

21st Century Material for Literacy Skills Media and Information Literacy in Indonesia Curriculum Implementation

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ABSTRACT

The low level of students' literacy skills in Indonesia is still a problem that has not yet received the right solution. The lack of use of digital media is one of the reasons. During the Covid-19 pandemic, online learning automatically increased students' gadget use intensity and automatically improved students' digital literacy skills. This research used quantitative research through tests and questionnaires. The sample used in this research was 30 students of Siliragung Junior High School in Banyuwangi. The instrument shows all items are valid using Pearson correlation. The value of Cronbach Alpha presented the reliability was 0.905 and showed high reliability. The results of the data analysis show that there is a strong linear relationship between students' digital media literacy skills and students' literacy skills. The relationship was found by the two-variable correlation coefficient of 0.508 with a significance of 0.004 using spearman's rank-order analysis. This result also means that students with high digital media literacy skills tend to have good literacy test scores

Keywords: 21st century, Literacy skills, Digital literacy, Curriculum 2013.

1. INTRODUCTION

At 21st century, almost all sectors of life cannot be separated from technology. Therefore, we are required to have 21st century skills which is media, information, and technology literacy skills are included. This also has led to the transformation of the previous curriculum to be ICT-based curriculum namely Curriculum 2013. However, not all institutions in Indonesia carry out learning activities that utilize ICT optimally. This is like ICT-based education is just a theory, but for habituation and application to student learning is still lack. The impact is, literacy skills of Indonesian children in reading, numeracy and science are very low.

The 4C's (Critical thinking, creativity, collaboration, and communication skills) are the most popular 21st Century skills. However, the 4C's are only the beginning. Students must also understand the information that surrounds them in order to develop 21st Century skills. This is why literacy skills are required. Literacy skills (Information, Media, and Technology) are concerned with how students can distinguish between facts, publishing outlets, and the technology that supports them. Literacy skills encourage students in

comprehending facts, mainly data points, that they might encounter online. It is important to distinguish between fact and fiction. Finding the truth online has become a massive job in and of itself, in the age of misinformation [1]. The low level of literacy skills in Indonesia are based on assessments conducted by international institutions such as PISA (Program for International Assessment). Referring to PISA research in 2018, the reading ability of Indonesian children aged 15 years is below the average of 72 other countries, with a score of 371 [2]. This result even worse than the result we have in 2015, and it shows that there are errors in the Indonesian education system.

During the Covid-19 pandemic, the implementation of ICT-based curricula has improved, because school activities are carried out online through digital media using platforms such as Google Classroom, Edmodo, WhatsApp, and others. Online learning also automatically increases the intensity of students' gadget use. The intensity of gadget use also automatically improves students' digital literacy skills. Digital literacy can be defined as a skill for surviving in the digital age. It is a set of skills and strategies that students and users in digital environments [3].

Many studies have examined literacy skills but correlate them with learning models, genetics, and others. Although digital literacy is a component of literacy skills, there is no research that examines how strong the correlation between digital literacy skills and literacy skills is. Being a component of literacy, the digital literacy skills certainly have a very meaningful relationship, and of course we can do something with digital literacy to improve student literacy skills such as emphasizing the use of digital media in the classroom as a learning tool, or something else. Based on the description above, the question of this research is, there a correlation between digital media literacy and student literacy skills? and, how strong the correlation between digital media literacy and student literacy skills? The primary hypothesis of this study is there is a strong correlation between digital media literacy and literacy skills.

2. LITERATURE REVIEW

2.1. Literacy

Current dictionaries (Merriam Webster, *Oxford Dictionary*) shows there are two definitions of literacy: (1) the ability to read and write, and (2) knowledge or capability in a particular field or fields. Literacy has been reconceived as a tool for knowledge construction in the field of cognitive science, and to obtaining new knowledge through reasoning or problem solving. Literacy is defined as reading and writing social practices and conceptions. Because social practices are emphasized here, the history of literacy reveals a number of contestations over the power and authority to access, and produce printed texts, which have been exacerbated by the rising role of digital technologies [5]. Many literacies can be identified in various social contexts and under multiple social conditions, the nature of which is changing within the specific situation of textual work [6]

2.2. Media and Information Literacy

Information literacy can be defined as the ability of people who able to recognize when information is required. They can also identify, locate, evaluate, and apply information to solve a specific problem [7]. The State University of New York defines information literacy as the ability to understand when information is needed, placed, evaluated, and then used effectively and simultaneously communicating it in various forms and types. Media literacy can be understood as a process of accessing, critically analyzing messages contained in the media, then creating messages using media tools (Hobbs, 2007).

