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Student Teachers' Multimodal and Digital Literacy Competence in Their Teaching Practice Program at High Schools in West Sumatera Province

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Abstract
This study explores the multimodal and digital literacy competence of English education students during their teaching practice in high schools across West Sumatra. Utilizing a quantitative approach, data were collected from 54 student teachers via close-ended questionnaires consisting 37 statements, with 17 statements focused on multimodal literacy competence and 20 statements focused on digital literacy competence. The results reveal that most student teachers exhibit a good level of multimodal literacy with mean score 3.00, particularly in using various modes of communication. However, a preference for multimodal approaches is less prominent with mean 2.58. In digital literacy, students show strong proficiency with mean score 3.32 in very good categorize, especially in media literacy (3.50) and the use of digital devices, though limited access to digital resources and institutional support remains a challenge. These findings emphasize the importance of enhancing teacher education programs to equip future educators with the skills needed for effective integration of multimodal and digital literacies in the classroom

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INTRODUCTION

The rapid evolution of technology has transformed daily life, particularly in the domains of language and communication. Digital tools and information communication technologies (ICT) have reshaped how we acquire, produce, and share knowledge (Jewitt, 2008). Whereas written text once dominated communication, today's interactions often blend text, images, video, and sound, demonstrating the rise of multimodal literacy. This shift enables people to construct, understand, and share knowledge in more diverse ways, reflecting broader technological changes that are reshaping literacy itself.

With this transformation, terms like "electronic literacies," "digital literacies," and "multiliteracies" highlight the expansion of literacy practices in response to digital

communication's demands (Warschauer, 1998; Lankshear & Knobel, 2003; Jones & Hafner, 2012; Cope & Kalantzis, 2000). In education, this multimodal approach has gained importance, with today's "digital natives"—students who have grown up immersed in technology—requiring language learning that embraces multiple modes of expression. Yet, despite these shifts, many educators face challenges in integrating multimodal and digital literacy into the classroom, particularly in Indonesia, where studies on this topic are still limited.

Multimodal literacy in education involves integrating visuals, sound, symbols, and movement to communicate meaning (Dalton, 2012, in Almusharraf & Engemann, 2020). Alongside digital literacy, it represents critical skills for navigating and interpreting digital content, yet teachers often require additional skills and understanding to use these modes effectively (Eksi & Yakisik, 2015). In Indonesia's Merdeka Curriculum, multimodal and digital literacy are recognized as vital for 21st-century learning. However, limited research exists on how these literacies are practiced in English classrooms.

This study seeks to address this gap by investigating the multimodal and digital literacy competencies of English education students in West Sumatra who are undertaking teaching practice programs in high schools. By examining these student teachers' skills, the research aims to provide insights into their readiness to meet the demands of a digitally connected world, where competence in multimodal and digital literacy is increasingly essential for effective teaching and learning.

METHODS

This study used a quantitative approach and the data obtain will be analyze using a descriptive statistical model. Fifty-four student teachers from thirteen regencies/cities in west sumatera participated in this study. The samples are student teachers from English Education Program at Universitas Negeri Padang Juli – December 2024 periode.

Regencies/cities	Participants
Agam	1
Bukittingi	3
Lima Puluh Kota	3
Padang	24
Padang Panjang	8
Pariaman	2
Pasaman	1
Payakumbuh	3
Pasaman Barat	2
Sijunjung	1
Tanah Datar	2
Padang Pariaman	3
Solok Selatan	1
Total	**54**

