# CHAPTER IV

# FINDING AND DISCUSSIONS

This chapter presents and discusses the findings of the study. It aims to elaborate on the data obtained from the analysis of observations, teacher interviews, and questionnaires. This study attempts to answer the research questions about (1) the current level of digital literacy among EFL teachers. (2) How do they integrate their digital literacy into their teaching practice (3) What challenges do they face, and what strategies do they use to integrate their digital literacy skills into teaching practice.

To find the answer to the first research question, the current level of digital literacy of EFL teachers, the researcher used three types of instruments: questionnaires, observations, and interviews. The first instrument was used to answer general questions about the first research question regarding EFL teachers' digital literacy level. The second instrument was mainly employed to observe the teachers integrate their digital literacy practice into classroom activity, as the second research question proposed. Meanwhile, the third instrument was conducted to get more profound responses and explanations of the first, second, and third questions, including the teachers' level of digital literacy, the integration of their digital literacy in the teaching practice, and the challenge and the strategy to overcome the challenge.

## 4.1 The Level of English Teachers' Digital Literacy

This section provides the EFL teachers' level of digital literacy. To determine the level of teachers' digital literacy, the researcher distributed the questionnaire in this study to two English novice teachers to gain general pictures of English teachers regarding their level of digital literacy. Therefore, the questionnaire results were confirmed and supported by another instrument, observation, and interview sessions.

The data were collected through a self-assessment questionnaire adopted from DigCom 2.2 by Vuorikari et al. (2022). The questionnaire contained questions

relevant to the framework to describe the participants' digital literacy competence. The scaling score ranged from 1 to 5, showing the lowest to the highest. In this case, the participants rated themselves by filling out the questionnaires. Meanwhile, the researcher only interpreted the results.

The DigComp Framework had five components, each consisting of several statements as questionnaire items. The components were information and data literacy (IDL), communication and collaboration (CC), digital content creation (DCC), safety (SF), and problem-solving (PS). Additionally, the researcher utilized the framework from Bayrakci (2021) to evaluate the teachers' level of digital literacy. The following table presents theoretical levels of digital literacy as defined by Bayrakci, 2022, providing a framework for interpreting participants' self-assessment data

**Table 4. 1** *The Competencies of Digital Literacy Level (Bayrakci, 2022)*

| Digital Literacy Scale Score Ranges | Level | Competence |
|---|---|---|
| 1.62-3.07 | Low/Poor | They can perform basic and routine digital tasks at a basic level. This is the entry-level stage, and they often need guidance from others. |
| 3.08-3.62 | Below Average/Weak | They can complete simple routine tasks and understand problems clearly independently. |
| 3.63-4.17 | Average | They can solve non-routine, but uncomplicated problems independently. They are at an intermediate level in adapting to the digital age and continue to learn. |
| 4.18-4.72 | Above Average/Good | They are digitally literate, able to solve complex situations independently and help others with routine tasks. They can use and understand digital technologies in their lives. |
| 4.73-5.00 | High/Perfect | They are expertise to help others solve problems in their professional lives and suggest or create new ideas and processes related to work. |

Based on the level of digital literacy above, the participants' digital literacy levels were assessed through a self-administered questionnaire. The results were summarized in the following table. The general results of the DigComp self-assessment were presented in Table 4.2.

**Table 4. 2** *The general results of the DigComp self-assessment*

| Teachers' name | Information and data literacy | Communication and Collaboration | Content creation | Safety | Problem-solving | Mean | Level |
|---|---|---|---|---|---|---|---|
| Ms. Yunita | 4.6 | 4.5 | 4.3 | 3 | 4.6 | 4.2 | Above average/good |
| Mr. Haikal | 4.6 | 4.75 | 4.6 | 3.3 | 4.8 | 4.4 | Above average/good |

As presented in the table above, the scores for each component varied significantly, ranging from a minimum of 3 to a maximum of 4.8. Based on the questionnaire results, Ms. Yunita's digital literacy level was above average, with a 4.2 score reflecting her ability to effectively use digital tools and skills. In contrast, Mr. Haikal achieved a slightly higher score of 4.4. Despite the slight difference of only 0.2 points in their scores, both teachers are still classified within the same category, which is above average or good according to Bayracki's level of digital literacy (Bayrakci, 2022). The scores were purely based on the participants' completed self-assessment questionnaire results. There was no intervention from the researcher. Other factors like participants' subjectivity (either overrating or underrating), conscientiousness in doing self-assessment, and comprehension in reading the questionnaire items might contribute to the results of this self-assessment.

From the questionnaire results, both teachers demonstrated the same level of proficiency in the Information and Data Literacy (IDL) domain, scoring 4.6. This showed that the teachers were pretty good at browsing, evaluating, and managing

data and information using digital devices. They were excellent enough to access and select appropriate technologies to support various instructional objectives. It is due to habits of teaching that the teachers are required to look for relevant materials for the students. The learning materials or the source must be valid or cited from a credible source. Then, the teacher must be able to access and find appropriate ESL/EFL websites for the relevant topics, navigate between them, and carefully consider the possible outcome before clicking a link.

In the communication and collaboration domain (CC), Ms. Yunita scored 4.5, while Mr. Haikal scored slightly higher at 4.75. This indicates that both teachers demonstrate strong abilities to use digital devices, share digital content, and actively engage in cyberspace through these tools. However, the minor score difference (4.5 to 4.75) highlights Mr. Haikal's greater confidence in using digital tools and technologies for remote work. Mr. Haikal feels more confident using digital tools and technologies for remote work to generate ideas and co-create digital content (e.g., shared mind maps, whiteboards, and polling tools). In contrast, Ms. Yunita perceives herself as less confident in these areas.

For the Digital Content Creation (DCC) domain, English teachers fall into the above-average or good category. This showed that they have strong skills in creating and developing digital content using application programs, integrating different types of digital content, and understanding the ethics of using copyrighted materials. However, there is a slight difference in the scores between the two teachers. Ms. Yunita scored 4.3, while Mr. Haikal scored 4.6. This difference is reflected in specific items. Mr. Haikal rated himself slightly higher in knowing how to use the internet to create digital games or quizzes to assess students (e.g., Kahoot, Poll Everywhere, Quizlet, Quizizz, Mentimeter). He also feels more confident identifying and selecting digital content for legal downloading or uploading, such as using public domain databases, tools, and open licenses. Additionally, they both appeared highly confident in creating and selecting appropriate digital content on open platforms for delivering materials, they rated themselves 5 for this item. This included using tools like Microsoft Office (Word, Excel, PowerPoint, and Canva) to create reading texts and share them in formats like DOC or PDF. Creating digital

content, such as Canvas, MS PowerPoint, or video editing, is an important skill. English teachers must have video editing skills as a learning medium in this era. Multimedia learning is one of the important roles in online learning.

In the Safety (SF) domain, the teachers received the lowest scores compared to the other components. The average scores were 3.0 and 3.3, falling into the below-average or weak categories. This indicates that the teachers are still less confident in their ability to apply behaviors that safeguard data privacy and protect against risks associated with using digital devices. This is evident in specific items, such as their confidence in installing and activating protection software and services (e.g., antivirus, anti-malware, and firewalls) to ensure the safety of digital content and personal data. For this item, the teachers rated themselves with scores of 2 and 3. However, they shared the same opinion and confidence in distinguishing between appropriate and inappropriate digital content.

In the Problem-Solving (PS) domain, the average scores of the English teachers were in the average category. Ms. Yunita scored 4.6, while Mr. Haikal scored slightly higher at 4.8. This slight difference is reflected in their confidence regarding specific tasks. Ms. Yunita feels highly confident applying efficient low-tech strategies to protect the environment. These include shutting down devices, turning off Wi-Fi, avoiding unnecessary printing, and repairing or replacing components to extend the life of digital devices. However, both teachers share the same high confidence level in certain areas. They both rated themselves 5 for the item can learn independently with digital resources that are available both online and offline (e.g., learning Excel through YouTube videos). They also rated themselves 5 for knowing how and when to use machine translation solutions (e.g., Google Translate, DeepL, Oxford Dictionary) to understand documents or conversations and am aware of plagiarism or AI-related issues. This showed that the English teacher already understands actions to solve problems using digital devices. They can solve noncomplicated issues on his or her own, and they are intermediate in keeping up with the digital age and continue to learn. It could be the form of how to handle technical issues, how to understand the use of applications independently by using the internet or tutorials.

Based on the data above, English teachers can be categorized as teachers with good digital literacy. There were four theme that indicate they were in a good category. First, the teachers are good in information and data literacy; second, communication and collaboration; third, content creation, and last, problem-solving. The results of questionnaire were supported by classroom observation and interview. As following four themes:

In the Information and Data Literacy domain, the teachers demonstrated good proficiency. This is evident in their ability to identify, access, and navigate data, information, and digital content effectively. They are skilled in accessing EFL/ESL websites, selecting appropriate search engines, and utilizing blogs, YouTube, hyperlinks, and digital databases. Furthermore, they can assess their students' credibility and reliability of familiar data and digital content sources. They also know how to verify the author or source of information to ensure its credibility, such as confirming whether it originates from an expert or authority in a relevant field. Classroom observations and interviews revealed that teachers at this proficiency level demonstrate their ability to utilize digital technologies in teaching contexts. This includes independently finding or accessing reliable websites and online resources using the internet and creating content, such as designing engaging slideshow presentations with images, hyperlinks, videos, and graphics. This was validated through classroom observation:

> Excerpt #Co4 Acc1 Y
>
> "At 7.22 A.M, the teacher accesses the learning materials and shares the materials using Canva, which is projected onto the screen using personal internet. The teacher explains the material verbally, and a question-and-answer session occurs; students answer enthusiastically related to the teacher's questions." (Ms. Y 20/11/2024)
>
> Excerpt #Co3 Acc1 H
>
> "At minute 01:51. The teacher shares material using canva and uses a projector to share the screen. The teacher starts bridging by asking "do you know what we will learn today?" And the teacher starts explaining the material to the students." (Mr. H 26/11/24)

From classroom observations, it was evident that both teachers utilized various software and hardware effectively in their teaching practices. They used tools such as projectors, laptops, and internet access to access teaching materials

from platforms like Canva and YouTube. Furthermore, according to Bayrakci (2022), individuals at this level are capable of applying and interpreting digital technologies in their daily lives. Study by Chama (2023) The study revealed that participants possessed moderate to high digital literacy skills. They felt confident in using digital tools for communication, browsing the internet, and online learning. These digital technologies were incorporated into their daily routines and used to share materials smoothly in the classroom. The teachers also evaluated the credibility of online resources before using them for learning activities. Interviews from both teachers supported it. As the teachers stated in the interview:

Excerpt #In An1 Y

Ms. Yunita: "Then, the credibility is the most that if I doubt the credibility of an online resource or material, I first study the material before teaching, like Cambridge, the credibility is already okay... so I do not need to find out any more, the most following their abilities, like elementary right, like that, so the most checked is just not really checked."

