Perceived need for a teacher education course on assessment literacy development: insights from EAP instructors

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Abstract

Classroom assessment, as a crucial element of the teaching journey, plays a significant part in enhancing student achievement, student learning, and teacher instruction. As such, teachers should possess a good grasp of assessment literacy. This study aimed to explore the EAP teachers' perceptions regarding the demand for in-service training in various areas of language assessment, in particular, examining how a language testing and assessment (LTA) teacher education course would impact the EAP instructors' Language Assessment Literacy (LAL). In this qualitative study, pursuing a descriptive narrative design, 60 EAP instructors were selected through purposive sampling from those who have been working in state universities in Tehran. From these participants, 30 EAP teachers were asked to write narratives regarding their needs for training on LAL, and the other 30 participants were involved in an online semi-structured interview to determine how such a course could promote or inhibit their perceptions and practices of LA and LAL. Using MAXQDA to do content and thematic analysis, the research findings revealed that EAP instructors highly perceived a need for further training especially a practice-based one. In particular, the instructors thought of teacher education courses as contributing to their theoretical and practical knowledge of LAL. Hence, teacher education courses with a specific focus on LAL are highly required, changing EAP teachers' perspectives on LTA, from being taught solely in theory to being taught practically in real classroom environments.

Keywords: EAP instructors, Language assessment, Language assessment literacy, Teacher perceptions, Teacher education course

Introduction

In recent years, the field of education has witnessed a growing emphasis on the significance of Assessment Literacy (AL). The teacher's primary focus in classrooms is learning assessment, that consumes a significant portion of their time. Despite dedicating substantial time to assessment, teachers may vary in their assessment practices and needs (Crusan et al., 2016; Vogt et al., 2020). Classroom assessment has a critical role in the learning process, and that good teaching is inconceivable without good assessment (Eckhout et al., 2005). Stiggins (1999) further supports this notion that the assessment quality directly impacts the pedagogical quality in any classroom.

As teachers attempt to enhance learning outcomes and meet the students' diverse needs, the ability to effectively design, implement, and evaluate assessments has emerged as a crucial factor in their instructional practices. From the perspective of Deluca and Klinger (2010), having a solid understanding of Assessment Literacy is vital in enhancing student achievement, promoting effective student learning, and fostering teacher instruction. Hence, there is an increasing recognition of the need to strengthen teachers with extensive knowledge and skills in assessment literacy.

The term assessment literacy, stemming from Stiggin's (1991) work, refers to a teacher's understanding of how to assess, why they assess, what they assess, the potential assessment challenges, and how to avoid those problems. It also involves understanding the negative consequences of inaccurate and poor assessment. Popham (2004) also emphasizes that assessment literacy involves teachers understanding the principles of assessment to create assessments that accurately measure student achievement and understanding. Moreover, according to Paterno (2001), teachers must possess a comprehensive understanding of the fundamental concepts in assessment practice. This entails having a strong command of the terminologies, the creation, and implementation of assessment methods and techniques, along with a thorough understanding of assessment standards and different approaches for measuring learning. Scarino (2013) argues that second language assessment literacy is crucial as it assists teachers in interpreting and applying information about student performance to enhance teaching (Falsgraf, 2005; Giraldo, 2021; Kremmel & Harding, 2020).

Additionally, assessment literacy assists teachers in selecting appropriate assessment instruments to achieve their learning objectives (Siegel & Wissehr, 2011). Mertler (2002) suggests that assessment literacy is a vital link between student achievement and assessment quality, emphasizing that teachers should possess an adequate level of assessment literacy to be effective in both EFL (English as a Foreign Language) and EAP (English for Academic Purposes) contexts. In the realm of EAP, where language proficiency serves as a gateway for academic success in an English-speaking environment, the significance of assessment literacy becomes even more evident. By refining their language skills and facilitating their integration into academic discourse communities, EAP instructors play a crucial role in preparing English language learners with a non-native background for the challenges of tertiary education. However, the question arises as to whether these instructors perceive a need for specialized teacher education courses concentrated on assessment literacy development in the EAP context.

This study aimed to explore the perceived need for a teacher education course addressing assessment literacy among EAP instructors. By examining the experiences and perspectives of EAP teachers, invaluable insights could be gained regarding their understanding of LAL and their opinions on the potential benefits of assessment literacy training. Likewise, by identifying the perceived needs and preferences of EAP instructors regarding assessment literacy development, this study highlighted the significance of integrating a comprehensive language assessment training into teacher education courses and programs, ultimately enhancing the instructional practices and outcomes in the field of EAP.

Literature review

Assessment literacy and teacher education

Assessment literacy is a crucial aspect of efficient teaching and learning. It refers to the knowledge, skills, and understanding that teachers possess in developing, implementing, and interpreting assessment efficiently. It assumes a pivotal role in promoting the students' learning outcomes and guiding pedagogical decisions. Assessment literacy includes various components that result in effective assessment practices. These components encompass understanding the assessment objectives, picking appropriate assessment practices, constructing valid and reliable tests, interpreting the assessment results, and employing the assessment data to inform instruction (Popham, 2009). Stiggins (1991) has emphasized the significance of teachers' understanding of assessment concepts, including reliability, validity, and fairness, as well as their ability to align assessment with learning objectives.

In 1990, the National Council on Measurement in Education, the National Education Association, and the American Federation of Teachers (AFT) collaborated to create the Standards for Teacher Competence Educational Assessment of Students. Although the standards for Teacher Competence in Educational Assessment of Students (AFT et al., 1990) are considered conventional, they continue to serve as a basis for assessing teacher assessment literacy. These standards present seven competencies that teachers are required to possess in assessment literacy. These competencies entail choosing proper assessment methods, engaging in the creation of assessment methods, the administration and interpretation of assessment results, utilizing the assessment data for making decisions, developing valid grading procedures, communicating the assessment outcomes, and identifying the unethical assessment methods (Standards for Teacher Competence in Educational Assessment of Students, 1990). To measure the assessment literacy of instructors, taking advantage of these standards, multiple-choice questionnaires have been employed (Mertler & Campbell, 2005; Plake et al., 1993). Plake et al. (1993) developed a questionnaire, consisting of 35 items with five multiple-choice questions for each standard. Mertler and Campbell's (2005) questionnaire, called the Assessment Literacy Inventory (ALI), employed five teaching scenarios built upon seven multiple-choice questions, with one question for every standard.

Additionally, other guidelines such as the Standards for Teacher Competence in the Educational Assessment of Students (AFT et al., 1990), the Classroom Assessment Standards (Joint Committee on Standards for Educational Evaluation, 2015), and Assessment Literacy Target Skills and Knowledge (Popham, 2009) provide further guidance for teacher assessment literacy. Various strategies have also been implemented in teacher education courses and programs to develop assessment literacy. These include providing explicit instruction on assessment principles and practices (Pellegrino et al., 2001), involving teachers in collaborative assessment design and analysis (Heritage, 2010), and providing opportunities for reflective feedback and practice (Brookhart, 2013). Likewise, technology-based tools and resources, such as online modules and interactive platforms, have been used to raise teachers' awareness and utilization of assessment concepts (Author, XXXX).

Research has also suggested that various initiatives have played a significant part in promoting teachers' capacity to create high-quality assessment and adopt appropriate

assessment practices (Koh, 2011; Lukin et al., 2004; Mertler, 2009; Sato et al., 2008). Extant studies have indicated that web-based instructional modules can develop teachers' understanding of the foundational statistical concepts that underlie test items (Fan et al., 2011; Zwick et al., 2008). Positive changes have also been found in other areas, such as teachers' ability to communicate the assessment results effectively (Mertler, 2009) and recognize inappropriate, unethical, or illegal assessment methods (Scribner-Maclean, 1999). Darling-Hammond et al. (2017) have argued for considering assessment literacy as a core element of teacher preparation courses and programs, highlighting the significance of mentoring, coursework, and field experiences in developing teachers' assessment skills and knowledge.

