p-ISSN: 2829-8411
e-ISSN: 2829-8403

Jurnal Inovasi dan Teknologi Pendidikan
JURINOTEP
Vol. 4, No.3 Januari, 2026 hal. 640-653
Journal Page is available to http://jurinotep.lppmbinabangsa.ac.id/index.php/home

THE RELATIONSHIP BETWEEN DIGITAL LITERACY AND CRITICAL THINKING SKILLS IN GRADE V IN ELEMENTARY SCHOOL

Anisah Saadah[1], Imamudin[2], Munawaroh[3]
[1,2,3]Universitas Bina Bangsa
Email: [1]annisahsaadah3@gmail.com, [2]imamudin@binabangsa.ac.id [3]munawarohmarwan@gmail.com

Article Info

Article History

Received: 10-10-2025

Revised: 10-11-2025

Accepted: 01-31-2026

Keywords: digital literacy, critical thinking skills, class V, students, elementary school, correlation

Abstract

The study aims to determine the relationship between digital literacy and critical thinking skills of fifth-grade students at SDN Banjarsari 2, Serang City. Digital literacy is a very important skill in the digital era, especially in supporting technology-based learning processes. Critical thinking skills are 21st-century competencies that need to be developed early so that students are able to analyze, reason, and draw critical or logistical conclusions. In this study, the method used is a quantitative method with a correlational approach, the sample in this study were fifth-grade students of SDN Banjarsari 2, Serang City. The instrument in this study used a questionnaire to measure digital literacy and to measure critical thinking skills, a test instrument in the form of 10 essay questions was used. The results of the analysis of this study indicate a significant relationship between digital literacy and students' critical thinking skills. The higher the students' digital literacy, the higher their critical thinking skills. This study shows the importance of digital-based learning in developing critical thinking skills in elementary schools.

Abstract

Penelitian bertujuan untuk mengetahui hubungan literasi digital terhadap kemampuan berpikir kritis siswa kelas V di SDN Banjarsari 2 Kota Serang. Lietrasi digital menjadi kemampuan yang sangat penting dalam era digital, terutama dalam menunjang proses pembelajaran yang berbasis teknologi. kemampuan berpikir kritis merupakan kompetensi abad 21 yang perlu dikembangkan sejak dini agar siswa mampu menganalisis, mengevaluasi, serta menyimpulkan secara kritis atau logis. Dalam penelitian ini metode yang digunakan adalah metode kuantitatif dengan pendekatan korelasional, sampel dalam penelitian ini yakni siswa kelas V SDN Banjarsari 2 Kota Serang. Instrumen dalam penelitian ini menggunakan angket untuk mengukur literasi digital serta untuk mengukur kemampuan berpikir kritis menggunakan instrumen tes berupa soal uraian sebanyak 10 soal. Hasil analisis dari penelitian ini menunjukan adanya hubungan yang signifikan antara literasi digital dengan kemampuan berpikir kritis siswa. Semakin tinggi literasi digital siswa maka semakin tinggi pula kemampuan berpikir kritis. Penelitian ini menunjukan pentingnya pembelajaran berbasis digital dalam pengembangan kemampuan berpikir kritis di sekolah dasar.

