

The Correlation Between Parents-Teachers Cooperation and Students' Digital Literacy Development

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Abstract

This correlational study investigates the parents' and teachers' cooperation regarding the students' digital literacy development in light of the transition to online learning. This study was conducted at SDN 200118 Padangsidimpuan, with 103 students recruited as a sample of this study. The data is collected from the questionnaires distributed to sample the class teachers and the students. The correlation between the two variables was analyzed with Pearson Product Moment Correlation in SPSS 23, in which the result shows the value of .565 and sig. 0.000 < 0.05. Thus, it can be stated that the alternative hypothesis, which states that there is a relationship between the parent and teacher cooperation variable with the development of students' digital literacy, is accepted.

Keywords

digital literacy; parents-teachers cooperation; students' learning

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INTRODUCTION

Digital literacy in elementary school is the ability to use digital media properly, correctly, and responsibly to obtain learning information, find problem solutions, complete learning assignments, and communicate in various learning activities with other students (Mardiani et al., 2021). Mastery of digital literacy can help students adapt to the increasingly rapid advances in information technology, besides being able to save energy, time, costs, and expand networks, information, and strengthen their academic achievements (Akhyar et al., 2021; Tohara, 2021; Udeogalanya, 2021, Akhyar, Fitri, Zalisman, Syarif, Niswah, Simbolon, & Abidin, 2021; Udeogalanya, 2021; Tohara, 2021). The estuary understanding and mastery of these skills is a reflection of the 21st Century learning skills that are characterized by the use of digital technology, communication tools or networks, as well as

skills to find, evaluate, use and create information (Gündüzalp, 2021; Alakrash, & Abdul Razak, 2021).

A person is said to have good digital literacy skills if he has the competency to read and process information from various media on the internet, smartphones, and other digital sources. According to a number of studies conducted all over Indonesia (Jakarta Post, 2022), the numeracy literacy index Indonesian students is one of the lowest in the world. The digital literacy index, based on a survey of 10,000 respondents across the country, with an increased numeracy literacy index of 3.46 in 2020 to 3.49 in 2021 and the subindices of digital skills and culture is improving but the digital ethics and safety are worsening. This rating definitely has an impact on Indonesian Human Development Index (HDI) as well which puts Indonesia in an unsatisfactory level, especially when compared to the rankings of a number of neighboring countries in the Southeast Asia region such as Singapore, Malaysia, Thailand and Vietnam.

Departing from the existing data and facts, strengthening basic literacy skills is thus nevertheless a necessity and becomes a non-negotiable priority in a lot of Indonesian education levels, especially with the transitions to either online or blended learning nowadays. In line with this, the World Economic Forum in 2015 has confirmed that the mastery of six basic literacy, namely literacy, numeracy, scientific literacy, digital literacy, financial literacy, and civic cultural literacy is one of the 21st century competencies needed to master by students in all levels of education, in line with the Indonesian Ministry of Education, Culture, Research and Technology through the Directorate of Elementary Schools seeks to improve the capacity and competence of school residents with the aim of citizens' basic literacy skills development programs.

In the contexts of Covid-19 pandemic where changes occur inevitably, the urgency to develop students' digital literacy is voiced louder by many researchers (Hafidzi, 2020; Hafiza et al., 2022; Hobbs & Coiro, 2019; Özden, 2018). Studies have consistently shown that students' digital literacy positively influence their learning results (Statti & Torres, 2020; Sukarno & Widdah, 2020; Susanto, 2021) although poses them to certain risks (Purnama & Ulfah, 2021; Tomczyk, 2020). The pandemic, in addition to bringing about very significant changes, also brings positive and negative impacts in all spheres, including the realm of education. However, this does not dampen the spirit of the Indonesian Directorate of Elementary Schools to make the best efforts in order to provide improved services for schools' residence to improve the quality of education.

One of the efforts made is to design and develop basic literacy programs, namely literacy, numeracy, scientific literacy, literacy digital literacy, financial literacy, and civic cultural literacy for school residents as general targets and students as a specific target as written on the School Literacy Movement (GLS) launched the government. In general the declaration of the school literacy movement is the result of reflection on the evaluation of literacy achievement, as a response and follow-up to the low literacy mastery of students in Indonesia. Efforts to increase literacy in elementary schools are very important because elementary schools become the foundation for the next literacy movement in Junior High Schools (SMP) and High School (SMA). Strengthening digital literacy is obviously one of the priorities of today's education system which also means strengthening the extracurricular activities in schools. The goal of digital literacy in elementary school is in line with the achievement of the extracurricular goals itself.