Several studies have also underscored the positive effect of assessment literacy on teacher practice. The groundbreaking research on formative assessment by Black and Wiliam (1998) revealed that when teachers possess assessment literacy skills, they can effectively utilize formative assessment strategies to adjust instruction, provide timely feedback, and enhance student engagement. Hattie and Timperley (2007) further highlighted the role of assessment literacy in developing student metacognition and self-regulation, resulting in higher learning outcomes. Teacher education and professional development courses and programs play a pivotal role in promoting pre-service and in-service teachers' assessment literacy. According to Klenowski and Wyatt-Smith (2014), many initial teacher education programs lack a comprehensive focus on assessment literacy. Nonetheless, there exists a growing acknowledgement of the need to integrate assessment literacy into the teacher education curricula.

In brief, effective teaching and learning relies on assessment literacy. While there is a growing recognition of the significance of assessment literacy in teacher education, further research is required to delve into the most effective approaches for promoting assessment literacy among teachers not only in EFL but also in the EAP context. By empowering teachers with assessment literacy skills, teacher education courses and programs can promote students' learning outcomes and contribute to teachers' assessment practices.

Assessment literacy in EAP

The significance of assessment literacy in the field of EAP lies in ensuring the reliability and validity of the assessments used to assess the students' language proficiency, academic skills, and readiness. Several studies have emphasized the significance of assessment literacy in the EAP context. In particular, assessment literacy enables EAP teachers to design reliable and valid tests aligned with the specific language demands of academic disciplines. Cheng and Fox (2017) have argued that assessment literacy allows EAP practitioners to make well-informed decisions regarding assessment approaches, feedback provision, and scoring criteria, thereby promoting the overall effectiveness of EAP courses and programs.

Despite its significance, enhancing assessment literacy in EAP can be challenging. One key challenge is the lack of explicit instruction, formal training, and professional development opportunities for EAP teachers in assessment principles and practices. Research by Coombe et al. (2020) and Wang et al. (2010) indicate that many teachers have limited knowledge of assessment theories and lack familiarity with various assessment methods,

especially in the EAP context. Likewise, the complicated nature of EAP assessment, which often involves assessing both language proficiency and academic skills, poses another challenge. This intricacy requires EAP teachers to possess a deep understanding of disciplinary-specific assessment standards and criteria (Schmitt & Hamp-Lyons, 2015).

EAP teachers are required to familiarize themselves with the concepts related to AL. It is necessary for them to understand what a consensus definition of AL is and how it varies for different groups with diverse needs and levels of involvement in language assessment. However, the level of LAL expected from a professional testing scholar differs from that expected of classroom teachers; the expectations are much higher for the former (Malone, 2013). Additionally, Inbar-Lourie (2013) identifies two distinct components of the LAL construct: Generic and Specific. The Generic dimension encompasses assessment knowledge, applicable to various domains of educational testing. Conversely, the Specific dimension focuses on the assessment knowledge that is specifically required for EFL and EAP teachers to conduct language assessment in their specific area effectively.

To deal with the challenges related to assessment literacy in EAP, various strategies have been proposed by educational researchers and practitioners. One approach is to provide professional development possibilities for EAP instructors that concentrate specifically on assessment literacy (Wang et al., 2008). For example, Tsagari and Vogt (2017) suggest offering training sessions and workshops that cover topics such as rubric development, feedback provision, and assessment design. Another strategy involves sharing of the best practices and developing collaboration among EAP teachers. This can be achieved through virtual collaboration, communities of practice, or online platforms where teachers can exchange experiences, ideas, and resources on EAP assessment.

As a long-term solution, integrating assessment literacy into EAP teacher education courses and programs has been recommended. By incorporating practical experiences and assessment-related coursework, future EAP teachers can promote a solid foundation in assessment practices and principles (Cheng & Fox, 2017). Furthermore, placing assessment literacy in EAP curriculum design can help students to become more aware of assessment criteria and expectations, enabling them to better prepare for academic assessment (Schmitt & Hamp-Lyons, 2015). Hence, further research is required to determine the needs of Iranian EAP teachers regarding assessment literacy and the ways a language assessment teacher education course could enhance EAP instructors' assessment literacy. This study aimed to address the subsequent research questions.

1. How do EAP teachers perceive a need for in-service training in different areas of Language Testing and Assessment (LTA)?
2. How does a language assessment teacher education course promote or inhibit the development of EAP instructors' assessment literacy?

Methodology

The methodology section of this study outlines a descriptive narrative design (Edmonds & Kennedy, 2017) employed to delve into the complexities and intricacies

of EAP teachers' perceived need for a teacher education course on assessment literacy, aiming to uncover meaningful insights and enhance the existing knowledge base in the domain of AL. This design was picked to capture a rich and detailed description of the participants' views, perspectives, experiences, and practices. By utilizing a descriptive narrative approach, the study aimed to explore and present a coherent and compelling account of EAP instructors' needs for training on LAL and the way a teacher education course on LAL could either promote or inhibit their perceptions and practices of language assessment. This design allows for the collection of qualitative data through qualitative data collection methods and involves the seven stages of "identifying the phenomenon, selecting the participants, collecting stories, retelling, collaborating with participants, writing your own stories as a researcher, and analyzing and validating the narratives" (Edmonds & Kennedy, 2017, p. 163), enabling the researcher to delve into the complexities and intricacies of EAP teachers' perceived need for a teacher education course on assessment literacy. Using this design, the study sought to uncover meaningful insights and enhance the existing knowledge base in the domain of AL.

Participants and setting

The participants involved in this study were picked from a pool of 80 Iranian EAP instructors who have been actively teaching in state universities in Tehran. The participants, working full-time or part-time at different Tehran universities, were involved in hard science majors, including Computer (25%), Industrial (10%), Electrical (25%), Mechanical (25%), and Civil engineering (15%). From these participants, 60 instructors were chosen based on their experience and expertise in teaching EAP and willingness to participate through purposive sampling (Mackey & Gass, 2005). Purposive sampling, also known as nonrandom sampling, involves the deliberate selection of specific participants by a researcher based on predetermined criteria or their expertise in the subject matter. This approach assists the researcher in gathering data that aligns with their specific interests. For this study, the selection of participants was based on their field of study (EAP, hard science), teaching experience (both novice and experienced), and willingness for collaboration. The sample showed diversity considering age (ranging from 25 to 60), gender (both male, 53% and female, 47%), educational background (both TEFL, Teaching English as a Foreign Language, and non-TEFL), and teaching experience (3 to above 25 years). The demographic data of the teachers who participated in the study is presented in Table 1.

The participants were divided into two groups: 30 EAP teachers were asked to write narratives regarding their needs for training on LAL, while the other 30 participants took part in a semi-structured interview. The rationale for the narratives was to gather in-depth insights into the individual needs and perspectives of the instructors, while the interviews aimed to explore the way a teacher education course on LAL could either promote or inhibit their language assessment perceptions and practices. By utilizing both narrative writing and semi-structured interviews, the study sought to capture a comprehensive understanding of the perceived need for a teacher education course on assessment literacy development among EAP instructors.

