



The Correlation between Students' Digital Literacy Skills and Their Reading Comprehension in Recount Text at SMP Muhammadiyah 2 Pekanbaru

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Abstract

English is an international language that plays an essential role in education, enabling Indonesian students to access global knowledge and participate in academic communities. Among the four language skills, reading comprehension is particularly important as it allows students to understand, interpret, and evaluate written texts. However, Indonesian students' reading ability remains relatively low, as indicated by reading literacy scores that are still below the OECD average. This condition suggests that many students experience difficulties in comprehending texts and drawing conclusions, which may also affect their writing skills, problem-solving abilities, and overall academic achievement. Therefore, this study aimed to examine the correlation between students' digital literacy skills and their reading comprehension in recount texts at SMP Muhammadiyah 2 Pekanbaru. This research employed a quantitative correlational design with a total sample of 45 eighth-grade students selected through total sampling. Data were collected using a digital literacy questionnaire and a reading comprehension test, and analyzed using Pearson Product-Moment Correlation. The findings revealed a significant positive correlation between the two variables, with a significance value (Sig. 2-tailed) of 0.000, which is lower than 0.05. This indicates that the alternative hypothesis (H1) is accepted and the null hypothesis (H0) is rejected. In conclusion, students with higher digital literacy skills tend to have better reading comprehension in recount texts. The implications of this research strengthening digital literacy needs to be integrated into English language learning to improve students' reading skills. Teachers and schools play a role in providing supportive media, facilities, and training, so that digital literacy can also improve overall academic achievement.

Keywords: digital literacy; reading comprehension; Recount text; quantitative; correlation

INTRODUCTION

English has become an international means of communication that connects people across cultures and nations. As an international language, English plays a vital role in education, enabling students to access global knowledge and participate in academic and professional communities (Rahman, 2019). Among the four language skills, reading comprehension is considered essential because it allows learners to construct meaning, interpret information, and develop critical thinking through written texts. Reading comprehension is not merely decoding symbols, but an active cognitive process involving prior knowledge, inference-making, and evaluation of meaning, as explained by Grabe and Stoller (cited in Prasetya Dharma & Itu Meo, 2026).

However, Indonesian students' reading ability remains relatively low. Data from the Programme for International Student Assessment (PISA) 2022, published by the Organisation for Economic Co-operation and Development (OECD), indicate that students' reading literacy scores are still below the international average. This condition shows that many students face difficulties in



understanding, analysing, and evaluating written texts. Weak reading comprehension also affects students' writing skills, problem-solving abilities, and overall academic achievement (Fitri et al., 2022). Therefore, improving reading comprehension has become an important concern in English language learning.

In the context of the Kurikulum Merdeka, recount texts are an important genre that aims to develop students' ability to retell past events in a structured and meaningful way. Recount texts are characterized by the use of past tense, chronological sequences, and temporal conjunctions (Maryam et al., 2020). Ideally, reading instruction should integrate digital literacy to support students in accessing, evaluating, and interpreting information from digital sources. Digital literacy refers to the ability to effectively use digital tools to access, evaluate, and apply information for learning purposes (Falloon, 2020). Previous studies suggest that students with strong digital literacy are better able to evaluate online information and comprehend digital texts (Coiro, 2021; Kannianen et al., 2019).

However, there is a gap between these ideal expectations and the actual conditions in the classroom. At SMP Muhammadiyah 2 Pekanbaru, although students are familiar with digital devices, they primarily use them for non-academic purposes such as gaming, chatting, and social media. In addition, many students still experience difficulties in reading comprehension, especially in identifying main ideas, understanding sequences, making inferences, and comprehending recount texts. Teachers also tend to rely on conventional teaching methods with limited use of digital media. As a result, students' frequent exposure to technology does not significantly contribute to improving their reading comprehension.

From a research perspective, previous studies have shown inconsistent findings regarding the relationship between digital literacy and reading comprehension. For example, Sari et al. (2024) found a positive correlation between digital literacy and reading comprehension, while Nasywa and Ningsih (2025) reported that students with good digital literacy still demonstrated only moderate reading comprehension. This inconsistency indicates a research gap, particularly in studies focusing on junior high school students and specific text genres such as recount texts within the Kurikulum Merdeka context.

Therefore, this study aims to examine the correlation between students' digital literacy skills and their reading comprehension in recount texts at SMP Muhammadiyah 2 Pekanbaru. This study is expected to provide empirical evidence on the importance of integrating digital literacy into reading instruction and to contribute to the development of more effective English learning strategies in the digital era.

