



## Strategies and Challenges in Implementing Multimodal and Digital Literacy by English Education Students during Teaching Practice Program in West Sumatera Province

Nailatul Fadhilah<sup>1</sup> and Fitrawati<sup>2</sup>

<sup>1,2</sup>Universitas Negeri Padang

Correspondence Email: [fadhilahdila1507@gmail.com](mailto:fadhilahdila1507@gmail.com)

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### Abstract

This study aims to identify strategies and challenges in implementing multimodal and digital literacy by English Education students during teaching practice in West Sumatera Province. This study used a descriptive quantitative approach involving 52 student teachers as participants. Data were collected through a closed questionnaire consisting of 40 statements, with 26 statements focused on the strategies used by the student teachers and 14 statements to explore the challenges they faced in implementing multimodal and digital literacy. The results showed that of the five strategies studied, the use of technology emerged as the most widely implemented strategy, with an average score of 3.50, signifying a high frequency of use in teaching practice. In contrast, the implementation of multimodal projects is the lowest strategy implemented by student teachers with a mean score of 2.73. This shows student teachers' preference to use technology such as projectors, educational apps and quiz apps as teaching support. However, student teachers faced significant challenges, especially in the technical aspect, which had a high mean score of 2.67, mainly due to limited technology facilities in schools as well as network issues. In contrast, personal factors provided minimal challenges, indicated with mean score of 2.08 category low, suggesting that student teachers generally experienced few challenges at the personal level in implementing multimodal and digital literacy.

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## INTRODUCTION

In today's rapidly evolving digital age, literacy has expanded beyond traditional reading and writing to include digital and multimodal skills (Lim, 2018). The widespread use of mobile technologies and social media has shifted literacy into a skill encompassing communication across multiple modes, such as text, visuals,

audio, and video. This shift demands that educators not only teach print-based literacy but also equip students with the digital and multimodal literacies needed for 21st-century learning. Teachers must adapt their teaching methods to include both traditional texts and multimodal features, enabling students to critically engage with various forms of media.

Multimodal literacy involves using multiple modes—visual, auditory, gestural, spatial, and linguistic—to convey meaning (Mills & Unsworth, 2017). This literacy is becoming increasingly important in educational contexts as it helps students better comprehend content by engaging with it in diverse ways. In Indonesia, the Merdeka curriculum has emphasized the integration of multimodal and digital literacies to create more engaging and effective learning experiences (Kemendikbud, 2022). Teachers are expected to implement these literacies in their classrooms to meet the demands of a digital world where communication occurs across multiple platforms.

Digital literacy, an essential component of multimodal literacy, involves the ability to use technology effectively to access, evaluate, create, and communicate information. This skill is crucial for teachers as they incorporate technological tools into their teaching practices, such as interactive media, videos, podcasts, and digital presentations (Yuniasari et al., 2023). By integrating these tools, teachers enhance the learning experience and help students develop the digital literacy skills necessary for success in today's world.

Previous research has explored various aspects of multimodal literacy in education. Bulut et al. (2015) discusses the expression of multimodal structures in teaching materials, focusing on the combination of text with visual, auditory, and spatial elements. Trisanti (2022) identified several forms of multimodal application used by teachers, including the addition of images and music to learning materials, preparing interactive media like videos and tasks, and using charts and tables to enhance understanding. Moreover, body language and gestures were also widely used by teachers to explain new concepts to students.

Walsh (2006) defines multimodal text as text that combines multiple modes to convey meaning. In this research, the focus will be on digital multimodal texts, including videos, multimedia presentations, films, podcasts, and digital posters (Trisanti, 2022; Steckmest, 2021; Lemerond, 2022; Lim, 2013). These tools allow teachers to engage students in learning through various media, offering them multiple perspectives on the content.

However, the implementation of multimodal and digital literacy also presents challenges. These challenges can be grouped into three categories: technical challenges, individual (teacher) challenges, and pedagogical challenges. First, technical challenges involve limited access to technology, inadequate internet connections, and software compatibility issues. Mali (2016) found that the lack of facilities in many schools prevents the full implementation of multimodal strategies. Moreover, unstable internet access further limits the use of digital texts in the classroom. Trisanti (2022) also notes that limited access to learning resources poses a significant challenge to adopting multimodal literacy.