INTRODUCTION

DOI Artikel: 10.46306/jurinotep.v4i3.198

Education currently focuses on the development of student resources during the learning process at school (Banyu, 2020). Developing student resources that have competence is a challenge of the 21st century. The challenges of the 21st century require students to master several learning skills (Khasanah, 2019). According to (Rahayu, 2022), 21st century skills include information literacy, didgital knowledge and literacy, critical thinking skills, creativity, problem solving, mastery of technology, and media literacy, information and communication. 21st century education is directed to train students' digital literacy (Haryanto, 2022). Digital literacy can be interpreted as the knowledge and skills of users in utilizing digital media, such as communication tools, internet networks, and others (Suherdi, 2021). According to Sutrisna (2020), digital literacy is simply defined as the ability to understand and use information from various types of formats, which are wider than information sources, and are able to be displayed through computer devices. According to Paul Glister in Zaenudin (2020), digital literacy includes four core competencies, namely: 1). Internet Searching, Internet Searching is related to searching for information on the internet; 2). *Hypertextual Navigation* This competency encompasses reading and understanding a hypertext dynamically; 3). Evaluation of Information Content (*Content Education*) This ability includes the assessment of what is found online also includes the ability to identify the validity and completeness of the information provided; 4). Knowledge Assembly This ability is related to the efforts that a person has to prepare knowledge. In *the framework of 21st Century Education*, several skills that need to be prepared are explained dan dikuasai oleh siswa di abad 21 yang dikenal dengan 4C yaitu communication, collaboration, critical thinking, dan creativity. Critical thinking skills are thinking skills that involve cognitive processes and invite students to think reflectively on problems (Saputra, 2020). According to Syamsudin (2020), critical thinking skills are intellectual processes that actively and skillfully conceptualize, apply, analyze, synthesize, and evaluate information collected or produced from observation, experience, reflection,

reasoning, or communication to guide beliefs and actions. According to Ennis in Purwanti (2023), indicators of critical thinking ability can be grouped into 5 groups, namely:

1. Provide elementry *clarification*
2. Build basic skills (*bassic support*)

3.Conclusion

4. Advence clarification
5. Strategy and tactics

Based on the results of an interview with Mrs. Ririn as a classroom teacher/homeroom teacher of class 5A at SDN Banjarsari 2 Kota Serang, the level of critical thinking ability of class 5A students is still relatively low, because at the time of learning students do not take the initiative to ask questions and respond, students only pay attention to the explanations or information conveyed by the teacher, students do not take the initiative to find the study materials they need. This results in students still having difficulty in filtering information, comparing facts, and drawing conclusions from the material presented. And when working on the questions, students still have difficulty in terms of understanding, analyzing, and evaluating the questions presented. Based on the results of interviews related to digital literacy, the school has implemented digital literacy, but the use of digital literacy is not optimal for learning because many 5th grade students use gadgets only for entertainment, not to find information that supports learning activities. In the implementation of digital literacy, teachers tend not to consistently develop digital literacy as a learning strategy that fosters students' critical thinking.

METHODS

In this study, the method used is a quantitative method with a type of correlational research. According to Creswell in Dr. Amruddin (2022), quantitative research is an effort to investigate problems. This study uses a correlational

DOI Artikel: 10.46306/jurinotep.v4i3.198

approach, the correlational method is used to explain the relationship between digital literacy and critical thinking skills in learning Peta Indonesia in grade 5 elementary school, then the resulting data will be tested using Pearson Product Moment to find out the magnitude of the correlation coefficient and determine whether the relationship between the two variables is significant or not. According to Creswell's opinion in Waruwu (2025), correlational research design is a research design used to describe and measure the degree of relationship between two or more variables or sets of scores. Sampling in this study used purposive sampling, The sample in this study is the VA class of SDN Banjarsari 2 Serang City, with a total of 30 students. The population in this study is the principal, teachers, and VA class students of SDN Banjarsari 2 Serang City.

RESULTS AND DISCUSSION

A. Digital Literacy and Critical Thinking Skills

The researcher carried out the research at SDN Banjarsari 2 Serang City. The variables used by the researcher are digital literacy and critical thinking skills. Sampling in this study used the *Purposive Sampling method*, data collection was carried out using a questionnaire to measure digital literacy with a total of 20 statements while critical thinking skills were measured by test questions totaling 10 description questions. A total of 30 students were sampled in this study. The purpose of this research is to find out the relationship between digital literacy and the critical thinking ability of students at VA SDN Banjarsari 2 Serang City. The data that has been obtained is then processed using the help of the SPSS Version 22 application.

1. Digital Literacy

Based on the results of the descriptive analysis that has been carried out, the mean value for the digital literacy variable is 67.33, the maximum value is 76 and the deviation value is 4.95. The mean value is included in the high category.

To find out the quality or criteria of digital literacy variables, please note Table 1. As follows.

Table 1 Results of Digital Literacy Descriptive Analysis

	N	Minimum	Maximum	Mean	Hours of deviation
DIGITAL LITERACY	30	57	76	67.33	4.950
Valid N (listwise)	30				

To find out the quality or criteria for digital literacy variables, please note Table 2, as follows.