METHOD

This type of research is field research with experimental methods. While the Approach used is quantitative correlational design to examine the relationship between students' digital literacy and their reading comprehension in recount texts. Digital literacy was treated as the independent variable, while reading comprehension was the dependent variable.



Participants

The target of this study was eighth-grade students at Muhammadiyah 2 Junior High School, Pekanbaru. There are two classes at Muhammadiyah 2 Junior High School: 8th-grade Binsus A and 8th-grade Binsus B, each with 45 students. Due to the small population, a total sampling method was used, involving all students from both classes.

Instruments

Data were collected using a questionnaire and a reading comprehension test. The questionnaire consisted of 20 items measuring four aspects of digital literacy: internet searching, hypertextual navigation, content evaluation, and knowledge assembly, using a five-point Likert scale. The reading test consisted of 21 multiple-choice items covering literal, inferential, and critical-creative comprehension.

All instruments were tested for validity and reliability. The results indicated that all items were valid and reliable, with Cronbach's Alpha coefficients of 0.770 (questionnaire) and 0.753 (test).

Data collection procedures

The data collection procedure of this research consisted of several steps to ensure the accuracy and reliability of the results. First, the researcher prepared the instruments, namely a questionnaire and a reading comprehension test. Before the instruments were distributed, they were validated by using validity test to ensure content validity. After the instruments were finalized, the researcher obtained official permission from the school and inform consent from the participants. After the data are collected, the students' responses to the questionnaire were scored by converting Likert scale options into numerical values, and the total and average scores were calculated.

Data analysis

The data was analysed using both descriptive and inferential statistics. Descriptive statistics, such as mean, median, and standard deviation, were used to summarize the results of students' digital literacy and reading comprehension scores. Inferential statistics, specifically Pearson's Product-Moment Correlation, was applied to examine the relationship between the two variables. The correlation was tested at a significance level of 0.05.

FINDINGS AND DISCUSSION

Findings

The researcher presents the findings regarding the correlation between students' digital literacy skills and their reading comprehension in recount text at SMP Muhammadiyah 2 Pekanbaru. The sample of this research was the eighth-grade students in SMP Muhammadiyah 2 Pekanbaru. There were two classes at the eighth-grade students in SMP Muhammadiyah 2 Pekanbaru namely 8 Binsus A and 8 Binsus B. The total of the sample was 45 students.

To collect the data, the researcher employed two research instruments: a questionnaire and a reading test. The questionnaire was designed to examine students' digital literacy skills, while the reading test was administered to assess their reading comprehension in recount text. The collected



data were analysed using IBM SPSS version 25, and the results of the analysis are presented as follows:

The Result of Students' Digital Literacy Skills Questionnaire

As explained in the previous chapter, a questionnaire designed to examine students' digital literacy skills. Prior to conducting the main analysis, the researcher administered a questionnaire consisting of 20 statement items to measure the variable. The results obtained from the questionnaire are presented in the following table.

Table 1 The Score of students' digital literacy skills Questionnaire

No.	Respondents	Score	Category
1	Respondent 1	79	High
2	Respondent 2	93	Very High
3	Respondent 3	86	Very High
4	Respondent 4	86	Very High
5	Respondent 5	84	Very High
6	Respondent 6	77	High
7	Respondent 7	74	High
8	Respondent 8	90	Very High
9	Respondent 9	85	Very High
10	Respondent 10	86	Very High
11	Respondent 11	88	Very High
12	Respondent 12	77	High
13	Respondent 13	78	High
14	Respondent 14	87	Very High
15	Respondent 15	82	Very High
16	Respondent 16	88	Very High
17	Respondent 17	86	Very High
18	Respondent 18	71	High
19	Respondent 19	87	Very High
20	Respondent 20	87	Very High
21	Respondent 21	82	Very High
22	Respondent 22	92	Very High
23	Respondent 23	94	Very High
24	Respondent 24	74	High
25	Respondent 25	80	Very High
26	Respondent 26	88	Very High
27	Respondent 27	82	Very High
28	Respondent 28	83	Very High
29	Respondent 29	89	Very High
30	Respondent 30	88	Very High
31	Respondent 31	88	Very High



32	Respondent 32	89	Very High
33	Respondent 33	86	Very High
34	Respondent 34	86	Very High
35	Respondent 35	78	High
36	Respondent 36	81	Very High
37	Respondent 37	84	Very High
38	Respondent 38	91	Very High
39	Respondent 39	88	Very High
40	Respondent 40	83	Very High
41	Respondent 41	94	Very High
42	Respondent 42	88	Very High
43	Respondent 43	89	Very High
44	Respondent 44	87	Very High
45	Respondent 45	88	Very High

Based on the data presented in the table, the overall results indicate that the respondents demonstrate a very high level in the measured variable. The majority of respondents are categorized in the Very High classification, while a smaller number fall into the High category. The scores range from 71 to 94, with most respondents obtaining scores above 80, indicating a strong concentration in the upper score range. Overall, these findings suggest that the measured variable among the respondents can generally be classified as very high.