3. METHOD

3.1 Research Design

This research used a quantitative approach because researchers collected and processed data through quantitative methods. Quantitative research requires the researcher to explain how the variables affect another variable. This research is a type of correlation research. The data that the researcher wanted to explore were media literacy and student literacy skills. The variable of this research was digital literacy skills and student literacy skills.

3.2 Sample

The population in this research was grade 9th - I Student of Siliragung Junior High School in Banyuwangi. The total of the population was 30 students. The sample used in this research were 30 students. The sampling technique of this research was purposive sampling because the sample was chosen because it fits the research needs. Because in this research using a financial literacy test which is intended for students aged 15 years.

3.3 Data Collection

Questionnaire and test are used to collecting data in this research. The questionnaire was used to collect digital literacy data for the research sample. The test is used to collect data on the literacy skills of the research sample.

3.4 Questionnaire

Questionnaire was used to collecting the digital literacy data from sample. The questionnaire used in this research were adapted from Jeong-Bae Son [11] and (Kominfo, 2020). The questions were modified and developed by the researchers based on the needs of the research. There were 13 items in the questionnaire. The questionnaire was designed using closed questions on a Likert scale is presented in Table 1.

3.5 Procedure

The test was used to collect literacy skills data from the sample. The test used in this research was financial literacy which is adapted from PISA designed by OECD [13], because that was the newest one for children literacy skills survey that conducted by OECD. The questions were modified and developed by the researcher based on the research needs. There were 14 items in the test as it is presented in Table 2.

The data collection process was carried out using both instruments simultaneously to the sample. These two instruments were distributed to the research sample via Google Form which is divided into 2 parts. The first part is a digital literacy questionnaire, and the other part is a literacy skill test. The questionnaire was designed

using closed questions on a likert scale with five criteria, namely, very good, good, acceptable, poor, and very poor. For literacy test instruments, there are guidelines for scoring as below.

$$Final\ Score = \frac{total\ score}{14} \times 100$$

Table 1. Digital literacy questionnaire structure

Dimension	Indicator	Item Number
Technologies	Digital media device function knowledge	1
Functional Skill and Beyond	ICT Skills	2
Creativity	Product creation or output in various formats and models by utilizing digital technology.	3
Communication	Ability to communicate through digital technology media	4
	Ability to create content based on audience needs	5
	Ability to predict impact or audience responses to the content	6
Collaboration	Ability to participate in the digital space	7
	Ability to explain ideas with others in a digital group space	8
The Ability to find and select Information	Ability to use search engines	9
Reference item	Ability to select information	10
Critical Thinking and Evaluation	Ability to contribute, analyse and sharpen critical thinking when dealing with information	11
Cultural and Social Understanding	Ability to process information in line with the context of social and cultural understanding	12
E-safety	The ability to ensure security when users explore with digital technology	13

3.6 Validity Test

Validity test is necessary to see whether the instrument measures what we want to measure. The validity test was carried out on questionnaire instrument using Pearson's product-moment through IBM SPSS 25. Question items are said to be valid if the calculated r value > r table. The sample of this research was 30, so the r table is 0.3494. It also means that the item of instrument can be said as valid item if the coefficient correlation is more than 0.3494.

3.7 Reliability Test

After being declared valid, a reliability test can be carried out to measure whether the instrument consistently measures the same topic at different times and places.

3.8 Data Analyze

Variable of this research was digital literacy and literacy skills. The collected data were analysed using non-parametric Spearman rank order statistical analysis because the researcher wanted to analyse the correlation between the two variables. Researchers used the IBM SPSS 25 to process research data.

4. RESULT AND DISCUSSION

Based on Table 3, it is known that the value of Cronbach Alpha was 0.905 for 13 items. This result means that the questionnaire item is perfectly reliable and constant. Based on Table 4 it is known that the results of the validity test using the Pearson product-moment show that all questionnaire items are valid because the calculated r value is more than the r table.