Excerpt #In An2 H

Mr. Haikal: "Sometimes from that too (BBC), where do I get it, not ohh I have to get it from the BBC, not like that, where oh it turns out that BBC Learning is easier to understand and easier for children to understand and apply."

In evaluating credible resources, teachers use credible resources and adjust to the student's level. They felt more assured in their ability to locate, evaluate, and use information effectively, applying critical thinking skills to assess the reliability and relevance of various data sources. Classroom observation and interview highlight that the teachers were good at information data literacy, which effectively accessing and evaluating information and digital content. While information is everywhere, assessing its reliability and finding relevant details require significant skills (Shenton, 2009). In education, teachers need to be equipped with such competencies, which are a prerequisite for critical thinking and the ability to identify and even verify the absolute truth of the information in e-learning (Konig et al., 2020). Since skills like searching for information, processing and evaluating data, and sharing knowledge are essential in learning, both teachers seem to

understand how to use digital tools to teach English. Information means the teachers must be competent in gathering information through digital media. Not only find but also understand how they use the information correctly (Indriyani, 2019). They are comfortable using digital tools to find resources, evaluate content, and communicate effectively, significantly improving their language learning experience.

It aligns with Castro's (2022) statement that consumers should assess the credibility and originality of information. They are mainly influenced by the quality of the conclusions, positions, opinions, and models constructing the information. Information literacy also refers to the cognitive abilities that enable consumers to evaluate information in an informed and efficient manner (Castro, 2022). This aligns with Hobbs's competencies of accessing digital information appropriately to find and use media and technology tools appropriate and relevant information with others (Hobbs, 2010). Learning materials must be valid and sourced from credible platforms, such as ESL/EFL websites, with careful consideration before accessing links. Technological advancements require teachers to balance these tools with adequate knowledge and skills. Keengwe (2018) emphasizes that teacher education programs must equip graduates with digital literacy, critical thinking, and adaptability to stay competitive in the 21st century. Similarly, Nikou (2022) highlights the importance of educators mastering technological tools to prepare students for globalization.

Collaborations and communication domain: the teachers know how to share digital content (e.g., pictures) across multiple devices (e.g., from smartphones to cloud services) and use and collaborate with students or colleagues using a commonly used chat on my smartphones (e.g., Facebook, Line, Google Doc, Messenger, WhatsApp, or social media) to talk to my colleagues, students, and classmates and organize group work or use video conferencing. Ms. Yunita's score in communication and collaboration was 4.5, while Mr. Haikal scored slightly higher at 4.75. This indicates that both teachers demonstrate strong abilities to use digital devices, share digital content, and actively engage in cyberspace through these tools. However, the minor score difference (4.5 to 4.75) highlights Mr.

Haikal's greater confidence in using digital tools and technologies for remote work. Mr. Haikal feels more confident in using digital tools. It can be seen from interview sessions:

Excerpt #In CC Y

Ms. Yunita: “Then, what's more, if, for example, in the Zoom meeting, the most common use is a whiteboard, which means that I am not too advanced and can use the standard teacher, share screen, or share features available in Zoom.

Excerpt # In CC H

Mr. Haikal: “If it is an online app like Zoom, that is umm mya, it is the highest because it is very frequent.”

The responses from Ms. Yunita and Mr. Haikal above highlight a difference in their familiarity and confidence with online tools like Zoom. No wonder Ms. Yunita scored lower in the Communication and Collaboration domain. Her use of Zoom is more basic, focusing on standard features such as whiteboarding and screen sharing, which she admits are not sophisticated. On the other hand, Haikal showed greater confidence and frequent use of Zoom, indicating a deeper understanding of the platform. This difference in their comfort and proficiency using digital tools reflects a slight difference in their grades, with Mr. Haikal being more proficient in this area. However, they were still a good category and able to use technology effectively. It is in line with Dudeney et al. (2014) that digital literacy is the ability to utilize available technology and comprehend the social practices that surround it. Therefore, related to the teaching process, digital literacy offers teachers the ability to find, evaluate, utilize, share, and create content using information technologies and the internet (Beckingham & Belshaw, 2011).

Next, in the Content Creation domain, the teachers also demonstrated good proficiency, with scores of 4.3 and 4.6. These results indicate that both teachers possess good proficiency, with only a slight difference in their levels of confidence or expertise. Ms. Yunita showed lower than Mr. Haikal, as she stated in the interview:

Excerpt #In C1 Y

Ms. Yunita: “I would not say I am really good at it, but I am quite familiar with using it.”

As Ms. Yunita noted during the interview, her score in the Content Creation domain is slightly lower than Mr. Haikal’s. She mentioned that although she may not consider herself an expert in this area, she is familiar with the tools and capable of creating materials such as slide presentations and interactive games. This reflects her solid understanding and ability to use these tools effectively, even if her confidence is not as high as Mr. Haikal’s.

It can be observed from classroom practices that the teachers consistently create their own digital content, such as slide presentations and interactive games, to enhance their lessons. This observation is supported by the interview sessions, where the teachers confirmed their active engagement in content creation. For instance, they mentioned:

Excerpt #In C3 H

Mr. Haikal: “Nahh, for the games themselves, it's like Worldwall, then Kahoot, then quizizz ummm and then there's also this educates play, education play. Well, that's like a website too, so we make a game but the questions, when they play it, it's like a frog jumping around and then they choose the answer, if the worldwall is more like this is not a class of champions, for example, we choose them to point on the wall which is the correct answer.”

Excerpt #In C3 Y

Ms. Yunita: “There used to be wordwall and online puzzles too. But now we use YouTube and slide presentations and quizzez the most.”

From the interview session Ms. Yunita and Mr. Haikal actively incorporate digital tools like interactuive games. The teachers not only develop their own materials but also create Kahoot, Quizizz, Wordwall, and Educateplay to design interactive quizzes for students to engage with during class. Son et al. (2011) define digital literacy as “the ability to use a computer at an adequate level for creation, communication, and collaboration” (p. 27). This highlighted their ability to create digital content and incorporate digital technologies into their teaching practice. The

current educational model requires teachers to possess adequate digital literacy. A lack of digital literacy among teachers can lead to ineffective technology use and unequal learning opportunities for students (Mardiana, 2020). The teachers also demonstrated creativity and effort in designing interactive and engaging presentations to enhance the learning experience. A study by Rahim et al. (2023) reported that participants demonstrated good competence in information literacy, communication, collaboration, content creation, online safety, and problem-solving. Nevertheless, there is potential for improvement in digital content creation.

The last domain is Problem Solving, where the teachers demonstrated a good category, as reflected in their scores of 4.6 and 4.8. The above-average or good category means that she or he is a digital literate who can solve complex situations independently and guide others in routine tasks (Bayrakci, 2022). The teacher's ability to choose solutions when faced with problems in the technological environment (Calvani, Fini, & Ranieri, 2009). For example, they can troubleshoot technical issues on online learning platforms, such as resolving video conferencing errors. If a student's connection is interrupted, the teacher promptly offers an alternative solution, like guiding the student to access a recorded lesson on a different platform. This knowledge was aligned with the teacher's performance in the classroom observation when they faced troubleshooting when the class was in online class or via Zoom; evidence for this was found during classroom observation:

Excerpt #Co2 Act5 Y

> "Mr, can you give an announcement to the students and handle the class? I have technical issues with my laptop. Working on it, I will be right back". (*Ms. Y, Wednesday, 13/11/2024)*

Excerpt #Co3 Act5 H

> "The teacher uses their own personal internet because the class is not provided the wifi" *Mr. H, Tuesday, 26/11/2024)*

This showed that the English teacher already understands actions to solve problems using digital devices. The teacher demonstrates critical thinking skills to address complex situations independently. This aligns with the perspective of Yu,

Fan, & Lin (2014), who assert that analyzing and recognizing problems is essential for determining the most appropriate actions or solutions to those problems. When the teacher faced technical issues on online learning platforms, she could resolve video conferencing errors, log in back to the class, and continue the lesson. The ability to address such challenges reflects teachers' skills in selecting appropriate solutions when faced with technological issues, as described by Calvani, Fini, and Ranieri (2009). This aligns with findings by Hartati et al. (2024) that prospective teachers in “fairly good” categories excelled in information literacy and problem-solving. The teacher demonstrates critical thinking skills at this level to independently address complex situations.