Table 2 Digital Literacy Assessment Criteria

Shoes	**Criterion**
81-100	Very High
61-81	Tall
41-60	Keep
21-40	Low
<20	Very Low

Source: (Nafisah, 2023)

Based on the table. 2 above, it can be seen that students' digital literacy has a mean value of 67.33. Based on the table of criteria for digital literacy variables, this number is included in the high category.

2. *Critical Thinking Skills*

Based on the results that have been carried out, the mean value of the critical thinking ability variable is 72.70, the maximum value is 80 while the deviation value is 5.34 the criteria for the critical thinking ability variable can be seen in the Table table.3

Table 3. Descriptive Analysis of Critical Thinking Skills

	N	Minimum	Maximum	Mean	Hours of deviation
CRITICAL THINKING SKILLS	30	62	80	72.70	5.344
Valid N (listwise)	30				

Based on the table, students' critical thinking skills have a score of 72.70. Based on Table 4 of the variable criteria, the number is included in the high category. To see the criteria for critical thinking ability scores, you can see table 4.

Table 4. Critical Thinking Ability Assessment Criteria

Score	Criterion
86-100	Very High
71-85	Tall
56-70	Keep
41-55	Low
< 40	Very Low

Source: Agip (in Wayudi, 2020)

B. Data Analysis

1. Normality Test

The normality test aims to find out whether the data from the research results are distributed normally or not. The normality test in this study used the Shapiro-Wilk test assisted by SPSS 22 because the sample in this study was less than 50. Normal or non-normal distributed statistical results will be visible at their significance value. If the significance value is > 0.05, then the data is distributed normally.

DOI Artikel: 10.46306/jurinotep.v4i3.198

The following results of the normality test of the two variables can be seen in the Table. 5. As follows.

Table 5 Normality Test Results

Tests of Normality

	Shapiro-Wilk		
	Statistic	df	Itself.
Lietrasi digital	.971	30	.559
Critical Thinking Skills	.944	30	.118

** is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the results of the data analysis, the significance value of the digital literacy variable was 0.559 and the significance value of the critical thinking ability variable was 0.118, which means that the significance value of digital literacy and critical thinking ability > 0.05. It can be concluded that the research data is distributed normally.

1. *Linearity Test*

This linearity test aims to understand the relationship of dependent variables with whether they are linear independent or not. The research data is said to be compared if the significance value is > 0.05. The following are the results of the two-variable linearity test which can be seen in table 6.

Table. 6. Results of Linearity Test

ANOVA Table

			Mean Square	F
	Between Groups	(Combined)	41.139	2.727
		Linearity	215.123	14.259

THINKING SKILLS * DIGITAL LITERACY	Deviation from Linearity	28.711	1.903
	Within Groups	15.087	
	Total		

			Itself.
THINKING SKILLS * DIGITAL LITERACY	Between Groups	(Combined)	.034
		Linearity	.002
		Deviation from Linearity	.120
	Within Groups		
	Total		

Based on the table above, the significance value of the linearity test is 0.120 which means that the significance value > 0.05, it can be concluded that digital literacy and critical thinking skills have a linear relationship.

2. *Uji Hypothesis*

The type of test in this study is the Pearson Product Moment correlation test used to find out whether or not there is a relationship between variables. Here are the hypotheses to be tested:

Ha = there is a relationship between digital literacy and students' critical thinking skills in the 5th grade Indonesia map material in elementary school

H0 = there is no relationship between digital literacy and critical thinking skills in the 5th grade Indonesian map material at SDN Banjarsari 2, Cipocok Jaya District, Serang, Banten. Here is the correlation test can be seen in the table. 7.

Table 7. Hypothesis Test Results

Correlations

		DIGITAL LITERACY	CRITICAL THINKING SKILLS
DIGITAL LITERACY	Pearson Correlation	1	-.510**
	Sig. (2-tailed)		.004
	N	30	30
CRITICAL THINKING SKILLS	Pearson Correlation	-.510**	1
	Sig. (2-tailed)	.004	
	N	30	30

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

Based on these results, the significance value obtained from the Product Moment correlation test was 0.004 which showed a significance value of < 0.05. It can be concluded that Ha is accepted and HO is rejected, so it can be concluded that there is a correlation between digital literacy and critical thinking skills. The relationship between the two variables shows negative results which means that the higher the X variable, the lower the Y variable or the lower the X variable, the higher the Y variable.

