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Research Article

A Study of Formative Assessment Literacy in Indonesia: Insight from Pre-Service EFL Teachers

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A B S T R A C T

This study examines formative assessment literacy of 100 pre-service teachers' (PSTs henceforth) of EFL in the context of an Indonesian higher education. Adopting a sequential mixed-method approach, this study employed two research instruments, TFALS (Teacher Formative Assessment Literacy Scale) adapted from Yan and Pastore (2022) and semi-structure interviews. While quantitative data gained from the first part of the TFALS were analyzed using IBM SPSS software, qualitative data gained from the second part of the TFALS and interviews were analyzed using NVivo Software. The first finding showed that the PSTs were found to have a moderate level of formative assessment with different value in each variable; conceptional dimensions ($M=3.12$, $SD=0.54$), practical dimensions ($M=2.96$, $SD=0.58$), and socio-emotional dimensions ($M=2.98$, $SD=0.57$). The second finding revealed five major challenges faced by the PSTs when implementing formative assessment including issues relating to institutional support, teaching workload, digital literacy, students' learning motivation, and teachers' assessment skills and knowledge. Despite some limitation, the current study provides several pedagogical implications including the necessity of professional trainings to help PSTs improve their formative assessment literacy.

INTRODUCTION

Over the past few years, Language Assessment Literacy (LAL henceforth) has become an increasingly popular topic among scholars across the globe. As a result of this popularity, people defined LAL differently. Fulcher (2012), for example, mentioned that LAL was the kind of knowledge and skills which needed to possess by language teachers with the purpose to appropriately develop language-related tests. Similar to this idea, Berry and O'Sullivan (2016) also defined LAL by emphasizing not

only assessment knowledge but also assessment practices required by teachers to be implemented in authentic language classrooms. In relation to this, Inbar-Lourie (2013) highlighted practical components of LAL by mentioning that language teachers should be able to not only develop and implement language assessment effectively, but also report language assessment properly with different purposes, either for summative or formative intentions. As opposed to this, Giraldo (2018) primarily focused on theoretical elements of LAL by arguing that language teachers should possess assessment knowledge

and principles to effectively developing language tests and assessment.

With regards different approaches used in defining LAL, on the other hand, several scholars have been combining both theoretical and practical component of LAL. Despite these different opinions, researchers (Lam, 2019; Xu & Brown, 2016) mentioned that assessment conception was another essential element of LAL which each individual teacher needed to possess, whether or not he/she was a language teacher. This notion has also been proposed by the Michigan Assessment Consortium (2017) which mentioned that LAL should include several components such as beliefs, knowledge, and practices. In line with this, Lam (2019) stated that three requisite items (knowledge, conceptions, and practices) should be embedded within teachers' assessment literacy. This definition exclusively specified the subjects to teachers as the assessment practitioners rather than other stakeholders such as students, principals, or policy makers.

Due to its popularity, LAL has been considerably a favorite research topic across the continents. However, not many LAL-related studies have been conducted in the context of Indonesian educational systems. This is probably because LAL is considerably a new concept among Indonesian researchers (Puspawati, 2019). One of recent studies was carried out Bahtiar and Purnawarman (2020) who analyzed EFL teachers' LAL in secondary-level schools in Yogyakarta. Their findings revealed that the participated teachers were not familiar with term of LAL. The teachers were also found to have not been facilitated with assessment trainings programs. Meanwhile, Saputra, et al (2020) examined trajectory teachers who were taking part in a training program called Professional Training Community (PLC). Their finding revealed that the training course was found beneficial for the teachers' understanding of LAL. The training also appeared to help the teachers with their authentic assessment practices. Another study was carried out by both Luthfiyyah, et al (2020) and Zulaiha, et al (2020) who examined teachers' LAL in Indonesian secondary-level schools. Their findings showed that there has been mismatch between teachers' beliefs of LAL and their teaching practices.