Table 1 Demographic background of the participants

Demographic information	Participants (f)
Gender	
Female	28
Male	32
Age	
20–29	23
30–39	25
40–49	9
50+	3
Major	
TEFL	47
Non-TEFL	13
Years of teaching experience	
0–4	16
5–9	13
10–14	11
15–19	9
20–24	7
25+	4
Level of education	
MA	12
PhD	48

Instruments

To ensure greater precision in the findings, the present study utilized two research instruments that were grounded in the theoretical principles of LAL as discussed in the literature. These instruments included narratives and online semi-structured interviews conducted with EAP teachers. Using both the narratives and semi-structured interviews, the researcher could gather rich and detailed data on the EAP teachers' perceptions of their training needs in LA. The narratives would allow the teachers to express their thoughts and experiences in their own words, providing a more personal and subjective perspective. However, the semi-structured interviews would provide a more structured and standardized approach to gathering data, allowing for a more objective and comparable analysis of the responses. Together, these two methods have provided a more comprehensive understanding of the EAP teachers' perceptions of their training needs in LA, complementing each other and constructing a more complete picture of the research questions.

Narrative inquiry

The primary focus of narrative inquiry centers on the stories individuals share about their own lives. Any form of discourse or text can serve as a narrative, presenting an individual's personal account. Narrative research emphasizes the timing, sequence, and collaborative process of reshaping these stories. Through the gathering and analysis of individuals' narratives, researchers aim to explore their lived experiences and gain insight into the storyteller's perceptions in the context of their life (Ary et al., 2014).

Various types of narratives exist, such as life story, life narrative, autobiography, biography, testimonies, personal narrative, or oral history (Ary et al., 2014). In this study, 30 participants were requested to write personal narratives (Appendix A) and share their experiences and perspectives concerning the EAP instructors' perceived need for a teacher education course on assessment literacy development. The intercoder reliability and content validity of the narratives were measured and ensured in this study.

Online semi-structured interview

In this research, a detailed online semi-structured interview was conducted with 30 EAP teachers who participated in the study (Appendix B). The interview focused on comprehensive discussions regarding the EAP teachers' specific needs for LAL training and how a dedicated course on this topic could impact their perceptions and practices of language assessment. The semi-structured interview took from 15 to 20 min for each interviewee. The rationale for the utilization of a semi-structured interview was following a written series of questions as a guide while also having the liberty to achieve additional information (Mackey & Gass, 2005). In other words, the semi-structured format of the interviews facilitated the flexibility in probing deeper into specific subjects while still maintaining a fixed set of core questions. The researcher designed the interview questions, and five language experts in the field of Applied Linguistics reviewed them to ensure their content validity. The intercoder reliability was also ensured to assess the level of agreement among the coders using Cohen's kappa. To do so, 20% of the generated codes were randomly selected and coded again by a second coder who was a university lecturer with expertise in applied linguistics and qualitative research. Out of the 460 codes created, 100 were sent to the second coder, who disagreed with the first coder on three codes. This resulted in an inter-coder agreement of 97%. To resolve the disagreements, the two coders discussed and made necessary modifications, ensuring consistency and the credibility of the analytical process.

Data collection procedure

The data collection process commenced with attaining informed consent from the participants to ensure their confidentiality and anonymity and explain the procedure and rationale of the study. This study recruited 60 instructors who were working either full-time or part-time at various universities in Tehran and specialized in hard science majors. The participants were selected through purposive sampling, based on their field of study, their experience and expertise in teaching EAP, as well as their willingness to participate. In this qualitative study, two main instruments were employed: Written narratives and semi-structured interviews. To collect data, the narratives and interview questions were initially examined for their content validity by administering them to five Applied Linguistics experts.

Thirty EAP teachers were requested to write narratives expressing their needs for training on LAL. These narratives paved the way for EAP instructors to reflect on their encounters and experiences, challenges, and areas where they felt they needed further training in language assessment and LAL. To pursue the research objectives, the researcher provided a written narrative, using the Google Docs platform, by posing elicitation and follow-up or clarification questions to encourage the participants to narrate

their life stories related to the impact of the LTA teacher education course on their LAL. The participants were asked to share their personal experiences in as much detail as possible. By utilizing follow-up questions, the participants' critical stories that had a strong emotional impact on their self-awareness were elicited (Yuan & Lee, 2016). These questions prompted the participants to elaborate on their particular experiences about the challenges and benefits of a language assessment teacher education course on LAL.

The other 30 participants were involved in online semi-structured interviews via virtual platforms like Skype, Skyroom, and Google Meet. The interviews were designed to explore how the language assessment teacher education course could either promote or inhibit the EAP instructors' perceptions and practices of language assessment and LAL. The researcher provided guidelines or prompts for the written narratives and developed an interview protocol for the semi-structured interviews. The interviews were audio-recorded to ensure accurate capture of the participants' responses and facilitate later transcription and analysis. The interviews lasted for approximately 15–20 min and were audio and screen recorded, using Camtesia Studio 8 software. Some interviews took a bit longer, nearly 25–30 min, as the researcher encouraged the participants to expand on their answers to gather more nuanced data. Since all participants were EAP instructors, the interviews were carried out in English. However, the participants sometimes shifted to Persian while discussing their work or study experiences.

Subsequently, the researcher transcribed the interviews and analyzed both the interview transcripts and written narratives. The analysis process involved content analysis and thematic coding, identifying recurring and key themes and patterns in the data related to the instructors' perceptions of training needs and the impact of a language assessment teacher education course on their LAL. Overall, the data collection process was carefully designed to ensure the quality and validity of the data collected, while also respecting the privacy and confidentiality of the participants. The use of both written narratives and semi-structured interviews provided rich and diverse data that allowed for a comprehensive analysis of the instructors' perceptions and experiences related to their needs for LAL training.

Data analysis

To promote the rigor of the study, Lincoln and Guba's (1985) principles of trustworthiness were applied. To validate the extracted codes and themes from both research instruments, the principles of dependability and credibility were upheld by conducting member checks with the participants. Likewise, to ensure reliability, an experienced L2 researcher cross-checked 30 percent of the data collected from narratives and interviews. As measured by Cohen's Kappa coefficient, this process resulted in inter-coder reliability indices of 0.97 and 0.96, respectively. To secure the confirmability of the results, another Applied Linguistics expert audited the entire data analysis. Minor disagreements arose during this step, which were subsequently resolved through conferencing and further discussion.

The qualitative analysis of the interview data was conducted using content and thematic analysis using MAXQDA (Version 2022). The content analysis was done through an inductive approach, signifying that it was not impacted by any pre-established theoretical framework or model. Using this approach, the codes, categories, and themes were

directly derived from the data (Berg, 2001). As for the interviews, initially, the researcher transcribed, summarized, categorized, and reviewed the interviews to ensure consistency between the audio recordings and the transcriptions. Once the data were cleaned in the narratives and transcriptions matched the recordings, they were further scrutinized and relevant sections pertaining to the research questions were coded using key words and phrases from the narratives and interview questions. This categorization process assisted in determining the main patterns in the teachers' responses.

To identify the frequency of occurrence, frequency counts were utilized to group the emerging themes and patterns in the narratives and transcriptions. These themes and patterns were then grouped into a thematic table based on the narrative and interview questions, accompanied by representative extracts from the participants. Subsequently, all the themes and patterns were carefully categorized to highlight the key themes present in the narrative and interview data. Next, a comparison was made between the key themes identified in the narratives and interview data, which aimed to establish the association between the research questions and the data, thereby validating the findings. To present the completed analyses visually, the researcher utilized the MAXMAP features of MAXQDA to generate figures.