The detailed questionnaire score could be identified in the descriptive analysis table below

Table 2 The Descriptive Analysis of students' digital literacy skills Questionnaire

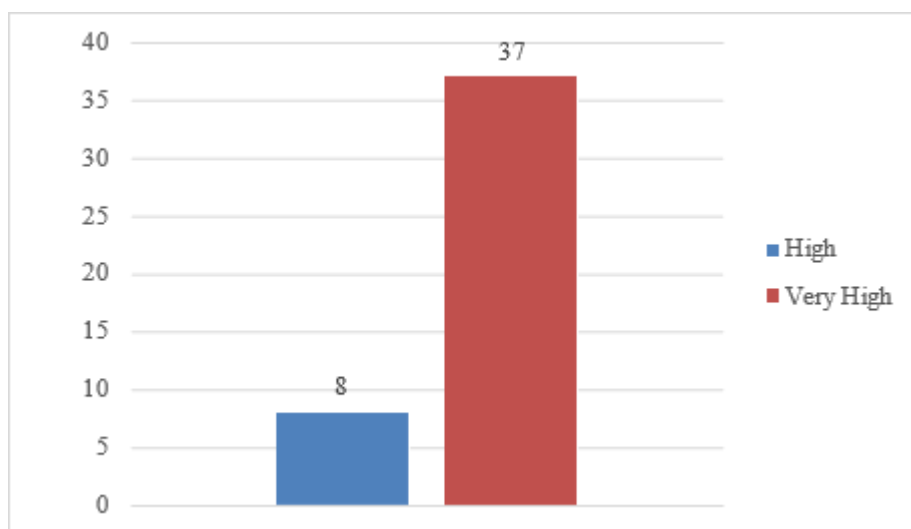
	N	Minimum	Maximum	Mean	Std. Deviation
students' digital literacy skills Questionnaire	45	71,00	94,00	84,9556	5,34261
Valid N (listwise)	45				

Table above shows that the number of respondents (N) was 45. The minimum score of the students' digital literacy skills questionnaire was 71.00, while the maximum score was 94.00, indicating a relatively wide range of scores among the participants. The mean score was 84.9556, which reflects the overall average level of students' digital literacy skills. The standard deviation was 5.34261, suggesting a moderate level of variation in the students' responses. Overall, the results indicate that the students generally demonstrate a good level of digital literacy skills.

**Table 3 The Frequency Distribution of Students' Digital Literacy Skills Score**

	Categories	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	8	17,78	17,78	17,78
	Very High	37	82,22	82,22	100,00
	Total	45	100	100	

Table above presents the frequency distribution of students' digital literacy skills levels. Out of 45 students, 8 students (17.78%) were categorized as having a high level of digital literacy skills, while 37 students (82.22%) were classified in the very high category. Overall, the findings indicate that the majority of students demonstrate a very high level of digital literacy skills. The distribution of the students' digital literacy skills level also can be seen in the chart below

Figure 1 Students' Digital Literacy Skills Questionnaire Score Chart

The Reading Comprehension in Recount Text

In this research, reading comprehension in recount text was the independent variable (Y). The reading comprehension test was employed to assess this variable. Prior to conducting the main analysis, the researcher administered a multiple-choice test consisting of 21 items to measure the variable. The results obtained from the test are presented in the following table.