In relation to issues related to LAL reported by studies above, it therefore teachers are required to enhance their LAL (Koh, et al, 2017). High level of LAL enables teachers to not only ensure learning quality (Smith, et al, 2014), but also provide positive impacts on students' academic achievement (Umam & Indah, 2020), teachers' professional success (Gultom, 2016), and students learning motivation (Alkharusi, 2013). Despite these benefits, empirical studies concerning the level of teachers' LAL are found to have been limited, especially in the context of

Indonesian EFL classrooms. In some countries, researchers (Massey, et al, 2022) have carried out relevant studies and revealed that language teachers in their studies were found to have between low and moderate level of LAL. Other studies (Bustamante, 2022; DeLuca & Johnson, 2017) reported that language teachers' low-level of LAL was associated with lack of pre-service assessment trainings. In relation to this, Gu and Lam (2023) argued that professional relevant trainings should be designed to provide language teachers with an opportunity to enhance their LAL, and subsequently implement different types of assessment, including Formative Assessment (FA).

FA has been an interesting topic to discuss when Black and William (1998) introduced their definition of FA by highlighting that FA referred to all teachers' activities which can be used to modify learning process. Since then, many scholars have proposed the definition of FA with emphasis on different aspects. A more recent concept was mentioned by Gu and Lam (2023) who argued that FA referred to a systematic stage conducted by teachers in interpreting students' learning evidences which were then used to improve learning. Meanwhile, Gezer, et al (2021) mentioned that FA was an assessment process which happens continuously during study period with the purpose to inform and guide learning and teaching process. They also emphasized that techniques of FA appeared to have been more flexible (i.e. students' portfolio, quizzes, feedback, observation, self- and peer assessment) compared to techniques of summative assessment which were relatively fixed such as paper-and-pencil tests.

In response to its benefits in scaffolding students' learning, FA has been seen by many scholars (Leenknecht, et al, 2021; Wylie, 2020) as a fundamental element in enhancing students' academic achievement and ensuring innovative learning process. However, as argued by Will, et al (2019), FA was found to rarely implemented by language teachers in their teaching practices. They might have been struggling to identify the extent to any learning progress. Several researchers (Wylie & Lyon, 2015) reported that FA is rarely observed in teachers' actual teaching practices, several others (Yan & Cheng, 2015; Yan & Brown, 2021) found that the implementation of FA is far less than satisfactory. Furthermore, a study by Stiggins (2017) showed that teachers' implementation of FA was found to have misaligned with educational principles or professional standards. More specifically, studies (Lysaght & O'Leary, 2013; Schneider & Bodensohn, 2017) have recently reported barriers teachers encounter in recognizing the value of assessment, and demonstrated insufficient knowledge and skills in educational assessment. Although teachers acknowledge the essence of using assessment evidence, they have been found to unable to manage relevant sources of FA data. Consequently, as

highlighted by some scholars (Will, et al, 2019; Yan & Brown, 2021), teachers possess limited amount of LAL to use FA data to inform instruction and learning.

Due to the benefits provided by FA for students' learning outcomes, many educational institutions across the continents have mandated language teachers to implemented FA in their classroom teaching practicum, including in Indonesia. Furthermore, the spread of the COVID-19 pandemic in 2020 has caused the Indonesian Ministry of Education and Culture proposed a new curriculum called *Kurikulum Merdeka* to be implemented in all level of educational institutions. The main feature of this new curriculum is the abolition of national examinations, and thus teachers need to implement FA. Hence, it is important that teachers, including English as Foreign Language (henceforth EFL) teachers are highly required to possess a high-level of FA. Failure in implementing FA due to lack of assessment literacy may affect students' learning outcomes.

With regards this, a number of FA-related studies have been conducted by scholars in the context of Indonesian EFL classrooms. Aria, et al (2021), for example, examined FA literacy of 48 secondary-level EFL teachers by sending them an online survey, and reported a general overview of the teachers FA literacy. Nevertheless, their finding was not validated by other instruments such as classroom observations or interviews. Meanwhile, Fitriyah, et al (2022) examined FA literacy of 55 secondary-level EFL teachers and provided insightful findings although an important instrument, classroom observation, was absent from their study. Hutami and Putro (2023), similarly, explored FA literacy of 78 secondary-level EFL teachers by administering an assessment test without conducting classroom observations to ensure the practices of formative assessment.