Findings

EAP instructors' need for in-service training in diverse LTA domains

The first research question sought to explore if EAP instructors perceived the demand for in-service training in areas of LTA. To answer this question, the participants' narratives were analyzed. To begin with, EAP instructors reported different levels of training they received, although the courses they were taking as EAP teachers appeared to have no substantial impact on their levels of training required. The EAP instructors claimed that they had taken Language Testing and Assessment (LTA) courses at university and as mandatory courses and part of the curriculum. However, there were few other EAP instructors (10%) who reported their LTA training to go beyond the mandatory courses at university. The instructors, though few in number, reported they had taken other courses in Teacher Training Courses (TTCs) held by institutes. There was an EAP instructor, who had attended conferences and assessment workshops. Table 2 provides a summary of EAP instructors' level of training for LTA.

As shown in Table 2 and Fig. 1, regarding the nature of LTA courses, EAP instructors (80%) predominantly reported the courses to be primarily theoretical rather than practical. The focus of these courses, according to interviewees, primarily revolved around the theoretical foundations of testing and assessment. In such courses, the key concepts and the basics of testing and assessment were primarily discussed from the theoretical

Table 2 Training received in LTA

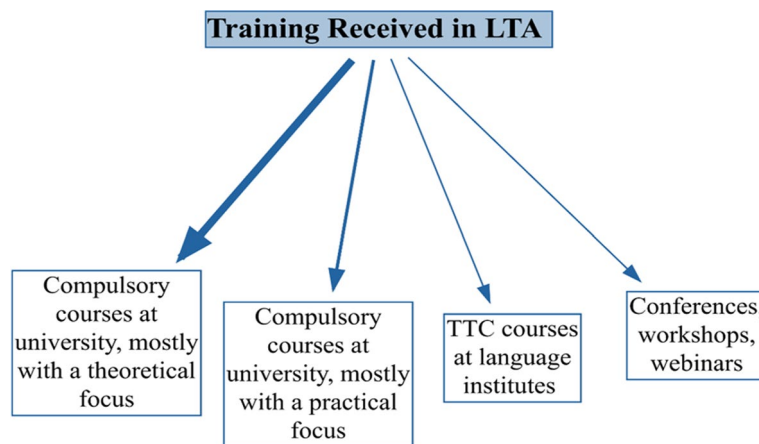| Training level in LTA	EAP, f (%)
Compulsory courses at university, mostly with a theoretical focus	24 (80%)
Compulsory courses at university, mostly with a practical focus	4 (14%)
TTC courses at language institutes	1 (3%)
Conferences, workshops, webinars	1 (3%)

Fig. 1 Training received in LTA

Table 3 Need for further training in LTA

The type of need for further training in AL	EAP, f (%)
Need for the theoretical side	2 (7%)
Need for practical side	27 (90%)
No need for further training	1 (3%)

perspective and the courses mainly consisted of class presentations and discussions. Further details regarding the nature of the courses can be found in the extracted excerpts from EAP instructors' narratives.

> *In my personal experience, I found that the courses primarily emphasized the theoretical aspects rather than the practical elements of language testing and assessment. While it is worth noting that occasionally the professors attempted to address the practical issues, the overall focus remained on the theories. From what I recall, the courses placed a greater emphasis on understanding the theoretical foundations of language testing and assessment. Although they were undoubtedly fruitful, they did not fully satisfy the need for practical implementation. The courses proved to be effective, but their content was not comprehensive. We did not delve deeply into the everyday assessment problems that teachers typically encounter, nor did we explore explicit and concrete solutions to such challenges. In particular, the courses lacked real-world procedures for conducting classroom assessment. (EAP Teacher 13)*

The analysis of the data revealed that EAP instructors expressed a desire for additional training in AL. It was found that being an EAP course teacher did not significantly affect the participants' perceived need for AL training. Additionally, their background (TEFL or non-TEFL) seemed to have no influence on their views regarding the necessity of further training. The findings from Table 3 and Fig. 2 indicated that although EAP instructors had previously taken LTA courses, they still felt the need for further training.

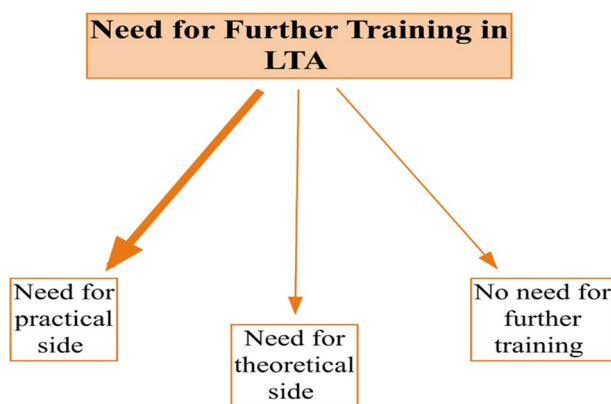The following excerpt presents the narrative reply of an EAP instructor.

Fig. 2 Need for further training in LTA

Table 4 EAP teachers' needs for in-service training in LTA

The causes of the need for further training in AL	EAP (%)
Lack of confidence	46.66
Limited training opportunities	33.33
Evolving assessment practices	13.33
Alignment with institutional expectations	3.33
Peer collaboration and support	3.33

> *The idea of delving into courses on language assessment seemed incredibly appealing, and undoubtedly, I would be willing to participate in them. If such courses were indeed available, it would be a great opportunity for me to extend my language assessment knowledge. After all, there exists a multitude of approaches when it comes to assessment, and I strongly felt that I lacked the proper training required to navigate the practical aspects of language testing and assessment methods. It is vivid that further education and guidance in this area would be invaluable. (EAP Teacher 27)*

The participants made references to "lack of confidence" (47%), "restricted training opportunities" (33%), "evolving assessment practices" (13%), "alignment with institutional expectations" (3%), and "peer collaboration and support" (3%) as the main reasons why they perceived a significant need for in-service training in various areas of LTA (Table 4 and Fig. 3). In particular, many EAP instructors expressed a lack of confidence in their skills and knowledge about LTA. They felt that additional "*training would develop their understanding of assessment techniques, principles, and practices*", thereby "*raising their confidence in assessing the students' language and content knowledge more accurately*". The participants underscored the limited availability of in-service training opportunities mainly focused on LTA. They highlighted "*the significance of professional development courses and programs tailored to the needs of EAP instructors*", providing them with "*practical strategies and updated knowledge for effective assessment practices*".

The EAP instructors recognized "*the evolving nature of LTA*", particularly in relation to "*innovative assessment methods and technological advancements*". One participant
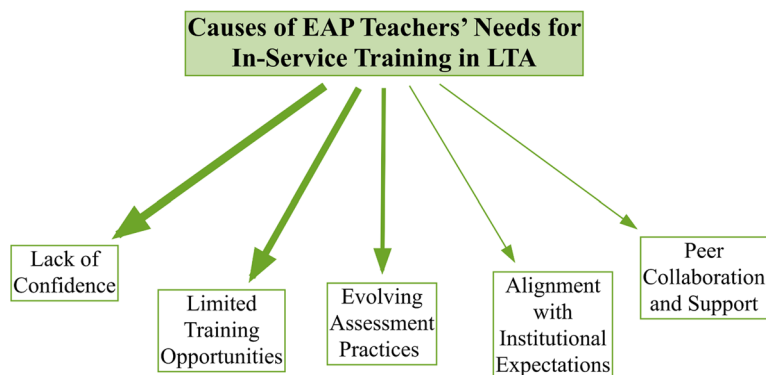
Fig. 3 Causes of EAP teachers' needs for in-service training in LTA

acknowledged the significance of aligning assessment practices with institutional standards and expectations. He perceived in-service training "*as a means to gain a better understanding of the institutions' assessment policies and procedures*", ensuring that the "*assessments are reliable, valid, and consistent with institutional requirements*". An EAP instructor also emphasized the value of peer collaboration and support in promoting assessment practices. She believed that in-service training could "*provide opportunities for networking and sharing experiences with colleagues*", fostering "*a supportive professional community*" focused on LTA.