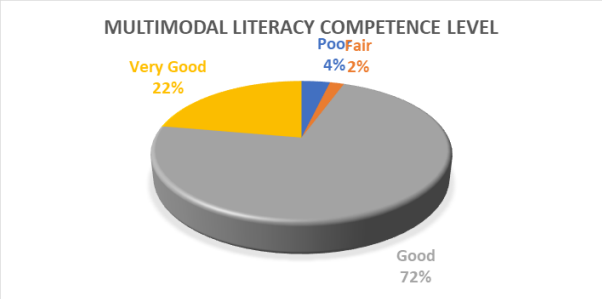
Data From UPPL UNP

The questionnaire is one form questionnaire include multimodal literacy competence and digital literacy competence. The multimodal literacy competence questionnaire is in the form of a ready-made questionnaire by Bulut et al. (2015), which consist of 17 statements. The digital literacy competence questionnaire is

referred to Trilling and Fadel's theory (2009, p.65), and Putri (2022) which consist of 20 statements. This questionnaire made in the form of google form, the distribute the google form link to English education students. The quantitaive data from the online questionnaire were analyzed using descriptive statistics presented using mean score and observation data with frequencies of student teacher multimodal and digital literacy competence during teaching practice.

RESULT AND DISCUSSION

Multimodal Literacy Competence



Graphic 1. Multimodal Literacy Competence Level

The analysis of multimodal literacy competence levels among student teachers shows a varied distribution of competences. Of the 54 participants, 72.2% (39 student teachers) were categorized as having "Good" competence, indicating that the majority have a solid understanding and ability in multimodal literacy. Meanwhile, 22.2% (12 student teachers) demonstrated "Very Good" competence, showing a high level of mastery in combining multiple modes of communication and representation. Only 1 student teacher (1.9%) fell under the "Fair" category, while 2 student teachers (3.7%) were classified as having "Poor" competence. This distribution suggests that while most teachers possess a solid foundation in multimodal literacy, there is a smaller proportion with outstanding skills, and a few individuals may require additional support to reach a more proficient level.

Table 1. Aspect of Multimodal Literacy Competence

No	Aspects	Mean	Category
1	Expressing Oneself Using Multimodal Structure	3.21	Good
2	Interpretation of the Contents Presented	3.20	Good
3	Preferring Multimodal Structure	2.58	Good
Total		**3.00**	**Good**

The table describe overall multimodal literacy competence based on three aspects—expressing oneself using multimodal structures, interpreting multimodal content, and preferring multimodal structures—reveals that student teachers demonstrate a "Good" level of overall multimodal literacy competence. The highest mean score (3.21) was achieved in the first aspect, indicating that student teachers are adept at utilizing various modes of communication to convey ideas effectively. A similar mean score of 3.20 was observed for the second aspect, suggesting that student

teachers are equally competent in understanding and interpreting multimodal information. However, the lowest mean score (2.58) was recorded for the third aspect, which still categorized as "Good," highlights that student teachers may be less inclined to favor multimodal approaches in comparison to their ability to use and interpret them. The overall mean score of 3.00 further confirms that student teachers possess solid multimodal literacy competence, though there remains some room for improvement, particularly in fostering a stronger preference for multimodal structures.

Table 2. First Aspect of Multimodal Literacy Competence

No	Expressing Oneself Using Multimodal Structure	1 STS	2 TS	3 S	4 SS	Mean	Category
1	Using a variety of visual elements in my presentations, including tables and graphics, helps me arrange my ideas systematically.	3	6	25	20	3.15	Good
2	I prepare an interactive presentation making use of music, visuals, and animations.	3	4	26	21	3.20	Good
3	Using various elements (such as music and images) in my presentations makes it easier to make my point.	2	5	23	24	3.28	Very Good
4	I use visuals such as graphs, tables, drawings, and photos in my literature.	1	9	24	20	3.17	Good
5	I can use writing, sound and images together at the same time to clearly express myself.	1	3	32	18	3.24	Good
	Mean					**3.21**	**Good**

In the first aspect of multimodal literacy competence indicated that student teachers feel capable of using auditory, and textual elements to organize and convey ideas systematically in their presentations. the data highlights that students feel confident in using visuals, such as tables, graphics, and photos, to systematically arrange ideas and enhance clarity in expression. The highest-rated item, with a mean of 3.28 and a "Very Good" category, indicates that using various elements like music and images makes it easier for them to convey their points effectively. Additionally, the students' positive responses to items about integrating writing, sound, and images reflect their readiness to engage in expressive, multimodal communication. These findings suggest that student teachers in West Sumatra are well-prepared to use multimodal strategies to enhance communication and engagement in their teaching practices.