To fill in these gaps, the current study aims at examining the extent to which pre-service EFL teachers are literate in FA, and to explore their self-perceived of influential factors in the practices of FA. In this regards, pre-service teachers (henceforth PST) refer to students who have taken teaching apprenticeship program and further transition from formal students to become professional teachers. By collecting data from two primary sources (an online survey and interview sessions) this study extensively investigated FA literacy among the PSTs in the context of an Indonesian tertiary education. To address the research purposes above, the following two research questions are outlined to guide the study:

1. To what extents are pre-service EFL teachers' literate in formative assessment?
2. What factors do pre-service EFL teachers perceive to have affected their practices of FA?

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METHOD

1. Research Context and Participants

This sequential mixed-method study was carried out at a private tertiary education in West Nusa Tenggara province, Indonesia. As for the participants, this study recruited 100 fourth-year students enrolling in English Language study program. These participated students were purposively selected since they have taken teaching apprenticeship program at the time of this study being conducted. This particular program needs to take by the students with the purpose to implement what they have previously studied. The demographic of the 100 PSTs can be seen in table 1 below:

Table 1 The Demographic Information of the 100 Participants

Information Background	Category	Number of Participants
Gender	Male	47
	Female	53
Age Range (in years)	15-20	19
	20-25	25
	25-30	6
Length of Learning English (in years)	1-5	13
	6-10	27
	11-15	7
	15-20	3

It is worth noting that a Language Assessment course is one of mandatory subjects which the PSTs need to take at their third-year study. In other words, the PSTs have been exposed by relevant features of language assessment which they need to implement in their teaching apprenticeship program. This research will focus on these PSTs' formative assessment literacy by examining the extent to which they are literate in formative assessment and their perceptions of the needs of assessment trainings for the development of their formative assessment literacy.

Out of these 100 participants, 10 of them were then randomly invited to semi-structured interviews. They were voluntarily willing to participate in the interview, and their information background is presented in the table 2 below.

Table 2 Information of the interviewed participants

Pre-Service Teachers	Gender	Semester	Length of English Learning (in years)
PST1	M	7	5
PST2	F	7	6
PST3	F	8	4
PST4	M	7	1
PST5	F	8	7
PST6	F	8	8
PST7	M	7	11
PST8	F	8	5
PST9	F	7	7
PST10	M	7	10

2. Instruments

Two research instruments were employed to collect both quantitative and qualitative data. The first instrument was an online survey called TFALS (Teacher Formative Assessment Literacy Scale) which was adapted from Yan and Pastore (2022). The TFALS comprised of two sections with the first section containing 22 items regarding three dimensions of formative assessment including conceptual, practical, and socio-emotional dimensions. The participants were required to rank the items through a Likert scale of one to six, where 1= strongly disagree, 2= disagree, 3=slightly disagree, 4=slightly agree, 5=agree, and 6=strongly agree. Cronbach’s alpha for the conceptual, practical, and socio-emotional subscales of the TFALS were 0.88, 0.88, and 0.89 respectively, indicating good internal consistency. The second section of the TFALS consisted of 10 open-ended questions regarding the participants’ self-perceived of assessment training needs.

Meanwhile, the second instrument was semi-structured interviews which was conducted to obtain clarification of the participants’ responses in the TFLAS. The interviews began with an open-ended question (ex: what do you know about formative assessment?) which was then followed by specific questions previously designed in an interview protocol. Each interview session lasted for approximately 30 minutes and was audio recorded for further analysis. It should be noted that the process of each interview session was carried out in the participants’ first language, Bahasa Indonesia, with the purpose to decrease English language barriers.