As noted, a desire for additional training in LTA was felt by all EAP instructors. However, most of them (90%) emphasized the significance of practical assessment skills rather than theoretical knowledge. The instructors' recognition of the necessity for further assessment training can be found through phrases and boosters like "*undoubtedly*", "*definitely*", and "certainly". These words confirm the EAP instructors' firm conviction. This inclination toward receiving training focused on language assessment practices rather than theories is further presented in the following extract.

> *To be honest, I haven't learned enough in TTCs outside about language and classroom assessment. Such a course can be a blessing. I assume there is always room for development in this field. Certainly, I find great value in specific skills pertaining to language assessment, particularly those with practical applications. Although I may possess some theoretical knowledge on certain aspects of language assessment, I am well aware that further training and practical experience are essential for my progress. There's always room for improvement, and the kind of training I seek should be grounded in practical applications and real-world scenarios. (EAP Teacher 5)*

While the majority of instructors acknowledged the need for further training in LTA, especially in practical aspects, a small percentage (3%) of instructors expressed no willingness for further training at all.

> *I have already acquired all the knowledge I was expected to master. I have completed all the advanced courses at university and have taken courses at various institutes as well. I require more practical experiences, my job is mainly to teach rather than to make tests, and I don't think if I may need any further training. (Teacher 29)*

Table 5 EAP instructors identified areas for further training to enhance their LTA

The areas of need for further training in AL	EAP (%)
Assessment literacy	16.66
Assessment for specific purposes	16.66
Test design and construction	13.33
Formative assessment strategies	13.33
Technology-enhanced assessment	13.33
Test analysis and interpretation	10
Test fairness and accommodations	6.67
Rubric development	3.33
Task-based assessment	3.33
Assessment research and validation	3.33
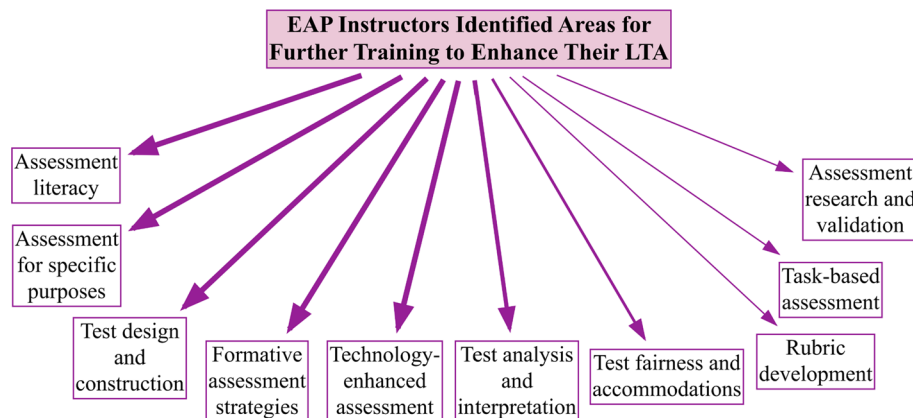
Fig. 4 EAP instructors identified areas for further training to enhance their LTA

The areas where EAP instructors felt more need for further training to develop their expertise in LTA were "assessment for specific purposes" (17%), "test design and construction" (13%), "test analysis and interpretation" (10%), "rubric development" (3%), "task-based assessment" (3%), "formative assessment strategies" (13%), "technology-enhanced assessment" (13%), "assessment research and validation" (3%), "test fairness and accommodations" (7%), and "assessment literacy" (17%) (Table 5 and Fig. 4). EAP instructors perceived the need for training in "*designing assessment tailored to specific professional contexts or academic disciplines*". This requires "*understanding the language demands of different disciplines and aligning assessments*" accordingly. EAP instructors felt the need for training in "*creating valid and reliable tests that accurately measure students' academic skills and language proficiency*". This includes understanding "*item writing techniques, ensuring alignment with learning objectives, and test blueprinting*". Training in "*analyzing test results and interpreting test scores*" would help EAP instructors "*make informed decisions about students' language ability levels and identify areas for improvement*". This includes "*understanding statistical analyses and score interpretation and reporting*".

Training in "*developing effective rubrics for assessing various language skills*" can be invaluable, involving "*understanding the rating criteria and levels of performance and*

providing constructive feedback". EAP instructors desired training in "*designing and implementing task-based assessments that simulate real-world academic tasks*". They felt that they would benefit from training in "*formative assessment techniques*", like self and peer assessment and teacher-student conferences, that "*provide ongoing feedback to students to support their language development*". With the increasing use of technology in education, EAP instructors perceived a need for training in "*utilizing digital platforms and tools for LTA*" such as "*automated scoring systems, online assessment, and computer-adaptive testing*". Training in "*validation methods and conducting research on LTA*" would help EAP instructors to "*improve their assessment practices*". EAP instructors sought training in "*providing accommodations for students with special needs or diverse linguistic backgrounds to ensure fairness in assessment and legal and ethical considerations*". Last, by no means least, EAP instructors sought training to "*raise their understanding of assessment concepts, principles, and practices*".

All in all, the findings revealed EAP instructors' need for more training in the conceptual and practical dimensions of LTA. EAP instructors observed discrepancies between the theoretical and practical aspects of the LTA courses they undertook, and they commonly expressed a more salient need for additional training in LTA practices. The EAP instructors also identified various areas for further training to enhance their expertise in LTA. The study highlighted the significance of providing targeted professional development opportunities to foster EAP instructors' confidence, skills, and knowledge, thereby conducting effective language assessment.

Impact of LTA teacher education courses on EAP teachers' assessment literacy

The second qualitative research question explored the impact of a language assessment teacher education course on the advancement of EAP instructors' assessment literacy. The responses gathered from EAP teachers in semi-structured interviews provided insights into how such a course either promoted or inhibited the development of assessment literacy among EAP instructors. This study specifically concentrated on evaluating the impact of LTA teacher education courses, which include TTCs held in institutes and university-based courses, on the AL development of EAP teachers. After analyzing the instructors' responses to interview questions, it was found that EAP instructors had varying opinions regarding the effectiveness of LTA in TTCs and university-based courses. The insights of EAP instructors regarding how TTCs and university-based courses influenced their AL development are presented in Table 6. Additionally, detailed explanations and relevant excerpts from participant interviews are provided to offer a more comprehensive understanding.

Table 6 The impact of university courses and TTCs on AL as reported by EAP instructors

TTCs and university-based teacher education courses and programs on LTA	EAP (%)
University courses and TTCs are different, with university courses being more theoretical and TTCs more practical	100
University courses are more conducive due to the theoretical knowledge they provide as well as their comprehensiveness	30
TTCs are more practical and, therefore, more conducive	53
University courses and TTCs are equally efficient	17

According to the findings presented in Table 6 and Fig. 5, EAP instructors perceived TTCs and university-based courses as distinct entities with varying levels of effectiveness on their LTA knowledge and practices. The discrepancies between these two types of courses were primarily attributed to differences in their theoretical and practical aspects, as reported by all EAP instructors. University-based courses were described as rich in theoretical knowledge related to assessment practices, whereas TTCs were seen as more focused on practical aspects of assessment. This contrast between TTCs and university-based courses is further highlighted in the following excerpts from EAP instructors.