The second challenge relates to teachers' capacities. Many teachers struggle with digital literacy and lack the skills to effectively use technological tools (Jayanti, 2023). While some educators are familiar with digital tools, they often face difficulties

integrating these tools into their teaching strategies. This challenge is compounded by the lack of adequate training in multimodal and digital literacy (Sutrisno, 2023). Additionally, aligning content with students' preferred modes of learning is another hurdle teachers encounter (Bouchev, 2021).

The third challenge is pedagogical. Implementing multimodal and digital literacy requires careful planning, and teachers must allocate sufficient time to incorporate multimodal elements into their lessons. Time constraints often limit teachers' ability to fully integrate these strategies. Furthermore, students' varying levels of digital experience can complicate the process of implementing these literacies (Yi, 2014). Some students may resist new teaching methods, preferring more traditional approaches (Sutrisno, 2023).

Despite these challenges, the integration of multimodal and digital literacy is crucial for preparing students for the digital age. Previous studies, such as those by Trisanti (2022) and Steckmest (2021), highlight the benefits of multimodal texts in education, yet there is still a research gap in understanding how pre-service teachers in Indonesia navigate these challenges, particularly during their teaching practice. This study aims to address that gap by examining the strategies and challenges faced by English education students during their teaching practice in West Sumatra, providing insight into the practical implementation of multimodal and digital literacy in classroom settings.

**METHOD**

This study used descriptive quantitative research with survey design by utilizing an online form to find out strategies used and challenges faced by student teachers in implementing multimodal and digital literacy. Fifty-two student teachers from thirteen regencies/cities in west Sumatra participated in this study. The sample is a student teacher from the English education program Universitas Negeri Padang Juli - Desember period.

**Table 1.** The details of Participants

<b>Regencies/Cities</b>	<b>Total Participants</b>
Sijunjung	1
Tanah Datar	2
Padang Pariaman	3
Agam	1
Lima Puluh Kota	3
Pasaman	1
Solok Selatan	1
Pasaman Barat	2
Padang	22
Padang Panjang	8
Bukittinggi	3
Payakumbuh	3
Pariaman	2
<b>Total</b>	<b>52</b>

*Data from UPPL UNP*

The researchers used two forms of close-ended questionnaires in this study. (1) A four-point Likert scale questionnaire containing 26 statements for strategies in implementing multimodal and digital literacy (2) 14 statements of a close-ended questionnaire for challenges in implementing multimodal and digital literacy. There are also open-ended questions used to obtain the details from student teachers about strategies used and challenges faced by them in teaching practice containing 2 statements for strategies and challenges in implementing multimodal and digital literacy. The purpose of the survey was to gather information from student teachers about their strategies and challenges in implementing multimodal and digital literacy. The quantitative data from the online questionnaire were analysed using descriptive statistics presented using mean score.

## RESULT AND DISCUSSION

### *Research Findings*

#### *Strategies in Implementing Multimodal and Digital Literacy*

In this research, the researcher gave a four-point Likert scale questionnaire to 52 student teachers consisting of 5 aspects and 26 statements.

**Table 2.** Expressing oneself using multimodal structure

No.	Indicator	Mean	Category
1	Adding music and pictures in presentations	3.44	Very High
2	Adding pictures in explaining texts	3.42	Very High
3	Preparing and using interactive media (Video and task)	3.50	Very High
4	Organizing thought using outlines and table	3.13	High
5	Using pictures, sound and writing text	3.35	Very High
<b>Mean</b>		<b>3.37</b>	<b>Very High</b>

This aspect assesses how student teachers use various modes such as music, images, and interactive media in their teaching. The mean score of 3.37 (Very High) indicates that most student teachers are confident in integrating multimodal elements to support their lessons. For example, using interactive media like videos and tasks scored 3.50, the highest in this category, showing that student teachers often engage students with multimedia tools. Similarly, using music and images to enhance presentations is also common, with a score of 3.44. However, organizing ideas using outlines or tables on the whiteboard is slightly less frequent, scoring 3.13 (High), indicating that while technology integration is high, traditional organizational tools might be used less.