3. Data Analysis

To analyze quantitative data gained from the first section of the TFALS, this study used IBM SPSS 12 Software to find out the extent to which pre-service EFL teachers are literate in formative assessment by finding mean score (M) and standard deviation (SD) calculations. The calculated mean score (M) was classified according to a five-interval scale by Dixon and Massey (1987) where:

- M = 4.21 – 5.00 means very high degree
- M = 3.41 – 4.20 means high degree
- M = 2.61 – 3.40 means moderate degree
- M = 1.81 – 2.60 means low degree
- M = 1.00 – 1.81 means very low degree

Meanwhile, NVivo 12 Pro Software was used to analyze qualitative data gained from the second section of the TFALS and interview sessions to examine PSTs’ self-perceived of challenges in the implementation of FA.

Table 3 Coding scheme for the qualitative data

Categories	Sub-Categories	Themes	Codes
A. Internal Challenges	1. Assessment Skills and Knowledge	a. Discussion Forums	A-1-a
			A-1-b

B. External Challenges	2. Digital Literacy	b. Relevant Trainings	
		a. Self-Learning Experts’ Assistance	A-2-b A-2-c
	1. Teaching Workload	a. Excessive Schedule	B-1-a
		b. Teaching Administration	B-1-b
	2. Students’ Issues	a. Learning Motivation	B-2-a B-2-b
		b. Passive Character	
3. Institution Support	a. Relevant Trainings	B-3-a	
	b. Teaching Facilities	B-3-b	

In terms of coding system as shown in table 3 above, the current study made use of inductive coding approach proposed by Drisko and Maschi (2015). In this regard, the codes were generated from the PSTs’ responses both in the TFALS and interview sessions. The process of gaining the codes involve several stages. For instance, the PSTs’ responses which relate to the issues came internally from the PSTs would fall into the category “Internal Challenges (A)”. After that, the challenges that relate to the PSTs’ assessment literacy would fall into the sub-category “Assessment Skill and Knowledge (1)”. Last, the solution that relate to working in groups would fall into the theme “Discussion Forums” (a). The three aspects (categories, sub-categories and themes) would then generate a code A-1-a.

RESULTS AND DISCUSSION

Pre-Service EFL Teachers’ Formative Assessment Literacy

Table 4 below displays the finding obtained from the TFALS.

Table 4 PSTs’ Formative Assessment Literacy

Dimensions	Mean	Std. Deviation
<i>Part 1: Conceptual Dimensions (CD)</i>		
I have the ability to tell my students the basic concept of FA.	3.17	0.50
I understand that FA is able to identify students’ learning needs.	3.15	0.53
I believe that FA process needs to be linear with learning purposes.	3.11	0.60
I know that FA activities should represent what students have learnt.	3.10	0.56
I believe that the outcomes of FA benefit teachers to help students achieve their learning needs.	3.00	0.49
I understand that FA needs to engage students to promote learning activities.	3.16	0.56
I know different types of assessment techniques which enable students showcase their learning activities.	3.19	0.55
Average CD	3.12	0.54

Part 2: Practical Dimensions (PD)		
I implement different means of assessment tools to help students exhibit their learning.	3.01	0.60
I train students to get involved in peer-assessment activities.	3.07	0.59
I teach students how to implement self-assessment activities.	2.88	0.57
I tell students to make use of feedback to complete future tasks.	3.04	0.58
I tell students what they should do to improve their learning.	3.11	0.60
I teach students how to utilize feedback to help improve their learning.	2.93	0.59
I tell students the purposes of each assessment I implement.	2.79	0.61
I tell students the criteria of each assessment I implement.	2.88	0.57
Average PD	2.96	0.58
Part 3: Socio-Emotional Dimensions (SED)		
I can understand that understanding on assessment needs to create among teachers and students.	3.01	0.59
I know how to get involved in students' responsive emotion towards assessment process.	3.04	0.55
I can understand that students' beliefs and attitudes influence their assessment experiences.	2.87	0.56
I know the impact of feedback for students' learning motivation.	3.02	0.59
I can understand that ethical factors of assessment.	3.03	0.56
I can understand students' well-being during the assessment process.	2.96	0.61
I know that students have the right to get advantage from the assessment process.	2.99	0.53
Average SED	2.98	0.57
Total Average CD + PD + SED	3.02	0.56

As can be seen from the table 4 above, the total average of the three variables (conception dimension, practical dimension, and socio-economic dimension) is 3.02 with standard deviation 0.56. Based on the five-interval scale by Dixon and Massey (1987), it is clear that the mean value 3.02 is in moderate degree. Thus, it can be assumed that the PSTs' FA literacy is in moderate level.