Table 3. Second Aspect of Multimodal Literacy Competence

No	Interpretation of the Contents Presented in Multimodal Structure	1 STS	2 TS	3 S	4 SS	Mean	Category

6	I relate various visual and verbal information on various media tools to each other.	3	9	24	18	3.06	Good
7	I interpret the information that I gather from numerous resources.	1	2	38	13	3.17	Good
8	I can decide the true or trusted content presented on various media (newspaper, TV, social media, etc.)	2	2	30	20	3.26	Very Good
9	I relate the information to which I have access using visual and auditory elements.	2	7	31	14	3.06	Good
10	I pay attention to the body language of the individuals I am listening to.	1	7	26	20	3.20	Good
11	I use body language that is in harmony with the words I choose when speaking.	2	3	25	24	3.31	Very Good
12	I understand how visual, auditory, and written elements give impact to individuals.	2	2	25	25	3.35	Very Good
	Mean					**3.20**	**Good**

Second aspect of multimodal literacy competence indicated that student teachers generally demonstrate a good level of competency in relating and interpreting information from various media using visual and auditory elements. The data indicates that students are proficient at relating visual and verbal information and understanding the impact of multimodal elements. Notably, the highest-rated items include the ability to decide on trusted content (3.26) and understanding the impact of visual, auditory, and written elements (3.35), both categorized as "Very Good." This suggests that student teachers are not only competent in interpreting content but also discerning in evaluating media credibility, an essential skill for effective teaching. Overall, these findings indicate that student teachers in West Sumatra are well-equipped to interpret and utilize multimodal resources, contributing to their preparedness for contemporary teaching environments.

Table 4. Third Aspect of Multimodal Literacy Competence

No	**Preferring Multimodal Structures**	**1**	**2**	**3**	**4**	**Mean**	**Category**
		STS	**TS**	**S**	**SS**		
13	I am excited in communication in which written, auditory, and visual elements are used together.	2	7	24	21	3.19	Good
14	Electronic environments that combine written, audio, and visual elements tend to distract me.	18	24	9	3	1.94	Fair
15	The use of visual, auditory, and written elements together leads to laziness of the mind.	9	18	13	14	2.59	Good

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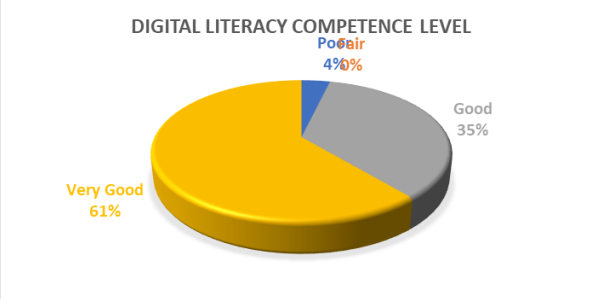
16	I like trying to interpret images, sounds, graphics, and writings simultaneously.	2	11	28	13	2.96	Good
17	I only trust the effectiveness of verbal expression when conveying my thoughts.	8	30	12	4	2.22	Fair
	Mean					**2.58**	**Good**

Third aspect of multimodal literacy competence indicated that a good level of preference among respondents for communication that incorporates written, auditory, and visual elements as seen in the favorable responses to items about excitement in multimodal communication and enjoyment in interpreting diverse content types. Although there is some concern about potential distraction and a slight preference for verbal communication, these reservations are not strong enough to detract from the overall positive stance. This attitude suggests that student teachers in West Sumatra are well-prepared to incorporate multimodal literacy in their teaching, a critical skill for effective engagement in today's digital learning environments.