Literacy involves building on prior knowledge, culture, and experience to develop new knowledge and deeper understanding. The development of the students' digital qualities can contribute either positively and negatively when viewed from the point of view

of digital literacy. The development of digital equipment and access to information in digital form creates opportunities as well as challenges in schools due to the gradations of differences of digital access in different parts of Indonesia.

The current digital development era is expected to be able to spur students to take advantage of the digital literacy in the academic field. One of the advantages that can be taken from this is that school residents, both teachers and students, can access the latest educational information in the most convenient ways.

At least in the last decade, digital literacy program in elementary schools has shifted from conventional literacy using printed media to electronic media. Teachers now are required to have to capacity to teach digitally by delivering learning materials that can be sourced digitally and are tailored to the lesson schedule and sub-themes. However, this of course cannot be implemented in all schools, especially the ones with constraint environments where facilities are not available to accommodate this.

However, the collaboration between teachers and parents is certainly needed to help achieve this goal. This collaboration aims to build communication between the two to monitor students learning progress mediated by digital devices. Parents as part of society have rights and obligations in providing and supporting their children's education as stated in Article 13 of Law no. 47 of 2008 states that the public has the right to: (a) Participate in the planning, implementation, monitoring, and evaluation of the implementation of compulsory education programs, and (b) Obtain data and information about the implementation of compulsory education programs.

With this, parents are to support the implementation of the compulsory education program, including the digital literacy movement especially in light of the transition to online learning due to the pandemic. The rights and obligations of the community as referred to in paragraph (1) and paragraph (2) are implemented in accordance with the laws and regulations. The forms of collaboration between schools and parents are parenting, communication, volunteering, parental involvement in children's learning at home, decision making and collaboration with community groups. Accordingly, the first step that must be taken by the schools is to establish communication with parents. Communication between the two can strengthen students' learning process and results (Cook et al., 2018; Rattenborg et al., 2019).

However, despite the urgency of digital literacy among students, some schools, especially elementary schools all over Indonesia, still prohibit students from bringing and using smartphones to school which affects students' familiarity and thus, digital literacy development in the contexts of teaching and learning. This is usually because people who are in charge of making decisions in this type of school believe that digital devices can hinder their students' learning, as opposed to developing it. This situation applies to the location of this study where, despite the inevitable transition to online learning back during the pandemic, parents refused approve the use of technology in their kids' learning for various reasons, some of which associated with their current views on the use technology in education.

While screen time has been associated with obesity, physical activity, dry eye disease, and learning disability for elementary school students (Mineshita et al., 2021) and the trajectory and early childhood development (Zhao et al., 2022), regulated screen time is in fact beneficial for students' learning (Riswanti Rini et al., 2022). There are a lot of educational goals that can be accomplished within regulated screen time. However, screen time regulation comes with digital literacy. With decent digital literacy, the students

themselves would be able to regulate their learning with the help of digital devices and online learning resources.

Parents and teachers' roles are needed to help supervise and accommodate their learning so that the learning objectives can be fulfilled. This lays down the foundation to the importance of teaching digital literacy in schools. Studies that investigate whether this collaboration exists needs to be conducted to make sure that the digital literacy development program is running in the investigated school. Although this topic has been heavily investigated in the past few years, such study conducted in a constraint environment in which the school has no other option than to turn to online learning due to the pandemic is rare. This study, thus, seeks answer to the following question; "Is there a correlation between parents-teachers cooperation with the students' digital literacy development?"

The benefits of this research are divided theoretically and practically. In line with the goal to examine the correlation between the two variables, this study will contribute new concepts and add repertoire to broaden scientific knowledge on technology in education. This study will also serve as a foundation at least for the school to continue researching the importance of digital literacy skills in today's world of education, in addition to providing information to the general public and readers regarding matters relating to technological advances.

METHOD

This research took place at SDN 18/118 Padangsidempuan. This study uses correlational method to investigate the correlation between the parents-teacher cooperation and students' digital literacy development. 103 students were recruited as samples to test the hypothesis. The two variables examined are parent-teacher cooperation and students digital literacy. In this study, the operational definitions of the variables are as follows:

a. Teachers-parents cooperation

The cooperation between teachers and parents refers to the cognitive and behavioral efforts in overcoming and managing the resources they have covered in the questionnaire.

b. Students digital literacy

This variable refers to the students' literacy in using technology in their learning which is also measured by the questionnaire answered by the students.

The research uses a questionnaire with 5 scales and a score namely, strongly agree, agree, neutral, disagree, and strongly disagree to examine the parents-teacher cooperation and students' digital literacy development. The validity and the reliability of the questionnaire are both calculated in SPSS as shown in the following table 2.

Based on the significant value obtained by the Sig (2-tailed) of .000 less than .05 which means that the item is valid. Based on the count value obtained, .872-.984 are all bigger than .1614, the r table product moment for 103 samples, which indicates validity for the instrument. In terms of the reliability aspect, the result is seen table 1.