In the case of the first variable, conception dimension, the highest mean value (M=3.19, SD=0.55) was gained by item 7 (I know different types of assessment techniques which enable students showcase their learning activities.). This finding was supported by the PSTs' responses in the interview sessions. For example, PST2 and PST5 said:

"Compared with summative assessment, I think formative assessment is more beneficial for students learning since it doesn't use only mid- and end-term tests to make decision of students learning outcomes. I know about this from a course I took and trainings I attended long time ago." (Code: A-1-b)

"After discussing with some of colleges, I now know that assessment can be carried out by a variety of techniques,

not just by mid- and final-tests. I should have known this before." (Code: A-1-a)

As for the second variable, practical dimension, the highest mean value (M=3.11, SD=0.60) was gained by item 5 (I tell students what they should do to improve their learning). This finding was supported by the PSTs' responses in the interview sessions. For example, PST6 and PST9 said:

"It is not easy to teach a class with many students have low learning motivation. It is the reason why I always try to tell them what needs to do to help improve their learning." (Code: B-2-a)

"Before starting classes, I try to tell my students what they should to improve their learning. It is important for me to do since many students mine have a very passive character." (Code: B-2-b)

In terms of the third variable, socio-emotional dimension, the highest mean value (M=3.04, SD=0.55) was gained by item 2 (I know how to get involved in students' responsive emotion towards assessment process). This finding was supported by the PSTs' responses in the interview sessions. For example, PST3 and PST4 said:

"Dealing with students who have no learning enthusiastic is frustrating. As a teacher, I always try to get involved in their emotion before jumping into assessment process. It is not easy, but a must thing to do." (Code: B-2-a)

"Some of my students are not easy to ask for active class discussion. But it is my job to get involved in their responsive emotion during assessment process." (Code: B-2-b)

The PSTs' FA literacy, as revealed by both the TFALS and interview sessions, is in line with what Hutami and Putro (2023) have found. Conducted in the context of Indonesian high schools, their study reported that the 75 participated teachers were found to have FA literacy in fair level with total average of assessment concept and practices was 13.29. Their study also revealed that pre-service FA course was one of impactful factors which had helped the teachers improve their FA literacy. The PSTs in the current study, however, reported that they had developed their FA literacy by consulting with colleges and attending relevant assessment training programs. As mentioned by Basturkmen (2019), professional training was considerably an effective method to keep teachers update with relevant information and to enable teachers expand their network. It is therefore, the PSTs in the current study made use of skills and knowledge they had received from participating in assessment trainings to help them with their FA practices. Another study by Luthfiyyah (2020) examined assessment literacy of Indonesian EFL secondary school

teachers. Their finding revealed that the teachers were found to have a moderate level of assessment literacy. While their study provides us with general literacy of language assessment by a group of EFL teachers, the current study mainly focused on examining one type of assessment (formative assessment). Focusing on one specific research topic, as Marcu (2020) suggested, was considerably an effective approach to help scholars gain a more comprehensive research data. As such, findings reported in the current study may help enlighten those who have been interested in the topic of FA despite some limitation.

Challenges Perceived by Pre-Service EFL Teachers in the Practices of Formative Assessment

The data gained from the second section of the TFALS and interview sessions revealed four factors which the PSTs perceived to have influenced their FA practices. The first factor was found to relate to institutional support. In the online TFALS, the PSTs wrote:

“Honestly, the school where I had taken the apprenticeship program never organized relevant trainings for teachers. I mostly look for some references from the internet to help me with FA.” (Code: B-1-a)

“When I took the apprenticeship program last semester, I used to prepare teaching and assessment media myself. I mean, there was very limited teaching facilities for teachers.” (Code: B-1-b)

The statements above are supported by data from interview. For example, PST2 and PST4 recalled how they had struggle with limited support.