Digital Literacy Competence



Graphic 2. Digital Literacy Competence Level

The analysis of student teachers' digital literacy competence revealed a generally high level of proficiency among the participants. Of the 54 student teachers, 61.1% (33 student teachers) were rated as having "very good" proficiency, demonstrating good digital literacy skills. 35.2% (19 student teachers) were classified as "good", indicating that a significant proportion of teachers had good skills but were unable to improve. Interestingly, no student teachers were classified as "average", indicating a clear divide between those with high and lower skills. Only 3.7% (2 student teachers) were classified as having "low" proficiency, highlighting that very few student teachers had significant difficulties with digital literacy. This distribution highlights the strong digital competencies of the majority of teachers, although the lack of representation in the "Fair" category may indicate targeted development opportunities to close the gap between lower and higher skill levels.

Table 5. Aspect of Digital Literacy Competence

No	Aspects	Mean	Category
1	Information Literacy	3,20	good
2	Media Literacy	3,50	very good
3	ICT Literacy	3,27	very good

Total	**3,32**	**Very Good**

The table describe overall digital literacy competence, based on the aspects of information literacy, media literacy, and ICT literacy, demonstrates that teachers have an overall "Very Good" level of competence, with a total mean score of 3.32. Among the three aspects, second aspect stands out with the highest mean score of 3.50, placing it in the "Very Good" category. This indicates that student teachers are highly skilled in understanding and critically analyzing various forms of media. Third aspect with a mean score of 3.27, also falls under the "Very Good" category, highlighting that student teachers are proficient in using digital tools and technologies. First aspect with a mean score of 3.20, is categorized as "Good," showing that while student teachers are competent in locating, evaluating, and using information, there is slightly more room for development in this area compared to media and ICT literacy. Overall, the findings suggest that student teachers have strong digital literacy competence, particularly in media and ICT-related skills.

Table 6. First Aspect of Digital Literacy Competence

No	Information Literacy	1	2	3	4	Mean	Category
		STS	TS	S	SS		
1	I apply critical thinking when searching for information online.	2	6	25	21	3,20	Good
2	I critically evaluate the credibility of digital information before using it (news, facts, hoaxes, thought, sites).	1	2	31	20	3,30	Very Good
3	I understand the social implications of the information I create and share online.	0	6	33	15	3,17	Good
4	I can effectively analyze and interpret text based information.	0	9	29	16	3,13	Good
	Mean					**3,20**	**Good**

The first aspect of digital literacy competence indicated that student teachers possess strong critical thinking and evaluative skills when navigating online information. With an overall mean of 3.20, categorized as "Good," respondents demonstrate a consistent ability to apply critical thinking, assess credibility, and interpret digital information effectively. The highest-rated item, with a mean of 3.30 and categorized as "Very Good," reveals a particularly strong focus on evaluating the credibility of digital information before using it. This competence is crucial in today's digital landscape, where misinformation is prevalent. Additionally, students show awareness of the social implications of sharing information online, suggesting a balanced approach to digital literacy that encompasses both evaluative skills and ethical considerations. These findings suggest that student teachers in West Sumatra are well-prepared to critically engage with digital content, a vital skill for their role as educators.

Table 7. Second Aspect of Digital Literacy Competence

No	Media Literacy	1	2	3	4	Mean	Category
		STS	TS	S	SS		
5	I am able to use information from various media.	0	4	26	24	3,37	Very Good
6	I am able to understand the purpose of the message presented by various media.	1	5	31	17	3,19	Good
7	I am able to use the device (gadget / tablet / laptop / computer, etc.) that is suitable for finding information.	1	1	13	39	3,67	Very Good
8	I am able to use the device (gadget / tablet / laptop / computer, etc.) that is appropriate for using information.	1	1	13	39	3,67	Very Good
9	I am able to use the device (gadget / tablet / laptop / computer, etc.) that is appropriate for making information.	1	1	15	37	3,63	Very Good
	Mean					**3,50**	**Very Good**

The analysis of the second aspect of digital literacy competence reveals that respondents demonstrate good to very good abilities in using information from various media, understanding the purpose of media messages, and utilizing digital devices such as gadgets, tablets, laptops, and computers for various informational purposes. The highest average score was recorded for the ability to use devices appropriately for finding and utilizing information, both at 3.67, falling into the "Very Good" category. This is followed by the ability to create information using devices, with an average score of 3.63, also in the "Very Good" category. Although understanding the purpose of media messages scored slightly lower at 3.19, in the "Good" category, overall, this aspect achieved an average of 3.50, remaining in the "Very Good" category, which reflects a high level of digital literacy competence among respondents.