In conclusion, teachers show an above-average or good level of digital literacy even though they only have three years of teaching experience as novice teachers, even though they are relatively new to the profession. This is largely due to their frequent engagement with and exposure to various digital tools, significantly improving their skills. Although they are still new to the teaching profession, their active use of digital platforms has helped them develop strong digital literacy, allowing them to perform effectively. Based on the data from a questionnaire, classroom observation, and interview, English teachers can be categorized as having good or above-average digital literacy skills, as reflected in their abilities across four key domains. First, the teachers showed strong performance in Information and Data Literacy, effectively demonstrating skills in accessing, evaluating, and navigating digital information and resources. Second, in Communication and Collaboration, teachers demonstrate confidence in using digital tools to interact, share and collaborate with others, both online and offline. Third, their abilities in Content Creation highlighted their proficiency in designing and developing digital teaching materials, such as interactive games and slide presentations, adjusted to classroom needs. Finally, in the Problem-Solving domain, the teachers showed their capability to utilize digital tools and strategies to overcome challenges, learn independently, and adapt to changing educational demands.

### 4.2 The Integration of Teachers' Digital Literacy in EFL Contexts

The following section discusses the five dimensions of digital literacy. The data were classified into the five dimensions of Digital and Media literacy by Hobbs (2010), which focused on specific teacher activities related to accessing, evaluating and analyzing, creating, reflecting, and act with digital tools and resources. To answer this research question on how teachers integrate their digital literacy into teaching practice, the researcher conducted classroom observations, and questionnaires and interview sessions confirmed it.

Through classroom observations, it is clear that five dimensions of digital literacy are being practiced. These dimensions highlight students' and teachers' different skills and competencies in using digital tools and resources. Table 4.3 displayed the specific details of these dimensions, providing a clear picture of how digital literacy is integrated into classroom activities.

**Table 4. 3** *Digital literacy practice by EFL Teacher*

| Dimension of digital literacy | Activities/descriptions | Source of technology | Impact on learning |
|---|---|---|---|
| Access | access videos, images, text, EFL/ESL websites and audio for diverse learning experiences | Projector, laptop, tablet, Internet, YouTube, Canva, online dictionary, trusted websites, or Google | Enhanced comprehension and retention |
| Analyze and evaluate | Teachers find reliable and relevant to the topic and adapt existing resources to create new materials and adjust to the student's needs. | Various digital tools | Increased focus on key learning points, engagement and facilitate students to analyze text or video |
| Create | Teachers create interactive presentations, online quizzes, wordwall and Kahoot! and share digital content. teacher facilitates communication and collaboration with others using digital tools. | Kahoot, Quizizz, Canva and Zoom | fostered collaboration, engangement, and communication among students |
| Reflect | Students and teachers reflect on the learning process, including using digital tools. | Zoom, class discussion | Teachers facilitate students to Discuss challenges encountered in accessing, analyzing, or creating digital outputs |
| Act | Teacher shares their knowledge and solve problem. Students | Canva, Whatsapp, Zoom. | Encouraging students to analyze |

| | | |
|---|---|---|
| | share projects on collaborative platforms (e.g., WhatsApp or online forums) | online news articles and identify biases. |

The table above highlighted how teachers integrate their digital literacy skills into their teaching practices in various ways. First, they access online resources to gather materials and ideas that enhance their lesson delivery, ensuring their content remains current and engaging. They also analyze content from the internet to determine its reliability, accuracy, and suitability for their students, enabling them to provide well-curated learning materials. Teachers further demonstrate creativity by designing their own digital content, such as presentations, videos, and interactive exercises, which they share with students to facilitate learning.

Additionally, the teachers engage in reflective practices by evaluating their teaching methods and the effectiveness of their digital tool usage in the classroom, continuously striving for improvement. Beyond the classroom, teachers apply their digital literacy skills in collaborative settings, working individually or in groups to share knowledge and solve problems within various social contexts, such as their families, workplaces, and broader communities. They also actively participate as local, regional, national, and international community members, contributing to shared goals and fostering connections through digital platforms.

These key points were identified during classroom observations, which provide an overview of how teachers integrate digital literacy into their teaching practices. The following sections will elaborate further on each aspect, supported by data from the questionnaire and interview findings.

### 4.2.1 Access

The first dimension of digital media literacy, as described by Hobbs (2010), is access. This refers to the ability related to the activity to find and use media and technology tools skillfully and share appropriate and relevant information with others. What is mean by technology tools skillfully is the ability to use both software and hardware. In terms of software, the teachers utilized the internet, EFL/ESL websites, presentation tools like Canva, and

interactive learning platforms to enhance their teaching. As for hardware, they relied on devices such as laptops, projectors, speakers, tablets, and mobile phones to deliver and support their lessons effectively.

Based on the classroom observation, there were two digital technology access by the teacher, software and hardware as displayed in table 4.4

**Table 4. 4** *Digital Technology Accessed by the Teachers*

| **Teachers' name** | **Software accessed** | **Hardware accessed** | **Function** |
|---|---|---|---|
| Ms. Yunita | ESL/EFL websites such as Cambridge.org.test, BBC Learning English, British Council, CNN, ISL Collective, Rumah123.com, and YouTube for learning resources, Chrome or Google searches, Whatsapp, Zoom, Internet, and Quizizz. | Laptop, Projector, speaker and tablet | Presentation tools, interactive learning platforms/assessment, content creation, communication tools |
| Mr. Haikal | ESL websites, Easy English websites, YouTube channels (www.kids.pages.com), personal blogs, Google searches, and Pinterest, Canva, YouTube, Internet, Zoom, Quizizz, Kahoot, Wordwall. | Projector, laptop, speaker, handphone, and speaker | Supporting both teaching and content delivery |

The table above shows that both teachers frequently accessed technology tools such as software and hardware when practicing teaching. The laptop, speaker, and projector became essential tools for supporting Mr. Haikal and Ms. Yunita in teaching with digital technology. The teachers used hardware to access online resources to offer diverse ways to meet students' unique learning styles and needs. Teachers can select from various options, such as interactive simulations, videos, educational games, and collaborative platforms, allowing them to adjust their instruction to engage students with different preferences and strengths. By thoughtfully

incorporating these varied resources, teachers can create a more inclusive and adaptable learning environment that supports every student's needs and enhances overall learning outcomes.

First, in term of accessing the software, the data collected through interview sessions and questionnaire indicated that the teachers accessed learning resources such as YouTube, pictures, EFL/ESL websites or educational tools in the classroom using the internet. They used Canva to deliver the material. Teachers can access YouTube and other websites because they have an internet connection. They understand that accessing these platforms requires internet service, and they were willing to spend money to ensure they had access. As mentioned by the teacher in the interview:

Excerpt #In Acc1 Y

> Ms. Yunita: "Umm... If I am the most, for sure I have a Google Spreadsheet that excels online, it is to manage my learning activities. Then youtube is one of the ones I use the most because it's perfect to make supplementary to my activities, so the materials are more attractive on YouTube. Then, next, I will use Canva and the Internet. I use Canva to share my screen."

Excerpt #In Acc1 H

> Mr Haikal: "To convey the material, well, if it is just material, it's usually easier to use Canva, and it's already available, so we just have to fill it in so it's practical. But if it's past tense like yesterday, I will listen to it too, then I will play past tense videos."

From the interview above, it can be seen that Ms. Yunita and Mr. Haikal used Canva the most frequently. The teachers stated that by using Canva, they could deliver learning materials more easily and attractively. The teachers' statement was in line with what Nguyen (2014) has expressed: that most teachers' use of classroom technology was limited to a few types of applications, such as word processing and PowerPoint. Meanwhile, as revealed by the teacher and from classroom observation, the teacher used the internet as a source of various materials delivered and learning activities they carry out with their students in class. Ms. Yunita's statement was supported by Park and Son's (2009) and Suwannasom's (2010). The

Internet provides various teaching content (Park & Son, 2009). The picture below the example of software accessed by the teacher


***Figure 4. 1*** *Teacher accessed online resources from CNN*

Secondly, the teacher accessed the hardware such as projector, laptop, speaker, handphone, and speaker to supporting both teaching and content delivery. The hardware became essential tools for supporting Mr. Haikal and Ms. Yunita in teaching with digital technology. From classroom observation it can be seen that teacher accessed projector to share their materials

***Figure 4. 2*** *Teacher accessed YouTube using projectors to share materials*

In conclusion, it was evident that the teachers have the ability related to the activity to find and use media and technology tools skillfully and share

appropriate and relevant information with others (Hobbs, 2010). This capability supports the development of learning materials and enriches the curriculum with diverse digital content. Such adaptability illustrates that digital literacy encompasses more than mere technical skills; it requires thoughtful technology integration to create a more inclusive and engaging learning environment for students. This implies that "digital literacy is more than skills or competencies" (Martin, 2008, p. 164). Furthermore, as highlighted by Wang & Lieberoth (2016), while technical proficiency is an important aspect of digital literacy, the ability to critically evaluate and filter the vast amounts of information available online is equally essential.

### 4.2.2 Analyze and evaluate

The second dimension of digital and media literacy, as outlined by Hobbs (2010), involves analyzing and evaluating. It includes the skill of comprehending messages and using critical thinking to analyze message quality, veracity, credibility, and point of view while considering potential effects or consequences of messages. In terms of analyzing and evaluating, the teachers showed their ability in this dimension by checking the credibility, suitability, and quality of learning resources.

To begin with, regarding credibility, the interview and questionnaire results confirmed that the teacher ensured the credibility of the resources. Before sharing teaching materials with their students, both teachers check the credibility of learning resources.

Excerpt #In An1 Y

Ms. Yunita: "Then, the credibility is the most that if I doubt the credibility of an online resource or material, I first study the material before teaching, like Cambridge, the credibility is already okay... so I don't need to find out anymore, the most in accordance with their abilities, like elementary right, like that, so the most checked is just not really checked."