“I mostly check on the internet when I had to deal with FA. The school should have equipped teachers, especially novice teachers, with some relevant trainings before they started their teaching career.” (Code: B-1-a)

“The teaching facilities at the school where I taught were very poor. It affected my assessment procedures where I mostly conducted summative assessment for practicality reasons.” (Code: B-1-a)

This finding aligns with what Chen, et al (2021) have found. One of the major challenges in the implementation of FA faced by the teachers in their study was related to support from the teachers’ institution. The majority of teachers in their study were found to have deal with poor teaching facilities which subsequently affected their assessment performances. The PSTs in the current study solved this issue by utilizing relevant sources from the internet. A PST, however, mentioned the implementation of summative assessment in his classroom practices due to its practicality. Despite this benefit, however, summative

assessment was considerably a less effective method in the field of language teaching (Ismail, et al, 2021).

In relation to the second challenge, teaching workload, the participants wrote in the TFALS how their heavy teaching workload have negatively affected their assessment practices:

“Since the first time I took the apprenticeship program at the school, I was assigned to teach almost every day. It was tiring and frustrating, to be honest. Not to mention my students’ low level of learning motivation. It all affected my assessment practices.” (Code: A-1-a)

“Other than my heavy teaching workload, the administration documents had taken much time to finished. I needed to submit lesson plans every session of my teaching schedule.” (Code: A-1-a)

During interview sessions, the PSTs also confirmed how their teaching workload had been one of the problematic issues. PST1 and PST8, for example, said:

“Teaching 12 classes in a week was very tiring. I was the only one apprenticeship participant who came from English study program. It might be reason why I was assigned to teach all 12 classes.” (Code: A-1-a)

“I never expected before that my teaching workload in the apprenticeship program was very excessive. I couldn’t even have opportunity to take a breath. Can you imagine teaching 3 classes every single day?” (Code: A-1-b)

It is clear from the quotes above that heavy teaching workload was found to have been a constraint in the teachers’ FA practices. This finding echoed with that of Asare and Afriyie (2023) who revealed that teaching workload was one of problematic issues in teachers’ practices of FA. They also found that other than that, other challenges in the implementation of FA included big size classes, overcrowded curriculum, and class teaching time.

With regards the third challenge, digital literacy, the participants mentioned on the TFALS regarding their challenges when conducting digital FA.

“The webinar I attended few weeks ago was relating to how to make use of computer software in assessing students’ English learning. This webinar can somehow help me to improve my literacy in conducting digital FA.” (Code: A-2-a)

“I am not used to using digital applications in my FA practice although I know it is beneficial for language teachers. It is therefore I sometimes check on YouTube videos on how to conduct digital FA.” (Code: A-2-b)

The statements above aligned with the participants' responses in the interview sessions. PST5 and PST9, for example, argued that:

"When I had to conduct digital FA, I always searched on google on how to make use of certain computer software. It is quite helpful, to be honest." (Code: A-2-b)

"Honestly speaking, I am not very familiar with some digital FA. That's why I often ask my colleagues or IT staffs in my school regarding computer software for conducting digital FA." (Code: A-2-c)

Issues of technological use in EFL teaching contexts has been a hinderance factor for teachers as many of them were found to have a considerably low-level of digital literacy (Rokenes & Krumsyik, 2016). The PSTs in the current study were aware of the benefits of computer software or applications in digital FA, but were not completely able to make use of them. This finding echoed those of Marcelo and Yot-Dominguez (2019) which revealed that teachers' self-confidence and relevant trainings were arguably two influential factors that can help teachers develop the level of their digital literacy. Although the PSTs in the current study realized their low-level digital literacy, they were found to have willingness to improve their ability in technology by participating in trainings, communicating with experts, and learning from the internet.