**Table 2.** Content Multimodal structure

No.	Indicator	Mean	Category
1	Visual, auditory and written elements in explaining material	3.37	Very High
2	Visual and verbal information in explaining texts	3.29	High

3	Using body language when explaining texts	3.54	Very High
4	Gesture in explain specific terms	3.54	Very High
5	Interpreting information from various resources	3.44	Very High
<b>Mean</b>		<b>3.44</b>	<b>Very High</b>

This aspect, with a mean score of 3.44 (Very High), evaluates how student teachers connect different modes of communication, such as images, sounds, text, and body language, in their teaching. They frequently incorporate gestures and body language when explaining new terms or materials, with the highest scores of 3.54 in both categories. This demonstrates a strong reliance on non-verbal communication to reinforce teaching. Additionally, combining visual and spoken information (mean 3.29) and using multimodal material (mean 3.37) is also common. Student teachers appear well-versed in delivering content through multiple modes.

**Table 3.** Digital Multimodal Texts

No.	Indicator	Mean	Category
1	Video (images, spoken language)	3.31	Very High
2	Video (Visual, audio, written language)	3.23	High
3	Multimedia presentations (text, images, music)	3.17	High
4	Multimedia presentation (all modes)	3.17	High
5	Film	2.90	High
6	Podcast	2.40	Low
7	E-poster	2.81	High
<b>Mean</b>		<b>3.44</b>	<b>Very High</b>

This aspect focuses on the use of multimedia and digital resources like videos, podcasts, and multimedia presentations. Videos that combine images and spoken language scored relatively high (3.31), suggesting frequent use in classrooms. However, the use of more complex multimedia presentations (text, images, music, gesture, and movement) scored slightly lower (3.17). Notably, the use of podcasts as a medium scored the lowest at 2.40 (Low), indicating that podcasts are rarely used in classroom teaching, possibly due to a lack of familiarity or resources. E-posters also received a relatively low score of 2.81, suggesting a limited application of certain digital tools.

**Table 4.** Utilizing Technology

No.	Indicator	Mean	Category
1	Smartphones, Laptop, and Projector	3.67	Very High
2	Educational Apps	3.44	High
3	Social media	3.40	Very High
4	Interactive quizzes	3.48	Very High
<b>Mean</b>		<b>3.50</b>	<b>Very High</b>

This aspect, scoring the highest overall with a mean of 3.50 (Very High), highlights how student teachers incorporate technological tools in their teaching. The use of technology such as smartphones, projectors, and laptops scored 3.67, indicating that these devices are almost universally used in teaching activities. Student teachers are highly proficient in using technology to facilitate learning. Similarly, educational apps and websites are frequently employed, scoring 3.44, and social media platforms like YouTube, Instagram, and TikTok are commonly integrated with a score of 3.40.

**Table 5.** Multimodal Projects

No.	Indicator	Mean	Category
1	Assign to create mind maps	2.77	High
2	Assign to create video, podcast	2.90	High
3	Assign to create a multimedia presentation	2.63	High
4	Assign to create narratives	2.67	High
5	Assign to create multimedia research	2.65	High
<b>Mean</b>		<b>2.73</b>	<b>High</b>

This aspect has the lowest mean score of 2.73 (High), that students do not really use multimodal projects strategies in applying multimodal and digital literacy. Assigning tasks like creating visual diagrams and mind maps (mean 2.77) and multimedia presentations (mean 2.63) are relatively common, but still not as widespread as other multimodal strategies. Assigning students to create more advanced projects, like videos, podcasts, and digital portfolios (mean 2.90), is less frequent, and the use of narratives combining text, images, and audio is similarly limited (2.67). The lower scores suggest that while student teachers recognize the importance of multimodal projects, they may face challenges in implementing them due to time constraints, limited resources, or insufficient training.

#### *Challenges in Implementing Multimodal and Digital Literacy*

To identify student teachers' challenges in implementing multimodal and digital literacy, the researcher gave a four-point Likert scale questionnaire to 52 student teachers consisting of 3 aspects and 14 statements

**Table 6.** Technical challenges

No.	Indicator	Mean	Category
1	Lack of facilities	2.83	High
2	Internet / Network Issues	2.58	High
3	Limited access to technology resources	2.67	High
<b>Mean</b>		<b>2.70</b>	<b>High</b>

The analysis of challenges in implementing multimodal and digital literacy reveals several significant obstacles encountered by educators. On average, technical challenges were rated as "High" (mean score of 2.70), reflecting considerable difficulties related to inadequate technological infrastructure, limited resources, and unreliable internet connectivity. Specific concerns included insufficient technological

support and restrictions on accessing or downloading essential media, which collectively hinder the effective integration of multimodal strategies in the classroom.