Excerpt #In An2 H

Mr. Haikal: "Sometimes from that too (BBC), where do I get it, not ohh I have to get it from the BBC, not like that, where oh it turns out that BBC Learning is easier to understand and easier for children to understand and apply."

It can be seen from the interview and questionnaires that both teachers checked the suitability of the learning sources. However, Mr. Haikal and Ms. Yunita took different approaches in selecting the credibility of the resources. Ms. Yunita tends to rely on online resources from credible sources, Mr. Haikal took a different approach. For Ms. Yunita, once she determined that a resource was credible, she did not feel the need to review its credibility again in the future. Instead, she adjusted them to match the students' level of difficulty. Meanwhile, For, Mr. Haikal, he was open to exploring online resources from various platforms as long as they meet the students' needs. For him, it doesn't always have to be from sources like BBC Learning. However, he still carefully selects materials to ensure they are appropriate and trustworthy.

Next, in term of suitability, teaching materials gained from various resources were not automatically used. The teachers analyzed and evaluated the materials. They typed relevant keywords to search for materials, sorted resources by scanning and skimming materials, checked the suitability of the materials toward the syllabus, checked the complexity of the materials in line with his students' level, comprehended the materials. This can be seen from the interview session, as the teachers confirmed:

Excerpt #In Acc2 H

> Mr. Haikal: “Modification. Ummmm..... I like to modify, for example, both from ee examples, for example a I get something this material and then I think this example is not hitting or related this in their daily lives, usually I adjust it, I modify which examples are close to their daily activities.”

Excerpt #In Acc2 Y

> Ms. Yunita: “then for example, text adaptation, I usually adapt it, I reduce the language that is too heavy, I ask the most AI help to simplify the language, or simplify the sentences so that it can be better understood for children.”

When the material was considered too difficult for students to understand, both teachers tried to adjust or adapt the text to make it easier to understand. They often simplified the language, broke the information into smaller sections, or reorganized the structure of the text for better

clarity. The teachers showed their consideration in selecting appropriate learning resources or materials for teaching practice. The learning materials or the source must be valid, appropriate to student's level, and cited from a credible source. As stated by Hobbs (2010), "digital and media literacy" encompasses the full range of cognitive, emotional, and social competencies that include the use of texts, tools, and technologies and critical thinking and analysis skills. Then, the teacher must be able to access, find, analyze, and evaluate appropriate ESL/EFL websites for the relevant topics navigate between them and carefully consider the possible outcome before clicking a link. Nikou (2022) argued that educators must be skilled in navigating and utilizing technological tools. Without these skills, teachers cannot adequately prepare students for globalization. As Keenge (2018) notes, teacher education is crucial in equipping learners with 21st-century skills for success in a digital society.

Furthermore, in term of quality of the resources, teaching materials from online resources were not always of good quality and were suitable for learning. To get relevant teaching materials, both teachers sorted some websites or online resources by scanning and skimming, and then she checked the suitability of the materials by comprehending them. As the teacher stated:

Excerpt #In An2 Y

> Ms. Yunita: "Then, for example, when adapting the text, I usually adapt it, I reduce the language that is too heavy, I ask for the most help from AI to simplify the language, or simplify the sentences so that it can be better understood for children in grade 6".

Excerpt #In An3 H

> Mr. Haikal: "If I know that it is still difficult for children, I will summarize it again or make a new concept again, maybe with the help of chat GPT."

As illustrated by the data from the interview above, Ms. Yunita and Mr. Haikal sorted some websites or online resources by scanning and skimming and then adjusted them to the student's level. Both teachers agreed on utilizing AI tools to modify their learning materials before sharing them

wsith students. Additionally, Ms Yunita sometimes modified reading or materials by changing some parts of the text, such as the character's names, the settings, and the structure or complexity of the sentences. Meanwhile, Mr. Haikal refined the learning materials, ensuring they were better suited for students before sharing.

Additionally, findings from classroom observation supported what teacher stated in the questionnaire and interview that the teacher was checking the quality of the learning materials. The teachers highlighted in the classroom observation:

> Excerpt # Co4 An4 Y
>
> Ms. Yunita: "What about this one, everyone? Can you see the picture clearly? What do you see in this picture?
>
> Excerpt #Co1 An4 H
>
> Mr. Haikal: "Keep quiet please, the one sitting in the back can hear and see the video clearly?"

The teachers ensure that materials provided to students, including audio-visual content and images, are sufficient to be seen and heard clearly. This includes checking the resolution and clarity of visual elements and the sound quality and clarity of audio materials. The data above showed that both teachers utilized their critical thinking skills to evaluate, select, and adjust appropriate materials for the student's level. Critical thinking is paramount, rather than technical competence, which is the foundation of digital literacy, according to Gilster (1997). This implies that "digital literacy is more than skills or competencies" (Martin, 2008, p. 164). Therefore, related to the teaching process, digital literacy offers teachers the ability to find, evaluate, utilize, share, and create content using information technologies and the internet (Beckingham & Belshaw, 2011).

### 4.2.3 Create

Another dimension is creation, which encompasses the ability to generate and design content utilizing digital tools. This dimension allows the individual to have skills for composing or generating content using creativity and confidence in self-expression, with awareness of purpose,

audience, and composition techniques (Hobbs, 2010). This skill goes beyond merely consuming information; it emphasizes creativity and innovation in developing engaging and meaningful materials. Regarding content creation, the teacher created interactive presentations and interactive games such as Kahoot, wordwall, and pop-up quizzes.

First, findings from the questionnaire showed that teachers were skilled in creating content in the digital space due to their exposure to various digital tools and platforms. This exposure has enabled them to develop competencies in designing, editing, and sharing materials effectively in a digital environment. In addition, evidence from the interview indicated that the teacher is skilled in creating digital content. In the teaching practice, the teachers design interactive presentations, create multimedia resources, or use digital platforms to develop educational content tailored to their students' needs. The ability to create also encompasses adapting materials to suit different learning contexts, ensuring that the content aligns with curriculum goals and according to students' interests and abilities. It was confirmed in the interview sessions:

Excerpt #In C2 Y

Ms. Yunita: “Then, next, I use canva, well ... I use canva for share screen, uh sorry, not share screen but slide presentation because if you use Ms presentation PowerPoint, it lacks a variety of application options and animations, while canva is more diverse, colorful and attractive, but sometimes there is a lack of it. Also canva requires the internet, YouTube and zoom I also often use, but in the current class because there are no more online classes, so ..... I do not use zoom anymore so the class is really in person.”

Excerpt #In C1 H

Mr. Haikal: “oh, if for the application for presentations, it is like canva of course and I do not use... do not use what is the name of umm Powerpoint the name is haha no one uses that actually so already on the move to canva....”

Excerpt #In C2 H

Mr. Haikal: “Eee, what is made by myself? Everything is made by myself anyway, like PPT, Canva, although actually there is already a template, but yes, it is modified again like, for example, color or

see what is the name ....um animation, or there are pictures added so."

Throughout the interview session, it was clear that both teachers use Canva to design their presentations. Both teachers rely on Canva as a digital tool to create because Canva is more diverse and colorful, has many animations, and is attractive, and teachers can add images.

Other content creations made by the teacher were Kahoot, word wall and quizizz. During the teaching and learning in the classroom, it was possible to feel bored and less motivated. Moreover, Ms. Yunita and Mr. Haikal's class was in the morning, so it was pretty challenging to maintain the students' mood or motivation to stay focused. They create online quizzes and games, would be more engaged and motivated in learning. The teacher confirmed this in the interview sessions:

Excerpt #In C3 H

Mr. Haikal: "Nahh, for the games themselves, it's like Worldwall, then Kahoot, then quizizz ummm and then there's also this educate play, education play. Well, that's like a website too, so we make a game but the questions, when they play it, it's like a frog jumping around and then they choose the answer, if the worldwall is more like this is not a class of champions, for example, we choose them to point on the wall which is the correct answer."

Excerpt #In C3 Y

Ms. Yunita: There used to be word walls and online puzzles, too. But now we use YouTube, slide presentations, and quizzes the most."

Furthermore, the data from the classroom revealed that the teacher creates and uses digital tools like interactive games. This can be seen from the picture from classroom observation.


***Figure 4. 3*** *The use of kahoot*

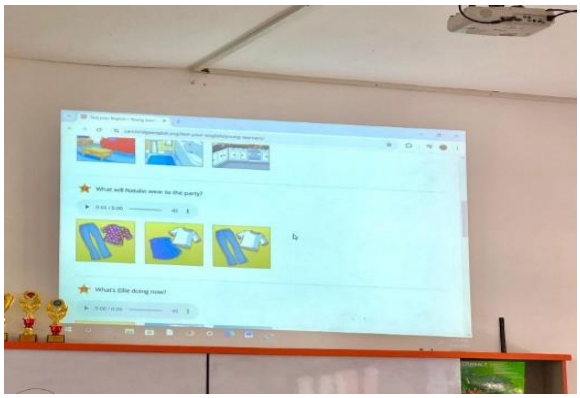

***Figure 4. 4*** *The use of Pop-up Quizz*

Findings from the questionnaires, interviews, and classroom observations showed that teachers consistently demonstrate their ability to create their digital content. This ability aligns with their level of digital literacy, indicating that they can design and adapt digital materials that suit their teaching needs and students' learning objectives.

The teacher incorporated digital tools like interactive games create by canva to design their presentation slides. Both teachers relied on Canva as their digital tool for creation because Canva is more diverse and colorful, has many animations, and is attractive, and the teacher can add a picture. As stated by Buckingham (2016), digital literacy enables teachers to enhance their productivity by developing engaging digital teaching materials, including images, audio, video, games, and more. It is strengthened by Son et al. (2011, p. 27), who define digital literacy as "the ability to use a

computer at an adequate level for creation, communication, and collaboration in a literate society." The teachers created, selected, and used specific digital technologies in the classroom to agree that the use of digital technology in the classroom enhances student engagement, improves accessibility to information, supports diverse learning styles and to enhance their productivity in developing engaging digital teaching materials, including images, audio, video, games.