With regards to the fourth challenge, students' issue, some participants wrote in the TFALS:

"It is not easy to get my students involved in peer-assessment. Most of them were shy students and they seem to prefer to sit on their chair finishing pen-and-paper tests." (Code: B-2-a)

"Many of my students were not motivated in group discussion or classroom activities. I don't really know the reasons behind their passivity." (Code: B-2-a)

The interview sessions support the statements above. PST3 and PST9, for instance, reflected:

"I noticed that many of my students were reluctantly participating in classroom activities. They seem to heavily rely on my explanation. Their over-reliance on teacher is often overwhelming." (Code: B-2-b)

"Honestly speaking, many students of mine were very focusing on grades. Their over attention to grade appeared to prevent them from being active in authentic learning process." (Code: B-2-b)

From the excerpt above, it is clear that the practices of FA were found to have been hindered by students' issues including low learning motivation, passive and shy character, over-reliance on teachers, and grade oriented.

This finding is in line with what Chen, et al (2021) have revealed. The participants in their study were identified to have students' issues when getting involved in classroom-based assessment process. As mentioned by Chen (2016) and Carless and Lam (2014), students' passivity and reluctance in participating in classroom were indications of the failure of FA implementation.

As for last factor, assessment skills and knowledge, the participants mentioned how they made use of relevant trainings outside of their institution to help improve their assessment skills. They wrote in the TFALS:

"I often recall from what I have learnt previously regarding the concept of FA. But I think professional trainings would be beneficial for PST like me." (Code: B-3-a)

"I barely remember what I have studied of FA few years back. I sometimes communicated with my colleagues who had studied FA and participate in assessment seminars or trainings." (Code: B-3-b)

The statements above are in line with the participants' answers in the interview sessions. PST1 and PST4, for example, said that:

"My classmates and I then initiated to create discussion forums which allowed us to share our best-practices of FA. Honestly, I don't know much anything about FA." (Code: B-3-b)

"I understand that FA is beneficial for students learning. But I don't know much on how to effectively carry out some techniques in FA such as journals, portfolio, feedback, and such like. I think I should read more about FA and attend more relevant trainings in the future." (Code: B-3-b)

The finding above echoed with what has been mentioned by Saoud (2022) that continues and regular professional training programs should be provided to help EFL teachers with the implementation of FA. The PSTs in the current study alleviated this issue by planning to participate in trainings in future time. They also initiated to create discussion forums which, as highlighted by Al-Jarf (2021), are considerably helpful for those who have no opportunity to attend professional development trainings.

In summary, finding from the quantitative analysis appeared to have been indicated by the qualitative data. In this case, the PSTs were found to have had a moderate level of FA literacy. This aligned with their perspectives of FA in which they acknowledged the benefits FA had to offer despite some challenges they had to receive. Unlike previous research which dominantly revealed problematic issues received by EFL teachers in the area of language assessment, the current study appeared to have focused on

the area of formative assessment. As the findings revealed, the current study has provided us with a general overview of EFL teachers' FA literacy to further facilitate them with relevant trainings with the purpose to help improve their FA literacy.

CONCLUSION

Employing a sequential mixed-method approach, the current study is an attempt to revealed FA literacy of pre-service EFL teachers in an Indonesian university setting. Quantitative data gained from the first part of the TFALS revealed that the PSTs had a moderate level of FA literacy. Meanwhile, the qualitative data gained from the second part of the TFALS and interview found that the PSTs encountered five major challenges in implementing FA. The challenges included issues relating to institutional support, teaching workload, digital literacy, students' learning motivation, and teachers' assessment skills and knowledge.

As the findings reported, the current study appears to have provided pedagogical implications. First, PSTs should need to be trained to help improve their FA literacy. Second, university authorities should be mindful with teaching workload allocated for PSTs since it might negatively affect their teaching quality and assessment practices. Third, training programs related to technology in teaching activities should need to organize to help PSTs with their digital literacy.