Table 1. Reliability

Reliability Statistics	
Cronbach's Alpha	N of Items
.793	11

Table 2. Analysis Item

		Correlations										Total
		Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	
Item 1	Pearson Correlation	1	.907 [*]	.869 [*]	.951 [*]	.911 [*]	.788 [*]	.907 [*]	.877 [*]	.772 [*]	.933 [*]	.951 [*]
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	103	103	103	103	103	103	103	103	103	103	103
Item 2	Pearson Correlation	.907 [*]	1	.869 [*]	.839 [*]	.911 [*]	.885 [*]	1.000 ^{**}	.783 [*]	.772 [*]	.933 [*]	.951 [*]
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	103	103	103	103	103	103	103	103	103	103	103
Item 3	Pearson Correlation	.869 [*]	.869 [*]	1	.771 [*]	.839 [*]	.643 [*]	.869 [*]	.739 [*]	.734 [*]	.823 [*]	.872 [*]
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	103	103	103	103	103	103	103	103	103	103	103
Item 4	Pearson Correlation	.951 [*]	.839 [*]	.771 [*]	1	.946 [*]	.840 [*]	.839 [*]	.954 [*]	.850 [*]	.909 [*]	.948 [*]
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000
	N	103	103	103	103	103	103	103	103	103	103	103
Item 5	Pearson Correlation	.911 [*]	.911 [*]	.839 [*]	.946 [*]	1	.915 [*]	.911 [*]	.912 [*]	.917 [*]	.956 [*]	.984 [*]
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	103	103	103	103	103	103	103	103	103	103	103
Item 6	Pearson Correlation	.788 [*]	.885 [*]	.643 [*]	.840 [*]	.915 [*]	1	.885 [*]	.792 [*]	.876 [*]	.922 [*]	.914 [*]
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	103	103	103	103	103	103	103	103	103	103	103
Item 7	Pearson Correlation	.907 [*]	1.000 ^{**}	.869 [*]	.839 [*]	.911 [*]	.885 [*]	1	.783 [*]	.772 [*]	.933 [*]	.951 [*]
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000
	N	103	103	103	103	103	103	103	103	103	103	103
Item 8	Pearson Correlation	.877 [*]	.783 [*]	.739 [*]	.954 [*]	.912 [*]	.792 [*]	.783 [*]	1	.883 [*]	.830 [*]	.911 [*]
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	103	103	103	103	103	103	103	103	103	103	103
Item 9	Pearson Correlation	.772 [*]	.772 [*]	.734 [*]	.850 [*]	.917 [*]	.876 [*]	.772 [*]	.883 [*]	1	.877 [*]	.904 [*]
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000
	N	103	103	103	103	103	103	103	103	103	103	103
Item 10	Pearson Correlation	.933 [*]	.933 [*]	.823 [*]	.909 [*]	.956 [*]	.922 [*]	.933 [*]	.830 [*]	.877 [*]	1	.975 [*]
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000
	N	103	103	103	103	103	103	103	103	103	103	103
Total	Pearson Correlation	.951 [*]	.951 [*]	.872 [*]	.948 [*]	.984 [*]	.914 [*]	.951 [*]	.911 [*]	.904 [*]	.975 [*]	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	103	103	103	103	103	103	103	103	103	103	103

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

The hypothesis to be tested in this study are:

Ho: There is no relationship between parent and teacher collaboration with the development of students' digital literacy at SDN 200118 Padangsidempuan.

Ha: There is a relationship between parent and teacher collaboration with the development of students' digital literacy at SDN 200118 Padangsidempuan.

Results and Discussion

This study investigates the relationship between parents- teacher cooperation and students' digital literacy development in light of the transition to online learning in which the descriptive data is shown in the following table 3.

Table 3. Standard Deviation

Variable	Mean	Standard Deviation
Students Digital Literacy	42,43	5,212
Parent Teachers Cooperation	42,74	4,014

To clarify the normality of the data distribution, the analysis was conducted in SPSS in which the result is shown in this following table 4.

Table 4. Tests of Normality

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
LD	.236	106	.000	.826	106	.000

a. Lilliefors Significance Correction

The numbers in the Kolmogorov-Smirnov and Shapiro Wilk columns respectively show the numbers .236 and .826, respectively, both of which indicate that the result is more than 0.05 so the data can be called normal as visually presented in this following figure 1.