Moreover, both teachers use digital tools such as game-based learning to help them make the students more engaged and the learning more enjoyable. Technology is increasingly being integrated into teaching to improve learners' motivation and their interaction with learning content (Licorish et al., 2018; Premarathne, 2017; Wang & Lieberoth, 2016). In a study by Ahmed et. al (2022) and Chiang (2020), Incorporating games into learning a foreign language is an effective strategy that can lower students' stress and improve their learning, and participants expressed positive attitudes towards the application of Kahoot! in the EFL reading class. In short, integrating technology, such as games like Kahoot! into teaching has boosted motivation, reduced stress, and enhanced learning outcomes.

Technology integration has profoundly reshaped teaching and learning, making traditional methods increasingly demotivating for learners and educators (Hakim, 2020). The teachers noted that digital technologies like interactive presentations, videos, and educational apps could make lessons more dynamic and visually appealing, capturing students' attention more effectively than traditional methods and motivating teachers to adopt such approaches in their classrooms. As the teachers said in the interview:

> Excerpt #In C4 Y
>
> Ms. Yunita: "For me, using digital is easier, more convenient, and more attractive. It is actually more engaging and they are also more visual children so they remember what they see in the form of images and audio too."
>
> Excerpt #In C4 H
>
> Mr. Haikal: "It is interesting, it is not boring, it is not boring."

The teachers agreed that using digital tools in the classroom makes lessons more engaging and helps students remember material better through images and audio. Mr. Haikal emphasized that technology prevents his classes from becoming boring, motivating them to create their own digital content, like Canva, with images, audio, videos, or games to meet students' needs. The students' responses regarding using digital tools in the classroom indicated a noticeable increase in enthusiasm and interest in learning. Many students reported that integrating digital resources made lessons more engaging and dynamic, helping to capture and maintain their attention more effectively than traditional methods alone. This high interest showed that digital tools positively impact student motivation and participation in classroom activities. ICTs can maintain learners' interest and enthusiasm in language learning while enhancing their enjoyment and emotional involvement (Dewi, 2014).

Furthermore, in terms of creating digital presentations or designing presentations, the students were assisted in creating their own digital presentations to enhance their creativity. Using Canva, students can collaboratively design slides incorporating text, images, and multimedia elements. Students can also work together to create infographics summarizing key concepts from their lessons.

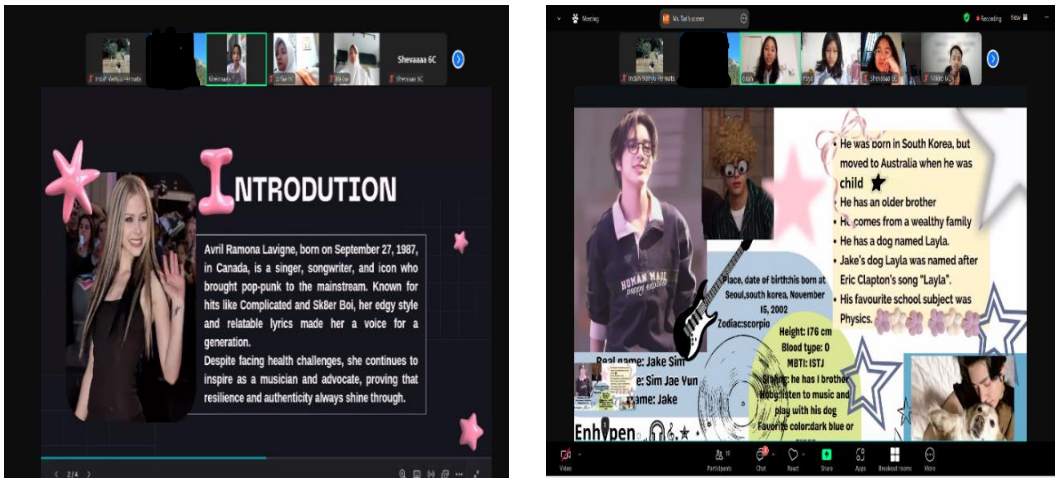


***Figure 4. 5*** *Digital presentation by the students*

The picture above illustrates digital presentation creation by the students; through this process, the teacher taught students key digital literacy skills, such as finding reliable information online and using AI tools wisely. Students learned to paraphrase and think critically about their work. According to Hutchison and Woodward (2018), digital technology offers new opportunities for students and teachers to improve skills and access valid materials in the digital space. Also, this technology can bring creativity to teachers and language learners. Digital tools make classrooms more dynamic, cooperative, attractive, and valuable (Jeong, 2017). It also increases the creativity and critical thinking of both language learners and teachers, and as a result, it leads to their greater independence.

Through collaboration and the increasing use of digital technology, teachers believe that promoting students' digital literacy depends on practicing and using digital technologies with students. This largely depends on how well teachers use technology for educational purposes (Krumsvik, 2014; Gudmundsdottir et al., 2014). Due to the students' familiarity with technology, teachers can use different types of technology to create a more diverse and inclusive learning environment and to promote their students' digital literacy by bringing them to practice through online classes, sharing educational information through technology, and encouraging the students to use educational technologies by assigning grades for using digital technologies.

It can be concluded that both teachers create and effectively utilize digital tools in their EFL classrooms. It is in line with Dudeney et al. (2014) that digital literacy is the ability to utilize available technology and comprehend the social practices that surround it. Digital literacy empowers teachers to creatively and interactively utilize technology to meet the diverse needs of their students. As Satriani et al. (2022) highlight, educators must master digital literacy skills to enhance their teaching practices. Therefore, related to the teaching process, digital literacy offers teachers the ability to find, evaluate, utilize, share, and create content using information technologies and the internet (Beckingham & Belshaw, 2011). Hobbs (2010) supports the idea that digital literacy includes

the practice of message composition and creativity. By creating interactive quizzes, presentations, and collaborative projects demonstrates the teachers' digital literacy, fostering active participation and enhancing student understanding of the material. These techniques make learning enjoyable and help develop essential skills such as teamwork, critical thinking, and digital literacy among students.

### 4.2.4 Reflect

Hobbs's (2010) fourth dimension is reflection, the skill of applying social responsibility and ethical principles to one's own identity and lived experience, communication behavior, and conduct. In a classroom activity, reflection can be demonstrated by promoting respectful communication, ethical considerations about how such technologies affect the relationship between teachers and students, plagiarism awareness, and digital responsibility. Regarding reflect, the teacher integrates their digital literacy by self-reflection in using digital technology and pays attention to ethical considerations, such as avoiding copyrighted content or material.

In the area of reflect, the data from the interviews were verified by the data questionnaire so that the teachers could reflect on whether digital tools have increased student engagement or created communication or interaction gaps. Self-reflection is an essential part of the teaching process, especially when it comes to the use of digital tools in the classroom. Teachers need to consider the tools' positive impacts and evaluate whether they effectively increase student engagement or create gaps in communication and interaction. As the teacher said in interview sessions

Excerpt #In R1 Y

> Ms. Yunita: "Oh, if reflection in digital? Quite often, once during an online class, it turned out that several games did not work in online classes; they should be used in offline classrooms. Then the internet, sometimes it takes a long time. From the homeroom teacher, I was once told, "Miss, if you teach children, you should be mobile because children like to move around and must be involved in the learning process" because I do more lecturing, hehe."

Excerpt #In R1 H

> Mr. Haikal: “Well, often, I like that the most, but most often it is from the teaching method, the second is from the material and tools that I use, for example, ohh it turns out to use umm what umm teach this, it should use eee use games, well the games should be this ... this. So, I am like considering that, ohh, it should use this application or, for example, whether it is from a presentation I like me this is from the picture, it seems that the picture was lacking, there should be a picture.”

Both teachers reflected on their use of technology in the classroom during the teaching process. Ms. Yunita's reflections were influenced by self-assessments and feedback from peer teaching or her home teacher. Similarly, Mr. Haikal's reflections came from both self-reflection and student feedback.

The data from classroom observation proved that the teacher did reflect on the use of digital tools in the classroom. The teacher stated during classroom observation:

Excerpt #Co3 R2 H

> “Ummm which one do you prefer? Alif, do you prefer Quizizz or Kahoot?” *(Mr. H, Tuesday, 26/11/2024)*

Excerpt #Co1 R1 Y

> “Guys, before you make the poster, make sure to look for information on trusted websites, and do not use AI completely because Miss does know which language you make yourself or AI. If you do not understand the vocabulary, you can use Google Translate or Deep.L instead of copy and paste all, okay?”. (*Ms. Yunita, Tuesday, 12/11/2024)*

From the statement from classroom observation above Mr. Haikal reflected on how digital tools are used during classroom activities and evaluated their effectiveness, considering how easy they were for students. Meanwhile, Ms. Yunita focused on the awareness of plagiarism and AI concerning online resources.

This reflection helps the teacher assess whether the tools enhance the learning experience and whether they are accessible and practical for students to engage with. It is widely recognized that technology is not a one-size-fits-all solution for enhancing classroom instruction (Ertmer, 2005). In

the classroom, teachers need to effectively integrate technology and link it to the subject matter (Stobaugh & Tassell, 2011). Thus, the teacher's reflection is essential to fostering an active learning environment that enables technology to become an essential and effective tool in education.