**Table 4 The Score of Reading Comprehension Test**

No.	Respondents	Score	Category
1	Respondent 1	52	Low
2	Respondent 2	100	Very High
3	Respondent 3	71	High
4	Respondent 4	67	High
5	Respondent 5	62	Moderate
6	Respondent 6	52	Low
7	Respondent 7	52	Low
8	Respondent 8	100	Very High
9	Respondent 9	62	Moderate
10	Respondent 10	67	High
11	Respondent 11	95	Very High
12	Respondent 12	52	Low
13	Respondent 13	52	Low
14	Respondent 14	76	High
15	Respondent 15	57	Moderate
16	Respondent 16	95	Very High
17	Respondent 17	67	High
18	Respondent 18	48	Low
19	Respondent 19	76	High
20	Respondent 20	76	High
21	Respondent 21	57	Moderate
22	Respondent 22	100	Very High
23	Respondent 23	100	Very High
24	Respondent 24	48	Low
25	Respondent 25	52	Low
26	Respondent 26	90	Very High
27	Respondent 27	57	Moderate
28	Respondent 28	62	Moderate
29	Respondent 29	100	Very High
30	Respondent 30	86	Very High
31	Respondent 31	86	Very High
32	Respondent 32	95	Very High
33	Respondent 33	67	High
34	Respondent 34	62	Moderate
35	Respondent 35	52	Low
36	Respondent 36	57	Moderate
37	Respondent 37	62	Moderate
38	Respondent 38	100	Very High
39	Respondent 39	81	Very High
40	Respondent 40	62	Moderate
41	Respondent 41	100	Very High



42	Respondent 42	81	Very High
43	Respondent 43	95	Very High
44	Respondent 44	71	High
45	Respondent 45	81	Very High

Table above presents the individual scores and categories of 45 respondents, with scores ranging from 48 to 100. Several respondents achieved the highest score of 100 and were categorized as Very High, while the lowest score of 48 was classified as Low. Most respondents fall into the Very High category, followed by those in the High and Moderate categories, whereas only a few are categorized as Low. Overall, the data indicate that the majority of respondents demonstrate high to very high levels of performance.

The detailed of the test result could be seen in the descriptive analysis table below.

Table 5 The Descriptive Analysis of Reading Comprehension Test Score

	N	Minimum	Maximum	Mean	Std. Deviation
Reading Comprehension	45	48,00	100,00	72,9556	17,91642
Valid N (listwise)	45				

The table shows the descriptive statistics of students' reading comprehension scores based on 45 respondents. The minimum score obtained was 48.00, while the maximum score reached 100.00. The mean score was 72.9556, indicating the average level of students' reading comprehension. The standard deviation was 17.91642, which reflects the variation of scores among the respondents. The detail of the students' reading comprehension level can be seen as follow.

Table 6 The Frequency Distribution of Students' Reading Comprehension

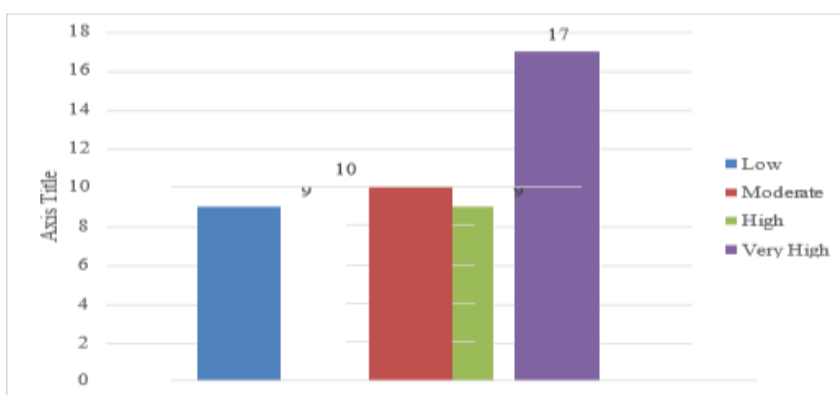
	Categories	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	9	20,00	20,00	20,00
	Moderate	10	22,22	22,22	42,22
	High	9	20,00	20,00	62,22
	Very High	17	37,78	37,78	100,00
	Total	45	100	100	

The table presents the distribution of students' reading comprehension levels across four categories. Out of 45 students, 9 students (20.00%) were categorized as Low, 10 students (22.22%) as Moderate, and 9 students (20.00%) as High. Meanwhile, 17 students (37.78%) were classified in the Very High category, representing the largest proportion of respondents. Overall, the results

show that most students fall into the Very High category, although the other categories are also proportionally represented.

The student's reading comprehension in recount text also can be seen in the following chart.

Figure 2 Students' Reading Comprehension Chart



Prerequisite Test

Before conducting correlation or regression analysis, a linearity test is necessary to determine whether there is a linear relationship between the independent and dependent variables. This test ensures that the assumption of linearity is met, which is a key requirement for applying parametric statistical analysis. The results of the linearity test between students' digital literacy skills and reading comprehension are presented in the following table.