> *From my perspective, university courses provide in-depth knowledge and comprehensive explanations of theoretical perspectives. They cover a wide range of concepts and facilitate extensive discussions. However, teacher training courses prioritize the practical aspects of each assessment type. (Teacher 17)*
>
> *University programs equip us with theoretical knowledge. Through books and university programs, we gain insights into ideal contexts. In contrast, TTCs are more relevant to real-world scenarios. I believe that for practical matters, TTCs are necessary. (Teacher 26)*

Upon closer examination of the transcriptions, it became apparent that a majority of EAP instructors (53%) held the belief that TTCs were superior and more effective compared to teacher education courses offered by universities. Although some instructors identified a lack of emphasis on assessment theories as a drawback of TTCs, they still expressed a preference for these courses over university-based alternatives, primarily due to their practical nature. To provide a more precise illustration, sample excerpts from EAP instructors are presented below.

> *Theories are taught in universities, but I desire practical applications to accompany them. However, TTCs offer a more hands-on approach that closely resembles actual classroom situations. Personally, I prefer TTCs because they equip me with the essential techniques required for teaching. (Teacher 21)*
>
> *In contrast to universities where professors focus on theoretical foundations, TTCs*
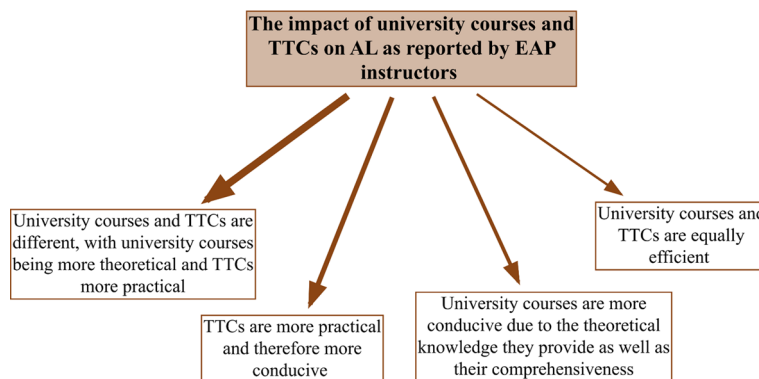

Fig. 5 The impact of University Courses and TTCs on AL as reported by EAP instructors

provide instruction on practical procedures and address real-world assessment challenges faced in classrooms. Through TTCs, I have gained the knowledge and skills needed to effectively resolve daily classroom issues. (Teacher 14)

Despite the majority of EAP instructors agreeing that TTCs were more effective than university-based courses, there was a minority (30%) who disagreed and attributed their assessment knowledge to university-based courses. These instructors believed that while university-based courses may not be as practically effective, they offered a solid theoretical knowledge foundation and comprehensive content. The following excerpts present the instructors' reasoning for favoring university-based courses over TTCs.

The training courses in institutes lack depth. They only touch upon a few superficial teaching techniques, often neglecting the importance of testing. University courses provide a more profound understanding of testing and scoring. However, there is a practical gap in these courses as they fail to adequately teach us about real-life teaching performances, which is a strength of TTCs. (Teacher 7)

I believe that university courses hold more significance compared to TTCs because they cover various aspects of assessment. These courses broaden our perspectives, which is crucial for implementing innovative testing methods. Personally, I prefer university-based courses because they have helped me gain a comprehensive understanding of assessment. (Teacher 29)

Regarding the effectiveness of university-based courses and TTCs, five instructors (17%) perceived both types of courses as equally beneficial in enhancing their knowledge and practical skills in the classroom. The following extract emphasizes an instructor's viewpoint, suggesting that these two courses can work hand in hand to complement each other.

In non-university teacher training courses, teachers acquire knowledge about specific procedures. However, these courses do not provide a comprehensive understanding of assessment fundamentals. So, teachers should participate in university-based teacher education programs, which offer the necessary building blocks for assessment. These two types of courses complement each other, providing a well-rounded training experience. (Teacher 14)

The findings from these interviews shed light on various aspects of LTA (Table 7 and Fig. 6). For instance, EAP teachers who had undergone a language assessment teacher education course highlighted the specific knowledge and skills they acquired that contributed to their assessment literacy. They discussed how the course provided them with a deeper *understanding of assessment principles, techniques, and approaches* (30%) relevant to EAP contexts. Additionally, the responses revealed that the courses enhanced EAP teachers' abilities to *design and implement effective assessments* (17%), *align assessments with learning outcomes* (13%), and *provide constructive feedback to students* (23%). EAP instructors also shared some examples of how the course influenced their *assessment practices* (17%), such as implementing formative assessment strategies or adopting more authentic assessment tasks. However, the interviewees expressed some barriers or challenges encountered during the language assessment teacher education course. They discussed aspects of the course that they found less helpful or areas where they felt their

Table 7 Factors by which LTA teacher education courses develop and impede EAP instructors' AL

| Contributions	EAP (%)
Familiarize with assessment principles, techniques, and approaches	30
Design and implement effective assessments	17
Align assessments with learning outcomes	13
Provide constructive feedback to students	23
Develop assessment practices	17
Challenges	
Limitations in content scope	27
Insufficient coverage of EAP-specific assessment practices	30
Lack of authenticity and contextualization	10
Limited training in rubric design and validity analysis	23
Lack of ongoing support and professional development	10
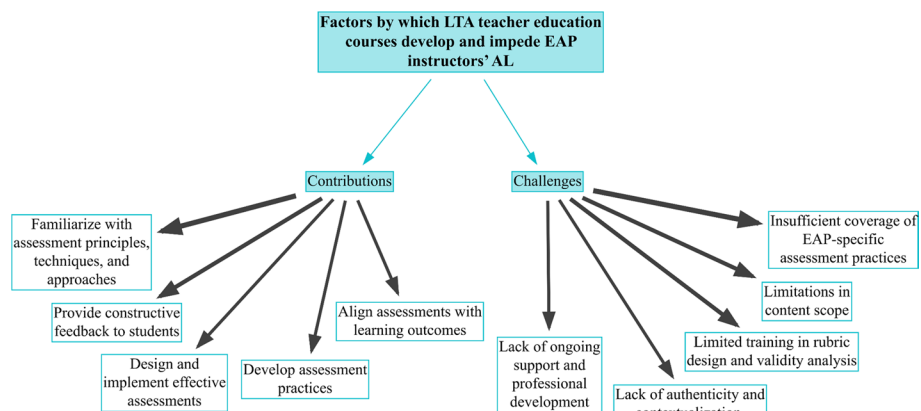
Fig. 6 Factors by which LTA teacher education courses develop and impede EAP instructors' AL

assessment literacy was not adequately developed. This included constraints related to the *content scope* (27%), *coverage of EAP-specific assessment practices* (30%), *authenticity and contextualization* (10%), *training in rubric design and validity analysis* (23%), and *ongoing support and professional development* (10%).