Despite some insightful data, the current study seems to have dealt with some limitations. First, this study recruited a relatively small number of PSTs as its research participants. Thus, it is essential that future studies need to get more participants to gain a more validated data. Second, this study merely focused on the implementation of FA from PSTs' perspectives. To obtain a more comprehensive finding, future studies need examine perceptions from other group of people such as in-service teachers, students, school principals, and curriculum designers.

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APPENDIX

Appendix 1.

TFALS (Teacher Formative Assessment Literacy Scale)

Section 1: Rank the statements below based on your teaching experiences!

Note : 1= strongly disagree, 2= disagree, 3=slightly disagree, 4=slightly agree, 5=agree, and 6=strongly agree.

TFALS (Teacher Formative Assessment Literacy Scale)	
Part 1: Conceptual Dimensions	Rank
I have the ability to tell my students the basic concept of FA.	1 2 3 4 5 6
I understand that FA is able to identify students' learning needs.	1 2 3 4 5 6
I believe that FA process needs to be linear with learning purposes.	1 2 3 4 5 6
I know that FA activities should represent what students have learnt.	1 2 3 4 5 6
I believe that the outcomes of FA benefit teachers to help students achieve their learning needs.	1 2 3 4 5 6
I understand that FA needs to engage students to promote learning activities.	1 2 3 4 5 6
I know different types of assessment techniques which enable students showcase their learning activities.	1 2 3 4 5 6
Part 2: Practical Dimensions	Rank

I implement different means of assessment tools to help students exhibit their learning.	1 2 3 4 5 6
I train students to get involved in peer-assessment activities.	1 2 3 4 5 6
I teach students how to implement self-assessment activities.	1 2 3 4 5 6
I motivate students making use of feedback to complete future tasks.	1 2 3 4 5 6
I tell students what they should do to improve their learning.	1 2 3 4 5 6
I teach students how to utilize feedback to help improve their learning.	1 2 3 4 5 6
I tell students the purposes of each assessment I implement.	1 2 3 4 5 6
I tell students the criteria of each assessment I implement.	1 2 3 4 5 6
Part 3: Socio-Emotional Dimensions	Rank
I can understand that understanding on assessment needs to create among teachers and students.	1 2 3 4 5 6
I know how to get involved in students' responsive emotion towards assessment process.	1 2 3 4 5 6
I can understand that students' beliefs and attitudes influence their assessment experiences.	1 2 3 4 5 6
I know the impact of feedback for students' learning motivation.	1 2 3 4 5 6
I can understand that ethical factors of assessment.	1 2 3 4 5 6
I can understand students' well-being during the assessment process.	1 2 3 4 5 6
I know that students have the right to get advantage from the assessment process.	1 2 3 4 5 6

Section 2: Answer the following questions based on your own opinion?

1. What challenges have you encountered with regards institutional support?
2. How did you resolve the challenges?
3. What challenges have you encountered with regards assessment knowledge and skills?
4. How did you resolve the challenges?
5. What challenges have you encountered with regards digital literacy?

6. How did you resolve the challenges?
7. What challenges have you encountered with regards teaching workload?
8. How did you resolve the challenges?
9. What challenges have you encountered with regards students' learning motivation?
10. How did you resolve the challenges?

Appendix 2.

Interview Checklist:

1. How long have you been teaching EFL?
2. Have you practiced FA in your EFL teaching experiences?
3. What kinds of FA techniques have you practiced?
4. Have you encountered any challenges in regard to institutional support? If yes, what are they?
5. How did you resolve the challenges?
6. Did your institution provide any financial aid to support your teaching and assessment practices?
7. Have you encountered any challenges in regard to your teaching workload? If yes, what are they?
8. How did you resolve the challenges?
9. Have you worked together with other EFL teachers?
10. Have you encountered any challenges in regard to digital literacy? If yes, what are they?
11. How did you resolve the challenges?
12. Have you participated in trainings relating to digital literacy?
13. Have you encountered any challenges in regard to students' learning motivation? If yes, what are they?
14. How did you resolve the challenges?
15. Have you encountered any challenges in regard to assessment knowledge and skills? If yes, what are they?
16. How did you resolve the challenges?