical skills, into teacher education programs.

Limitations

There are some limitations to this study that should be noted. Firstly, the limited number of 10 participants was appropriate for the exploratory qualitative design; however, a smaller sample size of ten means findings are not widely applicable to other populations within the ELT or higher education settings. Thus, the study should be seen as hypothesis-generating and not as a confirmatory study. Second, because data were gathered using only self-report interviews shortly after the professional learning workshops, there is a potential for a social desirability bias: participants may have reported more positive or transforming experiences than is documented in their subsequent classroom practice. Since there are no classroom observations, the correlation between teachers' reported AI literacy skills and their actual pedagogical practices cannot be confirmed. Third, the study is exclusively national (higher education institutions in Uzbekistan) and therefore care needs to be taken when generalizing results to other Central Asian, post-Soviet, or Global South school contexts, each of which has its own infrastructural, cultural, and policy context. Lastly, the cross-sectional design only reflects one point in time in a changing landscape, and the AI tools and teacher skills identified in this document can change significantly over time.

These restrictions indicate fruitful avenues for future study. Longitudinal studies of the same educators over one or more years would provide compelling data on the extent to which gains in AI literacy resulting from professional learning translate into lasting shifts in classroom practice and assessment design. Second, a larger-scale study involving more Central Asian countries, such as Kazakhstan, Kyrgyzstan, Tajikistan, and others, would enable cross-contextual comparisons and provide insight into how national policy frameworks, digital infrastructure, and institutional cultures influence AI literacy development in different ways across the Central Asian region. Thirdly, future studies should examine the student experience: What does being assessed as an AI learner look like from the student perspective, and do students acquire metacognitive and ethical skills in using AI that their teachers are now emphasizing? Filling this void would help define a more comprehensive construct of literacy with AI as a co-constructed aspect of the learning environment, as opposed to the teacher's only competency.

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