The language assessment teacher education course effectively promoted the development of EAP instructors' assessment literacy, as evident from the findings. The responses indicated significant improvements in multiple areas. First, the course enhanced EAP teachers' abilities to design and implement effective assessments. "*LTA teacher education courses would provide valuable guidance on creating assessments that accurately measure the students' academic skills and language proficiency.*" Furthermore, the course helped EAP instructors align assessments with learning outcomes. "*By understanding how assessments should reflect the desired learning outcomes, teachers would be better equipped to create assessments that effectively evaluate the students' progress and achievement in specific areas.*" Another important aspect of assessment literacy was providing constructive feedback to students. As noted by 23% of participants, they gained improved skills in offering meaningful and helpful feedback. "*These courses likely provide specific feedback that would help students to*

understand their strengths and areas for improvement." In addition to these improvements, the courses would also have a tangible impact on EAP instructors' assessment practices, "*enabling them to monitor student progress and adjust instruction accordingly, assessing students' language skills in real-world contexts, and making assessments more relevant and engaging for learners."*

One possible way in which a language assessment teacher education course inhibited the development of EAP instructors' assessment literacy was through limitations in its content scope. "*If the courses mainly focus on the theoretical concepts and neglect the practical applications and hands-on experiences, they fail to equip teachers with the necessary expertise and competencies needed for effective classroom assessment practices in EAP contexts."* If the language assessment teacher education courses do not adequately address the unique demands of the EAP context, they may hinder the development of assessment literacy among EAP instructors. EAP assessments typically evaluate students' ability to meet academic language and skill requirements. "*Without specialized training in EAP-specific assessment practices, teachers may struggle to assess students' language proficiency and academic readiness accurately."*

Another factor that led to the inhibition of assessment literacy development was the lack of authenticity and contextualization in the course. If the course materials and activities do not reflect the real-world challenges and contexts that EAP instructors encounter, it can limit their ability to transfer what they learn into meaningful assessment practices. "*Authentic assessment tasks and case studies grounded in EAP contexts should be included to develop teachers' understanding and application of assessment principles."*

Effective assessment practices rely heavily on well-designed rubrics and valid assessment tools. If the language assessment teacher education course fails to provide comprehensive training in rubric design and validity, it can hinder instructors' ability to create and use appropriate assessment instruments. "*Teachers need guidance on developing valid, reliable, and contextually relevant rubrics that align with EAP learning outcomes."* The impact of a language assessment teacher education course on AL development would also be influenced by the absence of ongoing support and professional development opportunities. Learning about assessment practices is an ongoing process, and educators require continued engagement, collaboration, and access to resources to refine their skills over time. "*Without follow-up support, instructors may struggle to implement what they have learned in practice effectively."*

The responses to this research question shed light on the usefulness of TTCs and university-based courses according to EAP instructors. Results demonstrated that EAP instructors perceived the nature of the two courses differently. They believed that whereas university-based courses could contribute to their theoretical knowledge, TTCs could be of more use in helping them with the practical side of assessment. These insights can inform the improvement of such courses to better cater to the needs of EAP instructors and ultimately enhance the quality of language assessment practices in EAP contexts. The LTA teacher education course effectively enhanced EAP instructors' assessment literacy by improving their ability to design and implement effective assessments, align assessments with learning outcomes, provide constructive feedback, and influence their assessment practices by adopting formative assessment strategies and authentic assessment tasks.

While a language assessment teacher education course has the potential to enhance the assessment literacy of EAP instructors, various factors can inhibit this development. These include limitations in the course content scope, insufficient coverage of EAP-specific assessment practices, lack of authenticity and contextualization, limited training in rubric design and validity analysis, and a lack of ongoing support and professional development. To address these inhibitions, modifications to the course content, structure, and delivery should be considered to better equip EAP instructors with the necessary assessment skills and knowledge for their specific teaching contexts.

Discussion

The present study aimed to explore the perceived need for in-service training in diverse domains of LTA among EAP instructors. The findings revealed that EAP instructors recognized the significance of additional training in LTA, particularly in practical aspects, despite having some previous exposure to LTA courses. The participants in this study reported different levels of training they had received in LTA. While the majority of EAP instructors had taken LTA courses as part of their university curriculum, only a small percentage had gone beyond the mandatory courses and sought additional training through TTCs, conferences, and workshops. It is worth noting that the focus of these courses was primarily theoretical, with limited emphasis on practical application. This finding aligns with the personal experiences shared by the EAP instructors, who felt that the courses they had taken primarily emphasized theoretical foundations rather than providing comprehensive training in practical implementation.

This finding is supported by studies conducted by Iranian researchers (Farhady et al., 2010; Karimvand et al., 2014; Sarlak & Vafaeimehr, 2014), highlighting the prevalence of theory-focused training programs in Iran. Similarly, Mehrani (2014) discovered that teachers felt their training courses excessively emphasized the theoretical rather than practical aspects. The lack of preparedness among teachers regarding assessment, as well as their grievances about training programs, has also been documented in foreign contexts by other researchers (Brookhart, 1998; Plake et al., 1993). Additionally, Lee (2010) emphasizes that pre-service teachers often have limited knowledge of AL due to inadequate training received in teacher education programs.

The participants expressed a desire for further training in AL. This need for training was consistent across EAP instructors regardless of their background (TEFL or non-TEFL) or their current role as EAP course teachers. The reasons cited for this perceived need included a lack of confidence in their skills and knowledge, restricted training opportunities, evolving assessment practices, alignment with institutional expectations, and the importance of peer collaboration and support. EAP instructors believed that additional training would enhance their understanding of assessment techniques, principles, and practices, leading to a more accurate assessment of students' language and content knowledge.

Teachers believe that they lack the necessary preparation to evaluate their students effectively (Mertler, 2009; Stiggins, 1999). Malone (2013) and Volante and Fazio (2007) have emphasized the importance of having classroom AL and providing teachers with effective training. The instructors also mentioned that their exposure to assessment courses during university was primarily limited to mandatory classes that mostly relied

on textbooks. These findings indicate that the majority of EAP instructors had limited access to resources for assessment. While textbooks are not the sole resource for language assessment, and there are alternative methods like professional development workshops and conferences available to gain assessment literacy (Brown & Bailey, 2008; Davies, 2008), it appears that instructors primarily depend on textbooks, which is just one approach to acquiring AL.

The areas where EAP instructors felt the most need for further training in LTA were assessment for specific purposes, test design and construction, test analysis and interpretation, rubric development, task-based assessment, formative assessment strategies, technology-enhanced assessment, assessment research and validation, test fairness and accommodations, and assessment literacy. These areas encompassed a range of skills and knowledge required for effective language assessment in EAP contexts. EAP instructors recognized the significance of aligning assessments with specific professional contexts or academic disciplines, developing valid and reliable tests, analyzing and interpreting test results, and providing constructive feedback through rubrics. They also emphasized the need for training in task-based assessments, formative assessment strategies, technology integration in assessment, conducting research on LTA, and ensuring fairness and accommodations for diverse student populations.

In comparing these findings with recent studies in the domain of EAP teachers' AL, it is evident that the need for further training in LTA is a recurring theme. Similar studies have highlighted the significance of providing EAP instructors with professional development opportunities that address both theoretical and practical aspects of language assessment (Baker & Riches, 2017; Cui et al., 2022; Giraldo & Murcia, 2019; Hyland, 2006; Jaramillo-Delgado & Gil-Bedoya, 2019; Koh et al., 2017; Kremmel et al., 2018; Lam, 2019; Lan & Fan, 2019; Levi & Inbar-Lourie, 2019; Manning, 2013; Restrepo-Bolívar, 2020; Vogt & Tsagari, 2014; Vogt et al., 2020). These studies have also identified various areas where instructors, in particular EAP teachers, feel the need for further training, such as test design, interpretation of test scores, and formative assessment strategies.

The findings of the second research question provided invaluable insights into the impact of LTA teacher education courses on the assessment literacy of EAP instructors. The study specifically focused on comparing the effectiveness of TTCs and university-based courses in enhancing EAP instructors' assessment knowledge and practices. The findings indicated that EAP instructors perceived TTCs and university-based courses differently, with each type of course offering distinct advantages and disadvantages. TTCs were generally found more effective by the majority of EAP instructors. These instructors highlighted the practical nature of TTCs and their emphasis on hands-on assessment techniques as the main reasons for their preference. They believed that TTCs provided them with valuable skills and strategies that could be directly applied in the classroom. However, a minority of instructors favored university-based courses due to their rich theoretical knowledge and comprehensive content. They acknowledged the potential limitations of these courses in terms of practical application but valued the solid foundation they provided in assessment theory.