Table 8. Third Aspect of Digital Literacy Competence

No	Information and Communication Technology Literacy	1	2	3	4	Mean	Category
		STS	TS	S	SS		
10	I use various digital device and basic software (e.g., Microsoft Office, Google Apps) to access information.	1	2	16	35	3,57	Very Good
11	I can create pictures, audio, and videos using online facilities.	1	3	22	28	3,43	Very Good

12	I am proficient in using application design and getting the right license.	2	12	25	15	2,98	Good
13	I am confidence displays video content that I made online.	3	10	25	16	3,00	Good
14	I know which application or software that is safe and appropriate to download.	1	8	21	24	3,26	Very Good
15	I am able to write comments on blogs, websites, or forums.	3	11	22	18	3,02	Good
16	I know of information that can be shared online.	1	4	24	25	3,35	Very Good
17	I pay attention in making online comments and online interactions.	2	5	18	29	3,37	Very Good
18	I understand how to protect my personal information and data when conducting online activities and interaction.	2	1	26	25	3,37	Very Good
19	I am capable to maintain ethics when communicating online.	2	0	19	33	3,54	Very Good
20	I manage my time for activities with and without digital devices.	1	9	28	16	3,09	Good
	Mean					**3,27**	**Very Good**

The analysis of the third aspect of digital literacy competence indicates that respondents generally display high competence in using information and communication technology (ICT). Most respondents show very good proficiency in utilizing digital devices and basic software to access information (3.57), creating multimedia content online (3.43), recognizing safe and appropriate software to download (3.26), and maintaining ethical online interactions (mean = 3.54). Skills related to personal data protection and responsible online comments also scored highly, both at 3.37. While abilities in design applications (2.98), confidently displaying self-created videos online (3.00), and managing screen time (3.09) were slightly lower, these still reflect a "Good" level. With an overall mean score of 3.27, this aspect falls into the "Very Good" category, underscoring respondents' strong digital literacy and awareness of ethical online practices.

Discussion

The study's findings align with theoretical frameworks presented by Bulut (2015) and Thrilling and Fadel (2022), which emphasize the importance of multimodal and digital literacy as critical competencies for modern educators. The research demonstrates that English education students recognize the significance of incorporating multimedia tools to create engaging, relevant learning experiences for high school students. This aligns with Thrilling and Fadel's assertion that media literacy is essential in preparing teachers to meet the expectations of digitally-native learners. The theories reinforce the idea that mastering digital tools is not only

beneficial but necessary for fostering effective, technology-rich learning environments.

Furthermore, the study reveals a disconnect between student-teachers' theoretical understanding of multimodal literacy and their ability to apply it effectively, echoing Cope and Kalantzis's (2009) views on the need for more comprehensive multimodal training in teacher education. The findings suggest that without structured guidance and accessible resources, student-teachers struggle to implement multimodal approaches that meet diverse student needs. The results underscore the importance of curricular adjustments in teacher education programs to better prepare future educators for the demands of a digitalized classroom environment.

CONCLUSION

This study investigates multimodal and digital literacy competencies among English education students during their teaching practice program in high schools in West Sumatra. The findings indicate that most participants exhibit good competence in multimodal literacy, particularly in using various forms of communication to convey ideas effectively. However, there is still a lower preference for multimodal approaches. In terms of digital literacy, participants generally demonstrate very good competence, especially in using digital devices and media literacy. Despite these strengths, challenges remain, including limited digital resources and lack of institutional support. This research highlights the need to strengthen teacher training programs to better prepare educators for the demands of increasingly digital and multimodal classroom environments.

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