The correlation between digital literacy and critical thinking skills is 0.510. The correlation value of 0.510 is included in the medium category, which means that digital literacy has a moderate relationship with critical thinking skills. To find out the degree of relationship between digital literacy and students' critical thinking skills, you can see table 8. As follows.

Table.8. Interpretation of Correlation Coefficient Scores

Score interpretation	Criterion
0,00-0,199	Very low
0,20- 0,399	Low

0,40- 0599	Keep
0,60- 0,799	Strong
0,80-1,000	Very powerful

Source: (Sugiyono, 2019)

A simple regersion test can be seen in Table 9. A simple regression test is used to determine the magnitude of the relationship between variables.

Table 9. Simple Regression Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.510[a]	.260	.233	4.680

a. Predictors: (Constant), LITERASI DIGITAL

b. Dependent Variable: KEMAMPUAN BERPIKIR KRITIS

Based on a simple regression test, the correlation between digital literacy and critical thinking skills was 0.510. The R Square value is 0.260, which means that the relationship between digital literacy and critical thinking skills is 26.0%. As much as 74.0% was influenced by other factors.

DISCUSSION

Based on calculations that have been carried out, the average digital literacy score in learning Indonesian maps for grade V students of SDN Banjarsari 2 Serang City, is 67.57. The highest score is 74 while the lowest score is 57. This value is included in the low category. This is because most students are still not used to using digital technology to support learning, especially in Indonesian map materials. As if they could not distinguish between good and bad online learning resources, students also used the internet more often to play games and watch

DOI Artikel: 10.46306/jurinotep.v4i3.198

videos that were not related to learning. According to Handayani (2020), digital literacy is not only the skill in terms of searching, sharing or using digital media but also the ability to critically evaluate information, the ability to choose appropriate applications and software in the teaching and learning process, and the ability to obtain information from the media. Based on the results of the data that has been carried out, the value of critical thinking skills in learning the Indonesian map of students in class VA of SDN Banjarsari 2 Serang City is 72.70 which is included in the low category. The highest score is 80, while the lowest score is 62. This is motivated by the difficulty of students in terms of analyzing, evaluating and understanding learning.

Based on the results of the study, it is the same as the previous research which shows a negative relationship with the research by Wulandari (2023) The similarity of this research with Wulandari's (2023) research is that it uses a type of correlation research, an equation in the research subject, namely class V, and an equation in the use of variable X, namely digital literacy. The difference between this study and the researcher lies in the place and time of the research and the use of the Y varial, which is the learning outcome. Digital literacy and students' critical thinking skills have a complex relationship. In general, good digital literacy can support critical thinking skills, but it can also be negatively correlated if not used wisely. According to Sitompul (2025) there are still many students who lack understanding and mastery of digital literacy, students still have difficulty in distinguishing between valid information and invalid information spread on the internet. Even though they feel confident in their digital literacy skills, there are still often obstacles in assessing the truth of an information source objectively. Therefore, increasing digital literacy is very important so that students can better evaluate their ability to use more valid sources for their learning needs.

CONCLUSION

Based on the results of the data analysis that has been carried out, the significance value of the *Product Moment correlation test* is 0.004, which means that the significance value is < 0.05. This indicates that Ha was accepted and Ho was rejected, so it can be concluded that there is a relationship between digital literacy and critical thinking skills.