Table 7 Result of Linearity Test

			Sum of Squares	df	Mean Square	F	Sig.
Reading Comprehension * Student's Digital Literacy Skill	Between Groups	(Combined)	3784,244	25	151,370	156,874	,000
		Linearity	3736,120	1	3736,120	3871,978	,000
		Deviation from Linearity	48,125	24	2,005	2,078	,054
	Within Groups		18,333	19	,965		
Total			3802,578	44			

Based on the table, the significance value for Linearity is 0.000, which is lower than 0.05, indicating that there is a significant linear relationship between students' digital literacy skills and reading comprehension. Meanwhile, the significance value for Deviation from Linearity is 0.054, which is higher than 0.05. This result shows that there is no significant deviation from linearity.



Therefore, it can be concluded that the relationship between the two variables is linear. As a consequence, further analysis such as correlation or regression can be appropriately conducted. In this research, IBM SPSS 25 was used to analyses the correlation between the two variables, namely digital literacy skill and reading comprehension in recount text. The results of the hypothesis testing are presented below.

Table 8 Result of Hypothesis Test

		Student's Digital Literacy Skill	Reading Comprehension
Student's Digital Literacy Skill	Pearson Correlation	1	.896**
	Sig. (2-tailed)		,000
	N	45	45
Reading Comprehension	Pearson Correlation	.896**	1
	Sig. (2-tailed)	,000	
	N	45	45

** . Correlation is significant at the 0.01 level (2-tailed).

The table above shows that the significance value (Sig. 2-tailed) is 0.000, which is smaller than 0.05. The rules for hypothesis criteria are: if sig. < 0.05, H1 is accepted and H0 is rejected; if sig. > 0.05, H1 is rejected and H0 is accepted. In this research, the sig. value (0.000) is less than 0.05, which means that H1 is accepted and H0 is rejected. It is also shown in the table that the Pearson Correlation coefficient is 0.896, which indicates a very strong positive correlation between students' digital literacy skills and reading comprehension. The correlation is significant at the 0.01 level (2-tailed) with a total sample of 45 students. Therefore, it can be concluded that there is a significant and strong positive correlation between students' digital literacy skills and their reading comprehension in recount text at SMP Muhammadiyah 2 Pekanbaru.

Discussion

The results of the hypothesis testing demonstrate a significant and strong positive correlation between students' digital literacy skills and their reading comprehension in recount texts at SMP Muhammadiyah 2 Pekanbaru. It indicates that the relationship between the two variables is statistically meaningful. This result suggests that students who possess higher levels of digital literacy tend to achieve better scores in reading comprehension. Consequently, the alternative hypothesis (Ha) is accepted, while the null hypothesis (H0) is rejected. These results imply that digital literacy is not merely a complementary skill but an important factor associated with students' ability to comprehend texts in the EFL context.

This finding can be explained through the theoretical perspective. Reading comprehension is not merely decoding words but involves constructing meaning through the interaction of linguistic



knowledge, cognitive skills, background knowledge, metacognitive strategies, and motivation (Falloon, 2020). Digital literacy skills appear to support several of these components simultaneously. For instance, when students search for information online (internet searching), evaluate content credibility (content evaluation), and synthesize information from multiple sources (knowledge assembly), they activate cognitive skills such as inference-making and working memory. These processes directly contribute to deeper comprehension, especially when students engage with recount texts that require identifying sequences of events, cause-and-effect relationships, and main ideas.

Despite the positive outcomes, several limitations need to be acknowledged. The study was conducted in a single school with a relatively small sample of 45 eighth-grade students, which may restrict the generalizability of the findings. Additionally, the correlational design employed in this research does not allow for conclusions about causality. Although a strong association between digital literacy and reading comprehension was identified, it cannot be definitively stated that digital literacy directly causes improvement in reading comprehension. Future studies involving larger samples, multiple institutions, or experimental designs would provide deeper insight into the nature of this relationship.

CONCLUSION

Reading is an essential skill in learning English, particularly at the junior high school level, where students are required to comprehend various types of texts, including recount texts. In the digital era, students are not only expected to master conventional reading skills but also digital literacy skills that enable them to access, evaluate, and understand information from digital sources effectively. Based on preliminary observations at SMP Muhammadiyah 2 Pekanbaru, although students are familiar with digital devices, their ability to utilize digital media to support academic reading varies. Therefore, this research was conducted to investigate whether there is a significant correlation between students' digital literacy skills and their reading comprehension in recount texts.

The results showed a strong and significant positive correlation between digital literacy and reading comprehension of recount texts, with students with high digital literacy tending to have better reading comprehension. Despite challenges in data collection, such as student absence, the study was successfully completed, involving 45 students according to procedures.



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