Previous studies conducted in Iran and other foreign contexts have consistently shown that teacher education programs tend to focus more on theoretical aspects and overlook practical assessment skills (Farhady et al., 2010; Karimvand et al., 2014; Mehrani,

2014; Sarlak & Vafaeimehr, 2014). Likewise, Koh et al. (2017) and Lan and Fan (2019) found that teachers who were proficient in assessment literacy were still unable to apply their knowledge in the assessment of language learners effectively. The implementation of assessment has been reported as problematic in both local and foreign settings (Mertler, 1999; Mertler & Campbell, 2005). In Iran specifically, the expertise of EAP instructors is mainly shaped by the assessment courses they take during their academic journey, including B.A., M.A., and PhD programs. These courses primarily rely on textbooks, and students are rarely given opportunities to apply the theories they learn in real instructional settings. Consequently, their assessment practices remain confined to the contents of the textbooks and assessment courses typically taken during their academic studies. Zulaiha et al. (2020) argue that local policies and regulations have a significant impact on the assessment practices of teachers. This is because educational policymakers, curriculum developers, syllabus designers, and textbook writers determine the content of textbooks in a top-down managerial manner, which in turn influences the way teachers conduct assessments.

Interestingly, a small percentage of instructors perceived both types of courses as equally beneficial. They emphasized the complementary nature of theoretical knowledge from university-based courses and practical skills from TTCs, suggesting that a combination of both approaches could be advantageous. The study also highlighted specific areas where language assessment teacher education courses positively influenced EAP instructors' assessment literacy. These included a deeper understanding of assessment principles, techniques, and approaches; improved ability to design and implement effective assessments; alignment of assessments with learning outcomes; and enhanced skills in providing constructive feedback to students. Some instructors also mentioned changes in their assessment practices, such as adopting formative assessment strategies and authentic assessment tasks. In tune with Popham's (2009) perspective, utilizing alternative forms of assessment, such as portfolios and formative assessment, is considered a defining characteristic of assessment-literate teachers.

However, the study identified several challenges and barriers that hindered the development of assessment literacy among EAP instructors. These included limitations in the content scope of the courses, insufficient coverage of EAP-specific assessment practices, lack of authenticity and contextualization in course materials and activities, inadequate training in rubric design and validity analysis, and a lack of ongoing support and professional development opportunities. Considering the limited availability of hands-on courses in universities, it is not surprising that instructors face challenges with assessment methods in their classrooms. Even with teachers who apply their assessment knowledge, there is still a concern about the quality of their assessment practices (Vogt et al., 2020). As a result, assessment literacy remains an essential requirement for many teachers (e.g., Malone, 2013; Taylor, 2013; Volante & Fazio, 2007).

Conclusion and implications

The findings of this study would enhance the awareness of EAP instructors' perceived need for in-service training in LTA and the impact of teacher education courses on their assessment literacy. The results revealed that despite having some previous exposure to LTA courses, EAP instructors recognized the significance of additional

training to stay abreast of LTA developments and adapt their assessment practices accordingly. The study highlighted the significance of providing targeted professional development opportunities to address the discrepancy between the theoretical and practical aspects of LTA courses. EAP instructors expressed a more salient need for additional training in LTA practices and identified various domains for further improvement to enhance their expertise in LTA. Additionally, the study compared the effectiveness of TTCs and university-based courses in improving EAP instructors' assessment knowledge and practices. The findings emphasized the improvement of both types of courses to better cater to the needs of EAP instructors and enhance the quality of LTA practices in EAP contexts.

The findings of the current study have several implications for the design and delivery of LTA teacher education courses for EAP instructors. Firstly, there is a need to address the limitations of course content, which often lack coverage of EAP-specific assessment practices, authenticity, contextualization, rubric design, and validity analysis. Course developers and instructors should consider incorporating these elements to better equip EAP instructors with the necessary skills and knowledge for their specific teaching contexts. Secondly, the study reveals the significance of ongoing support and professional development for EAP instructors.

Offering continuous opportunities for skill enhancement and keeping them updated with the latest developments in language assessment can contribute to the ongoing professional growth of EAP instructors. This could include workshops, conferences, online resources, and collaboration platforms where instructors can engage in discussions and share best practices. Furthermore, the study highlights the need for a balanced approach in LTA courses that provides both theoretical foundations and practical application. Integrating hands-on assessment techniques, authentic assessment tasks, and formative assessment strategies can enhance the practical skills of EAP instructors and enable them to design and implement effective assessments aligned with learning outcomes.

Considering the limited sample size and lack of control over participant characteristics such as age, gender, socio-economic situations, and educational background, the findings of this study might not be applicable to all EAP instructors or educational contexts. Variations in prior experiences, personal beliefs, and teaching approaches might have influenced EAP teachers' perceptions. These factors might impact teachers' needs for in-service training and assessment literacy. Further research is needed to explore the perceived need for in-service training in diverse LTA domains among EAP instructors in different settings and with a larger and more varied sample. Likewise, this study solely focused on the teachers' responses to narratives and online interviews. Other sources of data, such as classroom observations or quantitative measures, can extend the breadth and depth of the findings. Additionally, the study did not examine the long-term effects of teacher education courses on assessment literacy. Future studies can investigate the effectiveness of different professional development approaches, such as workshops, online courses, and mentoring programs, in enhancing EAP instructors' assessment literacy. A more extended follow-up period can also provide insights into the effectiveness and sustainability of such courses over time.

Appendix A. Teacher narratives

Please provide a comprehensive narrative of your experiences and insights by responding to each question thoughtfully and providing detailed examples or anecdotes where relevant.

1. As an EAP teacher, how many years of teaching experience do you have?
2. Briefly describe your responsibilities and role as an EAP teacher?
3. From your perspective, what areas of Language Testing and Assessment (LTA) are related to EAP teaching?
4. What courses have you taken about LTA so far? Where? For how long? Why?

5. What was the nature of those LTA courses you experienced?
6. How significant do you think is in-service training for EAP teachers in LTA?
7. Do you feel the need for further training in LTA?
8. Why do EAP teachers need in-service training in the different areas of LTA?
9. Have you personally felt a need for in-service training in any specific domain of LTA? If yes, please elaborate on which domain(s) and why?
10. Based on your experiences and perceptions, what recommendations would you make to develop the provision of in-service training courses and programs in LTA for EAP teachers?

Appendix B. Teacher interview

(1) How do you define assessment literacy?
(2) What are the essential elements of assessment literacy?
(3) Is there anything you want to learn with respect to assessment literacy (Any training)? Why?
(4) What differences do you see between TTCs and university-based teacher education courses and programs regarding the effectiveness of their training on your use of language testing and assessment approaches and the development of your assessment literacy?
(5) Which one has proved more helpful in your teaching career? How?
(6) Any other idea or comment with regard to assessment literacy or assessment literacy training programs or courses set for EAP teachers?

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Data availability
The datasets generated and analyzed during the current study are available from the author on reasonable request.

Declarations

Ethical approval and consent to participate
All procedures performed in the study were in accordance with the ethical standards of the institutional and/or national research committee and with the Helsinki's (1964) declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all teacher participants involved in this study.

Competing interests
The authors declare no competing interests.

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