In terms of ethical condiserations to avoid of plagiarism, the teacher consistently cited the sources they used from the internet. In this case, Ms. Yunita and Mr. Haikal did not formally cite the sources with APA style 7th edition, but Ms. Yunita and Mr. Haikal just put the link or mentioned the online resources. During the learning process, the teacher emphasized the importance of academic honesty and digital responsibility. the teacher teaches students how to cite sources properly, discourages plagiarism, and encourages using online resources responsibly, ensuring that information is not misleading. The teacher also advised students against copying and pasting content from websites without verification and encouraged creating original content while giving proper credit to ideas borrowed from others. By engaging in digital project presentations, students developed digital literacy skills, with the teacher indirectly teaching them essential tools for content creation.


Kennisya Ladiani Refdian

BREAKING NEWS

TIMOR LESTE LEPAS DARI INDONESIA



THE REPRESSIVE ACTION AT SOEHARTO'S TIME ONLY INCREASED THE WANT OF TIMOR LESTE'S PEOPLE TO SEPERATE ITSELF FROM INDONESIA.

BJ Habiebie gave them two choice. either **get independent** or **operate under a special autonomy.** a polling was made under the eyes of pbb, and the people of timor leste has choosen to get independent at **30 august, 1999**. it were a considered a country on **20 may 2002.**

*Thank you so much for:*
HTTPS://WWW.DETIK.COM/EDU/DETIKPEDIA/D-7480401/SEJARAH-TERPISAHNYA-TIMOR-LESTE-DARI-INDONESIA.

THE SEPARATION OF TIMOR LESTE FROM INDONESIA CANNOT BE SEPARATED FROM INDONESIA'S POLITIC AND ECONOMY SITUATION.

The area of Timor Leste is fed up from the constant separation conflict while being a part of Indonesia. A conflict that was made because of wanting a status, an area solely for itself yet a small part of Timor Leste, they still want to unite. One of the Communist Party on Timor Leste, Fretilin, do not agree on the clinging to Indonesia and want independence for itself. That same party ran a diplomacy and spread its wing to the world, so that when theres a conflict, all cynical eyes go to Indonesia. But this move was silenced at the era of President Soeharto.

***Figure 4. 6*** *Student credited the source from online resources*

The data above showed a digital presentation created by students, where they learned to find reliable information, cite sources, and use AI tools responsibly. They focused on paraphrasing and thinking critically about their content instead of copying and pasting. As stated by (Hutchison & Woodward, 2018) digital technology created new opportunities for students and teachers to improve their skills and access valid materials using the digital space. It is strengthened by Hobbs (2010) that digital literacy is the ability to engage in reflection and ethical thinking. In this case, both teachers and students reflected on their digital literacy, with teachers adapting their methods based on self-assessments and feedback, while students demonstrated growth in digital skills through their projects. Teachers have a crucial role in teaching digital literacy to students, particularly regarding socio-emotional and cognitive aspects, such as digital ethics, evaluating information credibility, and ensuring technology safety. While understanding digital technology is essential, it is often underemphasized in formal education, as developing digital skills requires significant time and effort (Güneş & Bahçivan, 2018).

#### 4.2.5 Act

The last dimension of Hobbs' digital and media literacy is the act. According to Hobbs (2010), the act refers to working individually and collaboratively to share knowledge and solve problems in the family, the workplace, and the community, as well as participating as a community member at local, regional, national, and international levels. In terms of the act, the teachers reflect the act by independently solving the problem in the technical issues during the teaching practice, using social media as an educative platform, and actively utilizing various digital resources as well as engaging in discussions with fellow teachers about practical issues.

First, in terms of independently solving troubleshooting, the results of the questionnaire analysis showed that the teachers feel confident in finding solutions on the internet or offline when facing a technical problem, with they rate themselves as "high," stating that they can learn

independently with digital resources and know how to find solutions on the internet when facing a technical problem such as to identify and solve a camera and/or a microphone issue when in an online meeting, or how to connect a PC to a projector. In addition, the classroom observation confirmed the results obtained from the questionnaire, which the teacher reflected on their act by working individually and collaboratively to share knowledge and solve problems. the teacher stated in the classroom observation:

Excerpt #Co2 Act5 Y

> "Mr, can you give an announcement to the students and handle the class? I have technical issues with my laptop. Working on it, I will be right back". (*Ms. Y, Wednesday, 13/11/2024)*

Excerpt #Co4 Act5 Y

> "Guys, do you have any internet here, guys? I don't know what happened on my laptop. I mean, this room, do you have WiFi? (having technical issues) *(Ms. Y, Wednesday, 20/11/ 2024)*

Excerpt #Co3 Act5 H

> "The teacher uses their own personal internet because the class is not provided the wifi" *Mr. H, Tuesday, 26/11/2024)*

This showed that the English teacher already understands actions to solve problems using digital devices. The teacher demonstrates critical thinking skills to address complex situations independently. The lack of Wi-Fi in classrooms presents a challenge for teachers. For example, Ms. Yunita expressed her frustration when facing technical problems with her laptop and asked about internet availability in the classroom during lessons. Similarly, Mr. H highlighted that teachers often rely on their personal internet connection to overcome this limitation, as the school does not provide Wi-Fi in classrooms. Both of the teachers independently solved the problem.

Furthermore, the data from the interview also revealed the same way in terms of individually learning to solve the problem. They can learn

independently with digital resources, as the teacher confirmed in the interview:

Excerpt #In Act5 H

Mr Haikal: “As for wifi, so far, I use my own internet; I have my own. So, no problem so far, very independent.”

Excerpt #In Act5 Y

Ms. Yunita: “I usually learn from YouTube or TikTok”

From the statement above, both teachers demonstrated efforts in working individually and collaboratively to share knowledge and solve problems in the workplace. Mr. Haikal emphasized his independence in accessing the Internet, relying on his personal connection to ensure online access. Meanwhile, Ms. Yunita highlights her initiative in learning through digital platforms like YouTube and TikTok, showing her adaptability in acquiring knowledge and ideas to enhance her teaching.

Findings from the questionnaire, classroom observation, and interviews revealed that the teachers demonstrated consistency in their ability to solve problems and learn independently when faced with technical challenges. This showed that the English teacher already understands actions to solve problems using digital devices. The teacher demonstrates critical thinking skills to address complex situations independently. This aligns with the perspective of Yu, Fan, and Lin (2014), who assert that analyzing and recognizing problems is essential for determining the most appropriate actions or solutions to those problems. When the teacher faced technical issues on online learning platforms, she could resolve video conferencing errors, log in back to the class, and continue the lesson. The ability to address such challenges reflects teachers' skills in selecting appropriate solutions when faced with technological issues, as described by Calvani, Fini, and Ranieri (2009). This aligns with findings by Hartati et al. (2024) that prospective teachers in “fairly good” categories excelled in information literacy and problem-solving. The teacher demonstrates critical thinking skills at this level to address complex situations independently.

Secondly, the teachers integrate their digital literacy in terms of acting by actively utilizing various digital resources and engange in discussions with fellow teachers about practical issues, such as using technology tools for teaching English. The interview sessions confirmed it:

Excerpt #In Act1 Y

Ms. Yunita: “ehhh yes there is, most of the time now it's the light ones like on TikTok, so for example like I'm after teaching here and then I meet with other teachers and we talk about “eh there is TikTok content, about how to play this game or for example how to make this, usually sometimes we share it once through so we learn from each other but just like giving additional ideas. We often ask the most.”

Excerpt #In Act1 H

Mr. Haikal: “On social media, I usually share, for example, if I find technologies, I just share them if there are comments that are rare. For example, some tools are like this; this is engaging, I usually like to share it.”

The teachers, from the statement above, actively utilize various digital resources, such as articles, videos, and podcasts, that are relevant and supportive of the learning. They also create and develop digital content to enhance teaching and learning. To stay updated with the latest developments in English Language Teaching (ELT), teachers actively engage in discussions with fellow educators about practical issues, such as using technology tools for teaching English. They also share insights, resources, and experiences on social media platforms, fostering collaboration and professional growth within the teaching community.

Third, the teacher utilized social media platforms like YouTube and Instagram as educational platforms for sharing their knowledge. As one teacher stated during interview:

Excerpt #In Act2 H

Mr. Haikal: “I really like social media, so ee... from college, I was active on YouTube too, and I like to make ee... videos of learning content like grammar mistakes or speaking on YouTube, but since I graduated from undergraduate. I have taken a break; I switched to ee... Instagram so, so I like to make content like that. So, for me, the social media platform is for what ... channeling about what I understand. At the same time, the output is personal branding anyway.”

The teachers agreed that they did not use social media mainly for communication but rather as a platform to share issues related to technology tools for teaching. Whenever they encounter something interesting, such as a new tool or method that could be implemented in the classroom, they use social media to discuss it with other teachers. The teachers also utilize social media platforms to share educational content. By creating social media accounts, they can post valuable resources related to English language learning, such as instructional videos or language learning tips; through these discussions, they learn from each other's experiences and ideas. Hobbs (2010), p.17, supports the idea that digital literacy is associated with the ability to use computers, social media, and the internet. They share their insights, ask for suggestions, and offer additional ideas to improve their teaching practices. This helps them stay updated and find new ways to engage their students effectively. Many teachers utilize social media platforms to participate in online professional development. This involves sharing resources, connecting with other educators, and expanding their knowledge and skills (Greenhow et al., 2020).

Teachers reflect on their actions by knowing how to problem-solve independently, share, and create educational content that is relevant and supportive of student learning. This allowed them to collaborate with students and colleagues in developing content that benefits the classroom and contributes to the wider community. This could involve sharing educational materials that positively impact locally, regionally, or internationally, helping to create a more interconnected learning environment. As highlighted by Hobbs (2010), p.17, when individuals have digital and media literacy skills, they can recognize personal, corporate and political agendas and are empowered to speak out on behalf of the missing voices and omitted perspectives in our communities. Teachers with digital and media literacy competencies not only decide the problem-solving but can assist students in problem-solving, improve students' digital literacy by integrating digital media into the curriculum, encourage critical thinking, promote responsible content engagement, and present material from multiple perspectives.