REFERENCES

Blue Water, R. C., Saepudin, A., & Sardin, S. (2020). Digital Literacy Analysis Of Independent Learning During The Covid-19 Pandemic. *Indonesian Journal of Adult and Community Education*, *2*(2), 61–69. https://doi.org/10.17509/ijace.v2i2.30882

Dr. Amruddin, S.Pt.,M.Pd., M. S. (2022). Quantitative and qualitative research methodology. In *Proceedings of the National Academy of Sciences* (Vol. 3, Issue 1). CV Media Sains Indonesia. http://dx.doi.org/10.1016/j.bpj.2015.06.056%0Ahttps://academic.oup.com/bioinformatics/article-abstract/34/13/2201/4852827%0Ainternal-pdf://semisupervised-3254828305/semisupervised.ppt%0Ahttp://dx.doi.org/10.1016/j.str.2013.02.005%0Ahttp://dx.doi.org/10.1

Haryanto, H., Ghufron, A., Suyantiningsih, S., & Kumala, F. N. (2022). The correlation between digital literacy and parents' roles towards elementary school students' critical thinking. *Cypriot Journal of Educational Sciences*, *17*(3), 828–839. https://doi.org/10.18844/cjes.v17i3.6890

Khasanah, N., Sajidan, S., Sutarno, S., Prayitno, B. A., & Walid, A. (2019). Critical Thinking Ability and Student's Personal Religious Beliefs: An Analysis of DBUS Model Implementation. *Tadris: Journal of Teacher Training and Tarbiyah Science*, *4*(1), 41–49. https://doi.org/10.24042/tadris.v4i1.4101

Nafisah, A., Atmojo, I. R. W., & Ardiansyah, R. (2023). The level of digital literacy ability of grade V elementary school students in Laweyan District. *Journal of Basic Education*, *11*(1). https://doi.org/10.20961/jpd.v11i1.70953

Purwanti, E. (2023). Analysis of Critical Thinking Skills of Junior High School Students on Plant Life System Material. *Bioscientist : Scientific Journal of Biology*, *11*(1), 864. https://doi.org/10.33394/bioscientist.v11i1.8541

Rahayu, N., Arianata, R., Maharani, D., & Halimah, H. (2022). The relationship between digital literacy and student learning achievement: a case study of class 6B at SD Negeri 4 Selat Hulu. *International Conference on Education, Languages, Literature, and Arts (ICELLA).*

Saputra, H. (2020). Mathematical critical thinking skills. *IAI Agus Salim Metro Lampung Library*, *2* (April), 1–7.

Sitompul, B., Purba, S., Tamba, P. M., & Sianturi, F. (2025). Critical Thinking Skills for Students' Digital Literacy. *Journal of Tambusai Education*, *9*, 10154–10161.

Sugiyono. (2019). *Research and Development Methods of Research and Development*. Alphabet.

Suherdi. (2021). *The Role of Digital Literacy during the Pandemic*. CV Cattleya Darmaya Fortuna.

Sutrisna, I. P. G. (2020). Digital literacy movement during the covid-19 pandemic. *Stylistics: Journal of Language and Arts Education*, *8*(2), 269–283. https://doi.org/10.5281/zenodo.3884420

Syamsudin. (2020). Problem Based Learning In Developing ELSE (Elementary School Education Journal). *ELSE Journal*, *4*, 81–99.

Waruwu, M., Pu'at, S. N., Utami, P. R., Yanti, E., & Rusydiana, M. (2025). Quantitative Research Methods: Concepts, Types, Stages and Advantages. *Scientific Journal of the Education Profession*, *10*(1), 917–932. https://doi.org/10.29303/jipp.v10i1.3057

Wayudi, M., Suwatno, S., & Santoso, B. (2020). A Study of Critical Thinking Skills Analysis of Senior High School Students. *Journal of Office Management Education*, *5*(1), 67–82. https://doi.org/10.17509/jpm.v5i1.25853

Wulandari, P. A., Sholeh, K., & Syaflin, S. L. (2023). The Relationship between the Use of Digital Literacy and the Learning Outcomes of Class V Students of Muara Sugihan Elementary School, Banyuasin Regency. *JRPD (Journal of Basic Education Research)*, *6*(2), 170–176. https://doi.org/10.26618/jrpd.v6i2.11334

Zaenudin, H. N., Affandi, A. F. M., Priandono, T. E., & Haryanegara, M. E. A. (2020). Digital Literacy Level of Junior High School Students in Sukabumi City. *Journal of Communication Research*, *23*(2), 167–180. https://doi.org/10.20422/jpk.v2i23.727