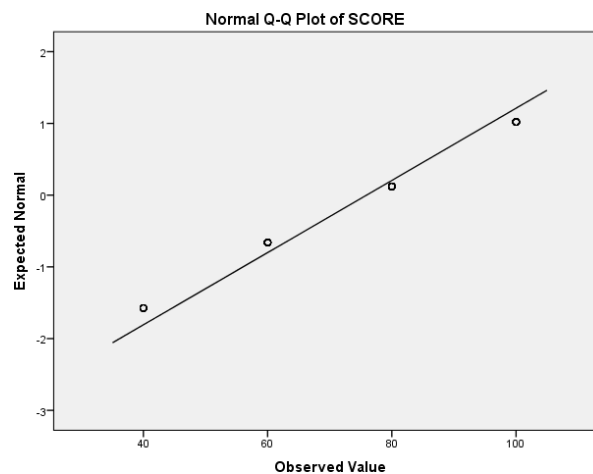


Figure 1. Normal Q Plot

The line is pointing right upwards which indicates that the data is normally distributed. Furthermore, the association between parents-teacher cooperation with students' digital literacy development is displayed as significant as tested with Pearson Product Moment Correlation test as shown in this following table:

Table 3. Tests of Normality

		Correlations	
		SCORE	LD
SCORE	Pearson Correlation	1	.565**
	Sig. (2-tailed)		.000
	N	103	103
LD	Pearson Correlation	.565**	1
	Sig. (2-tailed)	.000	
	N	103	106

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

The results showed that there is a significant correlation between the two variables in question at .565 value. Accordingly, since the significance value of the variable is bigger than 0.05, it means that the requirement to establish relationship between the two variables is fulfilled.

Furthermore, the direction of the relationship between the two variables in this current study can be seen from whether the number has a positive or negative sign. If the sign is negative, it means that the variable X increases then the variable Y decreases or vice versa, so in the opposite direction. However, if the sign is positive, it means that the variable X increases, the variable Y also increases, in one direction. In the above table, it is seen that the number is positive which means that the relationship is linier, confirmed by this following scatter plot:

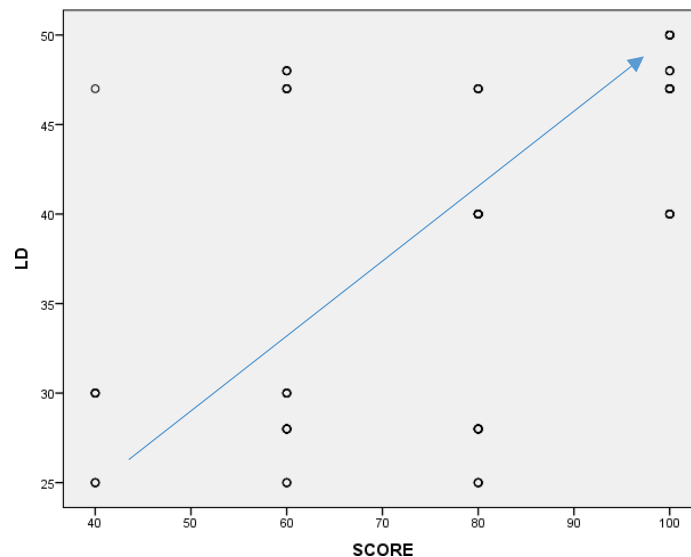


Figure 2. Scatter Plot

In this study, the determination of the strength or weakness of the correlation between two variables is based on the proximity of the value to either 1 or -1. The closer the value is to either 1 or -1, the stronger the relationship is. However, if the number obtained is closer to 0, then the relationship between the two variables can be said to be weak. In this case, the Pearson correlation test shows that the number is closer to 1 which suggests a strong correlation.

In relation to the hypothesis in this study, the statistical analysis shows that the null hypothesis is rejected and the alternative one is accepted. The theory used in this study, ecological theory, supported this finding in its postulate that says that parents-teachers cooperation does relate with students' digital development.

CONCLUSION

Based on the formulation of the problem, hypothesis and research results, it can be concluded that there is a strong and significant relationship between parent-teacher cooperation and the development of students' digital literacy. From the results of hypothesis testing, the research shows that there is a positive and significant relationship between parent and teacher collaboration with the development of students' digital literacy. This means that the better the collaboration between parents and teachers, the better the digital literacy development of students in schools will be. This is evidenced by the value in the calculation of the Pearson product moment correlation which shows the value of .565 and sig. $0.000 < 0.05$. Thus, it can be stated that the alternative hypothesis which states that there is a relationship between the variable of parent and teacher cooperation with the development of students' digital literacy is accepted. Suggestion; The researcher is aware of the limitations and unintentional errors that might exist in this study. However, this research is expected to provide a useful contribution to the discourse on the role of parents in students' learning. This research is expected to provide input and direction for academics, stakeholders, and education practitioners. Future researchers who are interested in exploring this topic further is expected to expand by considering other variables related to students' digital literacy development based on a more complete and broader information.

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