### 4.3 The Challenges Faced by Teachers

This section provided EFL teachers' challenges in integrating digital literacy into their teaching practices. It highlights specific obstacles encountered in areas such as access to technology (teacher laptops, computer labs, internet, and students' devices), inadequate training, time constraints, and technical issues (Bluetooth and projectors). The researcher employed interviews and strengthened classroom observation to answer this research question.

While integrating digital tools in the classroom has brought many benefits, including increased engagement and the ability to deliver more engaging and interactive material, it is not without its challenges. Teachers often face various obstacles that can hinder the effective use of these tools in the classroom setting. To help teachers effectively integrate emerging technologies into their teaching, they need to understand the factors that both facilitate and hinder technology integration (Dewi, et al 2023). Technology integration depends on the understanding and the commitment of teachers. What they find may challenge their educational philosophy and practice in expected ways, some good and some not so (Olson, 2000, p. 1). There are many reasons to use technology as an educational tool. The tools can be used as a source for teaching and as a media for delivering materials and designing learning activities.

The first challenge faced by teachers was access to technology. It included teacher laptops, computer labs, internet, and students' devices. The teachers confirmed in the interview session the barrier they faced as their statement below:

Excerpt #In At1 Y

Ms. Yunita: "Actually, I was trying an application called scrath3.0, so scrath3.0 there are some kinds of games that we can make as teachers, well in the context of English, it only requires a computer or laptop. I hope to be able to access the computer room at the school, so that they can play the game, but 60 minutes is not enough because I have to explain umm how to use it."

Excerpt #In At2 Y

Ms. Yunita: "If it is from myself, yes, yes, from my own device, my device is unsupported. Maybe I have not upgraded it yet, so the most I can do is make a standard Bluetooth is not connected to the speaker." (Personal interview 23/11/2024)

Excerpt #In At3 Y

Ms. Yunita: “Well, the internet in my class is not connected to my laptop, I have not asked for access yet.”

Furthermore, data from classroom observation also highlighted similar challenges that teachers encountered during classroom activities, strengthen the findings from other sources. As the teachers stated in the classroom observation:

Excerpt #Co4 Act5 Y

“Guys, do you have any internet here, guys? I don’t know what happened on my laptop. I mean, this room, do you have WiFi? (having technical issues) *(Ms. Y, Wednesday, 20/11/ 2024)*

Excerpt #Co3 Act5 H

“The teacher used their own personal internet because the class is not provided the wifi” *Mr. H, Tuesday, 26/11/2024)*

Regarding the statement above from the interview and classroom observation, Ms. Yunita faced some barriers, such as limitations with her own devices, time, access to computer labs, internet, and students’ devices), and technical issues (Bluetooth and projectors). Regarding internet access, the teacher mentioned that she could not utilize the internet in her teaching practices due to the lack of connectivity in the classroom. Mr. Haikal also discussed a similar issue. To integrate technology tools and resources into a teaching and learning experience, a teacher must first have sufficient access to these tools and resources (Inan & Lowther, 2010; Ritzhaupt et al., 2012). Access to technology tools and resources means sufficient devices are physically available to the teacher and students. Since Ms. Yunita was developing a new application named Scratth3.0, she still could not access the computer or laptop in the laboratories at her school due to limited time, and her laptop was also not supported.

Furthermore, recent studies hint that access to sufficient technology tools and resources may still be an issue in education, particularly in smaller school districts (Carver, 2016; Howley et al., 2011; Kale & Goh, 2014; Makki et al., 2018). Furthermore, due to school regulations, her students could not bring their own devices while teaching and learning. Institutional and school-related issues are first-order barriers that refer to external factors that are typically beyond teachers' control

(Ertmer, 1999). In addition, Becker (2000) argued that teachers and students must be able to access technological resources without any problems for technology to be effective in education. In other words, the schools' technological infrastructure and access to this technology are crucial elements in the integration process (Bingimlas, 2009; Vanderlinde & Van Braak, 2010).

The second place for the challenge that the teacher faced was time constraints, which can hinder the integration of technology into their teaching practices. As highlighted in interview sessions:

> Excerpt #In Lt Y
>
> Ms. Yunita: "But 60 minutes is not enough because I have to explain umm how to use it."
>
> Excerpt #In Lt H
>
> Mr. Haikal: "I think it is the time. Because using technology, for example, if you use ppt, we sometimes come at 7.15. I used a... Mm... At least I came to the class at 7.15 for PPT, operating it like I had to plug in, turn on this, and that. The projector, what if the projector is not on, you have to call the staff down, sometimes it takes up to 5 minutes, 10 minutes, 15 minutes. Well, that is the problem)."

Both teachers from the statements above faced similar issues, emphasizing that limited time was a significant barrier to effectively integrating technology into their classroom activity. They explained that balancing curriculum requirements with digital tool usage can be challenging, especially when time constraints prevent him from fully incorporating these resources into his teaching. These challenges reveal teachers' practical difficulties and how time pressures and connectivity issues can hinder their efforts to create technology-enhanced student learning experiences. As Hew & Brush (2007) stated, teachers must have adequate time to plan quality technology-supported learning experiences. These issues include limited access to devices for students and teachers, technical difficulties, and insufficient time as primary barriers. These obstacles make it challenging to incorporate technology into their teaching practices consistently. It is supported by (Hew & Brush, 2007; Kopcha, 2012) a lack of time to plan new learning experiences integrating technology is often cited as a significant barrier to educational technology use. This finding aligns with previous studies highlighting challenges such as limited digital

resources, poverty, unaffordable devices (Soekamto et al., 2022), inadequate technological access, unskilled teachers, and technical issues (Ramorola, 2013). lack of time, and a limited budget were identified as barriers to digital literacy adoption.

The challenges V that overcoming barriers to technology integration requires a multifaceted approach. Specifically, they suggest improving infrastructure and access to tools, fostering positive pedagogical beliefs about technology, building teachers' self-efficacy and ICT skills, encouraging innovation, and promoting continuous professional development. Similarly, it is emphasized by (Ertmer, 1999. p 56). The significance of external barriers is limited access to technology, time constraints, and the need for adequate training and support. These studies highlight that addressing these challenges involves more than simply providing access to technology; it requires a concerted effort to support teachers with resources, professional development, and the time needed to confidently and effectively integrate technology into their classrooms.

Moreover, other challenges faced by teachers from the interview indicated that in terms of professional development, the teachers stated that they still lacked inadequate training, as their statement in their interview:

> Excerpt #In It Y
>
> Ms. Yunita: "It is actually a bit difficult now to meet with work friends because of different schedules, so I learn independently through YouTube."
>
> Excerpt #In It H
>
> Mr. Haikal: "I can learn autonomy, but it is a bit slow. So far, I learned it from YouTube, but it was too long, so now I am learning it from TikTok because it is simple there, straight to the point, right)."

From the statement above, teachers take the initiative to learn independently to improve their skills due to the lack of professional development. Both teachers relied on YouTube and TikTok. The lack of high-quality training and technical support for technology integration can hinder the use of educational technology in the classroom (Hew & Brush, 2007; Kopcha, 2012). It is supported by Nikolopoulou and Gialamas (2015), who also found that lack of funding, technical

support, administrative support, poor training, lack of equipment, and lack of access to the equipment reduces teachers' technology use. A lack of high-quality training and technical support for technology integration can hinder the use of educational technologies in the classroom (Hew & Brush, 2007; Kopcha, 2012). However, training and support might still positively influence technology integration, even when access to technology tools and resources is not high (Makki et al., 2018). However, due to the lack of training provided by the school or other parties, these teachers have taken the initiative to learn technology independently.

It is supported by (Jones & Dexter, 2018) that self-motivated teachers may also seek informal technology learning opportunities if formal learning opportunities are not provided at the school or district. They understand the importance of digital literacy for English teachers and believe technological skills are essential to their role. By independently learning new technologies, they aim to stay relevant and provide students with a more interactive and practical learning experience, even with limited formal training support. In a study of high school teachers, Gurfidan and Koc (2016) found that among school culture, technology leadership, and support services had the highest effect on technology integration in the classroom. Likewise, in a study of 152 elementary school teachers, Hsu (2016) found that aside from students' lack of computer skills, a lack of training and exposure to technology was the most frequently reported barrier to technology integration.

Inadequate training is another barrier to effective technology integration. Nonetheless, both teachers have made efforts to learn new technology skills independently. They often explore digital tools, experiment with online resources and seek information to improve their technical skills. While their self-learning demonstrates their commitment to using technology in the classroom, structured training and support are still important. Research showed that training positively affects technology integration, even in contexts with limited access to tools and resources (Makki et al., 2018). A comprehensive training program can empower teachers to confidently and effectively incorporate technology.

### 4.4 The Strategy to Overcome the Barriers

This section provides the EFL teachers' strategy to overcome the barriers. To address these challenges, the teachers demonstrated several strategies and implemented several strategies, including a positive attitude toward technology integration, handling troubleshooting independently, an independent learning workshop, and peer teaching.

Despite some barriers that teachers to integrating technology into teaching practice, teacher beliefs are perhaps the most significant determining factor of technology integration in classrooms, Ottenbreit-Leftwich et al. (2010). Teachers still have a positive attitude toward technology and how they handle obstacles. As the teacher stated in the interview:

Excerpt #In Pa Y

Ms. Yunita: “What is it umm the most anticipation is that I usually learn from YouTube or TikTok on TikTok I also like to learn, for example, what I got in the workshop I adapted again to be used in class at the children's level..... I usually use my personal internet.”

Excerpt #In Pa H

Mr. Haikal: “As for wifi, so far, I use my own internet, I have my own. So no problem so far, very independent.”