**Table 7.** Individual / self-challenge

No.	Indicator	Mean	Category
1	Unable to operate technologies	1.87	Low
2	Limited capacity in applying strategies	1.92	Low
3	Unequipped with knowledge and practical ways	2.02	Low
4	Lack of training	2.19	Low
5	Difficult to integrating multimodal aspects	2.04	Low
6	Difficult to explore content in student-preferred modes	2.19	Low
7	Difficult to represent content in student-preferred modes	2.35	Low
<b>Mean</b>		<b>2.10</b>	<b>Low</b>

Individual challenges were rated as "Low" (mean score of 2.10), indicating that personal challenges among educators—such as unfamiliarity with relevant technologies, limited proficiency with editing tools, and inadequate training in multimodal literacy—were less prominent. Nonetheless, teachers reported difficulties in incorporating multimodal elements into their teaching practices and matching content delivery with students’ preferred modes of learning, including text, visual, aural, spatial, and gestural modalities.

**Table 8.** Pedagogical challenges

No.	Indicator	Mean	Category
1	Limited time for the lesson containing multimodal and digital literacy	2.48	High
2	Diversity of student digital experience	2.65	High
3	Resistance from students regarding the adoption of new methods.	2.50	High
4	Difficulty in exploring conceivable meaning in multimodal and digital media	2.52	High
<b>Mean</b>		<b>2.53</b>	<b>High</b>

Pedagogical challenges also received a "High" rating (mean score of 2.53), with educators struggling to integrate multimodal and digital literacy into lessons due to time constraints, varying levels of student technological experience, and students' unfamiliarity with diverse media formats. Teachers additionally noted difficulties in effectively conveying intended messages through various media, emphasizing the need for refined pedagogical strategies to optimize multimodal teaching approaches.

Overall, these findings suggest that while technical and pedagogical challenges are perceived as substantial, individual challenges are less pronounced. This indicates a need for systemic support, infrastructure improvements, and targeted professional

development to enhance the successful implementation of multimodal and digital literacy in educational settings.

### ***Discussion***

Student teachers employ multimodal and digital literacy in their learning activities. The use of technology, such as smartphones, projectors, and educational applications, was prominent in their teaching approaches. This is in line with Papergiou & Lameris (2017) that multimodal could work by using pedagogically driven approaches to teaching and learning mediated by technology that would help practitioners to design and support teaching and learning activities for enhancing students' learning experiences. There are many educational applications that can be used in implementing multimodal and digital literacy. According to the observation, student teachers use Canva application in learning and also utilize many websites to create interactive quizzes. Participants were adept at using videos, multimedia presentations, and interactive media, which aligns with best practices in multimodal literacy instruction (Trisanti, 2022). Nevertheless, the use of less common digital tools, such as podcasts or digital portfolios, was less frequent, suggesting a need for broader exposure to diverse multimodal tools and projects.

The challenges encountered by student teachers were classified into three primary categories: technical, individual, and pedagogical challenges. Technical challenges with significant obstacles arising from inadequate technological infrastructure, in line with Mali (2016) who found lack of reliable internet connectivity, and limited access to digital resources, all of which impeded the successful integration of multimodal and digital literacy. Individual challenges were rated as low with mean score of 2.1, indicating that, although some student teachers faced difficulties related to unfamiliarity with specific technologies, overall, personal challenges were less impactful compared to external factors. Pedagogical challenges also received a high rating with mean score of 2.53, with difficulties stemming from time constraints for technology-based activities, the diversity of students' technological proficiency, that in line with Yi (2014) found students' varying levels of digital experience can complicate the process of implementing these literacies and students' limited familiarity with multimodal content, all presenting notable challenges to effective implementation.

### **CONCLUSION**

This study discusses the strategies and challenges faced by English Education students in implementing multimodal and digital literacy during their teaching practice program in West Sumatra Province. Using a descriptive quantitative approach, the study involved 52 students who collected data through closed-ended questionnaires and observation lists. The results showed that students used multimodal and digital literacy effectively, especially with interactive media, body language, and technology such as projectors and smartphones. Also, multimodal projects strategies be the less frequent use in implementing multimodal and digital literacy by student teachers. Some of the challenges faced include infrastructure limitations, difficulties in accommodating students' learning mode preferences, and students' diverse digital experiences. Limited time and facilities were also cited as significant challenge.



Overall, this study emphasizes the importance of systemic support and professional training to improve the implementation of multimodal and digital literacy in education.

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