From the statements above, it can be seen that the obstacles experienced by the teachers in integrating technology in learning were not a big problem that cannot be overcome. The teachers were seen to show their high efforts in learning by themselves through various platforms and using their internet. Despite time constraints, device access, lack of professional development, and unstable internet connections, they can still adjust and find solutions to ensure the teaching and learning process runs smoothly. Teacher beliefs associated with technology integration practices include value beliefs and ability beliefs (Vongkulluksn et al., 2018). The teachers’ positive attitudes and adaptability highlight their belief in technology as a valuable tool to enhance learning. As Ertmer (2005) and others (Rada, 2011; Ottenbreit-Leftwich et al., 2010; Vongkulluksn et al., 2018) emphasize, teachers with have high value and ability beliefs are more likely to

effectively integrate technology into teaching and learning than teachers who do not. When teachers are confident in their skills and genuinely believe that technology enhances learning, they are more likely to overcome limitations, creating meaningful, creative, tech-enhanced learning experiences for their students.

Besides the positive attitude of technology integration, to overcome the barriers, the teacher showed their ability to handle troubleshooting independently and revealed their problem-solving skills when faced with technical challenges. It was confirmed in the interview sessions:

Excerpt #In Ps1 Y

> Ms Yunita: "Ummmm, I can do it, most of the time, because I also have a standard class, most of the problems I face are just like, for example, the Bluetooth is not connected to the speaker, for example, the projector is not on, for example, my YouTube, well the internet, in my class, well the internet in my class is not connected to my laptop, I have not asked for this case, but usually I use my personal internet. Well, at most, if the internet is not connected, I can still use it, or I can still use the standard ones, but if it is really advanced, I might ask for help from someone. But so far, because I am still standard in using the tool, I am not surprised by the problems I face. It's still possible. It is still under control."

Excerpt #In Ps H

> Mr. Haikal: "Well, if the first thing is about time, I usually set up early, before 7:15, maybe around 7:10. I go in first to continue if, for example, the technician I call someone because I also do not understand it, like the projector."

Excerpt #In Ps2 H

> Mr. Haikal: "As for wifi, so far, I use my private catering; I have my own. So, no problem so far, very independent. I even printed it myself… Then if it is a technology like, for example, speakers like that, I bring my own. There are speakers at school, but it is complicated, so I bring my own."

Referring to the statement above Ms. Yunita encountered various technical issues during her teaching, such as difficulties connecting Bluetooth to the speaker, the projector not functioning properly, and the Wi-Fi being unavailable in the classroom. Despite these challenges, she handled them effectively, ensuring minimal disruption to the learning process. On the other hand, Mr. Haikal faced

time constraints as a significant barrier. To address this, he made an effort to arrive earlier at the classroom to prepare and resolve any potential issues in advance, demonstrating his strategy for overcoming obstacles in integrating technology into his teaching. Mr. Haikal also has a backup plan in case digital tools or technical issues arise during lessons, such as malfunctioning speakers, to ensure that teaching remains smooth and effective. He also printed the learning materials or worksheets and used private Wi-Fi. This preparedness makes it easier for the teacher to manage the class without disruption.

When these teachers encountered obstacles, they initially tried to handle them independently. This suggests resilience and problem-solving skills, indicating they can independently assess and resolve challenges. The above-average or good category means that she or he is a digital literate who can solve complex situations independently and guide others in routine tasks (Bayrakci, 2022). The teacher's ability to choose solutions when faced with problems in the technological environment (Calvani, Fini, & Ranieri, 2009). The teacher also showed their initiative by careful preparation, which is necessary to conquer these obstacles. Understanding classroom scenarios and having backup plans prepares teachers for challenges, supported by Harmer's (1998) view that backup plans are key to successful teaching.

Additionally, the teachers engaged in independent learning, continuously improving their technological skills and exploring new tools to enhance their teaching practices. They demonstrated an openness to change, which reflects a flexible and adaptive mindset. This openness means they will embrace new ideas, teaching methods, and technologies that may improve their instructional practices or enhance student engagement. Instead of sticking to traditional methods, the teacher is receptive to innovation and continuously looks for ways to evolve their approach in response to students' needs, educational trends, and technological advancements. Their statement in the interview can be seen below:

Excerpt #In IL H

Mr. Haikal: “No, I really like to discover new things because I like to have the motivation to make how I am different from other teachers.”

Excerpt #In IL Y

Ms. Yunita: “Actually, I would like to use more diverse ones.”

Ms. Yunita and Mr. Haikal demonstrated their commitment to overcoming barriers by embracing innovation and actively exploring new technologies. Rather than relying solely on traditional methods, they remained adaptable and sought continuous improvement to meet students' needs, align with educational trends, and integrate technological advancements. Their curiosity and dedication to lifelong learning highlight the importance of teachers being open to new ideas, as this fosters personal growth and enhances their teaching effectiveness. In other words, digital technology skills can lead to teachers' professional development and empowerment, improve the quality of their education, and build self-confidence and mastery in using these technologies (Pérez-Escoda et al., 2019). This attitude benefits the teacher’s professional growth and creates a dynamic learning environment where students benefit from diverse teaching methods and up-to-date resources.

Nothing in this world is constant. Being flexible and adaptive to change allows us to survive and still succeed. Flexibility and adaptability are important qualities that every teacher must acquire. Keengwe (2018) stated that to stay competitive in the 21st-century workplace, teacher education programs must equip graduates with essential skills like digital literacy, critical thinking, and adaptability. Based on List’s (2020) research, teachers were able to improve their digital skills, develop their creativity and problem-solving skills, and become independent in their learning and teaching by using various digital technologies. Effective teachers can adjust, change, and modify teaching methodologies depending on the student’s needs, the availability of resources, and the context of the environment. They evaluate students’ achievement rather than rigid practice (Christenbury, 2011, cited in De Villa et al 2020).

Moreover, to strengthen their expertise regarding their effort in overcome the challenge in integrating digital technology was they participated in workshops to enhance their skills, learn new instructional strategies, and keep up to date with the latest educational practices and tools. As noted by the teacher during the interview:

Excerpt #In W1 Y

Ms. Yunita: "Actually, I have not participated in a training that is really digital literacy, but I have participated in several workshops where the speaker is very interesting. He uses quizzes, Kahoot, and sentiment, so indirectly, he inspired me to use it in the classroom, to adapt it again."

Excerpt #In W2 Y

Ms. Yunita: "Usually, according to my experiences, for example, what I got in the workshop, I adapt again to be used in the classroom at the children's level."

Excerpt #In W H

Mr. Haikal: "Hmmm... most workshops are like the independent curriculum workshop. There is also something like how to integrate technology, so. I have not done it if it is specifically digital literacy."

The teacher mentioned during the interview that both teachers participated in workshops to improve their skills. These workshops were not exclusively focused on digital tools or digital literacy but were more aligned with the independent curriculum. Nonetheless, they included elements of integrating digital tools into learning, enabling teachers to explore how digital resources can support curriculum objectives and enhance the learning experience through technology. Ms. Yunita and Mr. Haikal adapted the skills from the workshop to be integrated into teaching practice. Polly et al. (2010) highlighted the importance of preparing future teachers for technology use through authentic teaching experiences, including hands-on workshops, teacher collaboration in design teams, real-world applications like field experiences, and reflective practices such as managing electronic portfolios.

Finally, besides the workshop, the teacher mentioned that peer teaching helps them to collaborate and share best practices. They seek guidance and support

from one another when preparing learning resources and sharing new technology developments for teaching. As explained by the teacher in the interview session:

Excerpt #In PT1 Y

Ms. Yunita: “If it is from friends, yes, it is quite helpful. The most chatting at a glance is like what was used earlier.?”

Excerpt #In PT2 Y

Ms. Yunita: “Ehhh, yes, there is. Most of the time now, it's the light ones like on TikTok. So, for example, I am after teaching, and then I meet with other teachers, and we talk about “eh, there is TikTok content, about how to play this game or, for example, how to make this. “Usually, it's shared once through, so we learn from each other but just like giving additional ideas. We often ask the most.”

Excerpt #In PT H

Mr. Haikal: “If it comes from the teacher, it is usually lacking, honestly.”…. I actually need it, but if I am an autonomous learner, I can do it, but it is a bit slow. So far, I learned it from YouTube, but it was too long, so now I learn it from TikTok because it is simple and straight to the point.

From the interview session, Ms. Yunita frequently sought colleague guidance, demonstrating her openness to collaboration and commitment to staying informed. By discussing emerging tools and trends, Ms. Yunita ensured that her teaching practices remained relevant and engaging for her students. In contrast with, Mr. Haikal preferred to learn independently or self-study, even though he could benefit from learning with others. He was usually self-motivated and took an independent approach to keeping up with new digital tools or trends. He tends to dive in by himself, figuring things out. Though he knows that working with others could sometimes help, he enjoys the freedom to set his own pace and focus on what interests him most.

Mentoring provides a strong support system for educators' holistic well-being and development. Teachers value the support gained from one another as a beneficial way to stay connected. And when they feel valued and respected, they will provide quality services through valuable teaching (Linton, 2017). This aligns with study by Tondeur et al. (2018) found that peer feedback among pre-service teachers enhances awareness and digital skills. Collaborating with peers of similar

or higher digital competencedddd interdisciplinary teamwork helps teachers quickly gain new knowledge and skills. Self-directed learning offers significant benefits for teachers as part of their continuous professional development. It helps them stay updated with the latest ICT tools and methodologies, especially when formal programs are unavailable. Jones and Dexter (2018) highlight that self-motivated teachers often turn to informal learning opportunities to grow. Similarly, Boonmoh and Kulavichian (2023) stress that teacher motivation, access to ICT tools, and technology skills are crucial for effective classroom integration, emphasizing the importance of comprehensive training programs.