Table 2. Digital literacy skill test structure

Dimension	Indicator	Items
Analyse information in a financial context	Distinguish between the fixed and variable costs associated with running a car	1
	Determine the effects of extending the loan repayment period	2
	Analyse information in the context of mobile phone plans	5
	Choose the most suitable telephone plan for a particular individual	6
	Compare the cost of using the bike Sharing scheme	12
Identify financial information	Interpret a financial document (bank statement)	3
	Calculate the bank balance at a given point	4
Apply financial knowledge and understanding	Interpret the small print to understand the terms and conditions of buying a service, and then calculate the implications for the true cost	7
	Figure out how much membership in the bike-sharing scheme would cost given	11
Evaluate financial issues	Reflect on the potential risks of Conducting financial transactions online using computers in public places and to evaluate those risks	8
	Implications of financial contracts and recognize the potential financial consequences on other if a contract is not honored	9
	Should demonstrate an understanding the reason of taken a risk in giving card details to an unsolicited caller	10
	Evaluate the financial situation of taking an annual subscription, uses the bike sharing program.	14
Identify financial information	Find a mistake in an invoice issued by the bike sharing calculation	13

Based on the descriptive result, it is known that the average score of digital media literacy skills of 30 grade students is 41.00. The minimum score is 24, and the maximum score is 54. It is also known that the average score of literacy skills of 30 students is 73.93. The minimum score is 46.43, and the maximum score is 96.43. All the data obtained based on the frequency of the respondent are presented in Figure 1 and 2.

Table 3. Digital literacy questionnaire result of reliability test

Cronbach's Alpha	N of Items
0,905	13

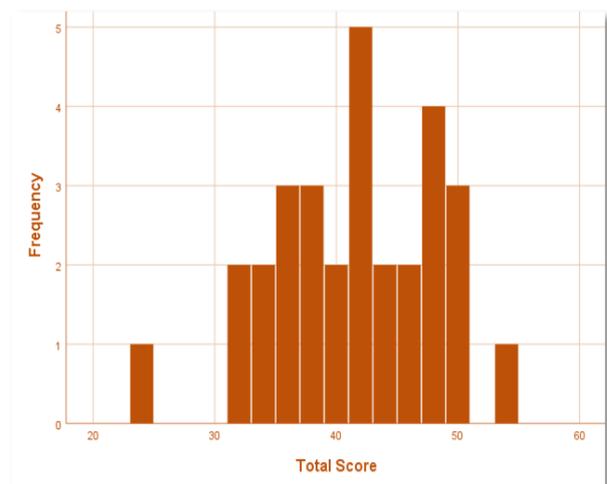


Figure 1 Students' digital media literacy skills

Table 4. Digital literacy questionnaire result of validity test

Item	r value	r table	Result
1	0.374	0.3494	Valid
2	0.572	0.3494	Valid
3	0.829	0.3494	Valid
4	0.673	0.3494	Valid
5	0.754	0.3494	Valid
6	0.807	0.3494	Valid
7	0.819	0.3494	Valid
8	0.663	0.3494	Valid
9	0.674	0.3494	Valid
10	0.793	0.3494	Valid
11	0.756	0.3494	Valid
12	0.659	0.3494	Valid
13	0.534	0.3494	Valid

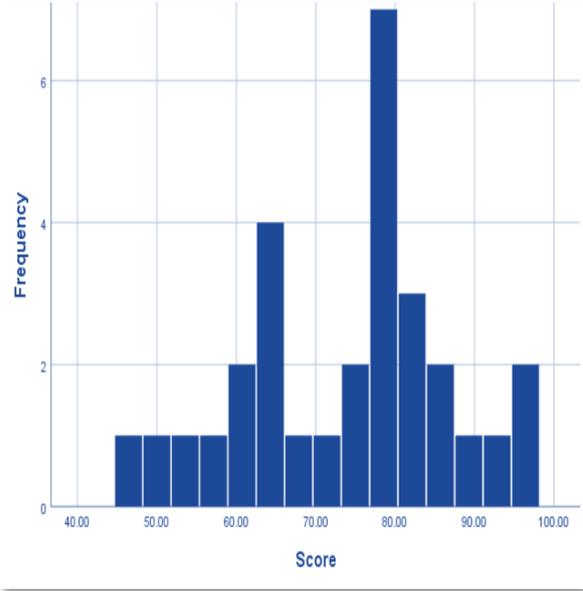


Figure 2 students' literacy skills

Table 5. Digital media literacy and literacy skills correlation result

Component		Literacy Skills	Digital Media Literacy Skills
Spearman's rho	Literacy Skills	Correlation Coefficient	1.000
		Sig. (2-tailed)	0
		N	30
	Digital Media Literacy Skills	Correlation Coefficient	0.509**
		Sig. (2-tailed)	0.004
		N	30

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

Based on Table 5 it is known that the correlation coefficient for variable literacy skills and digital media literacy skills are 0.509 with significance of 0.004 using spearman's rank-order analysis. It also means that there is a strong linear relationship between students 'digital media literacy skills and students' literacy skills because the students who have digital media literacy skills tend to have good literacy test scores.

Based on the results of the study, it is known that students who have digital literacy skills will tend to have good literacy test scores. Therefore, it is necessary to increase the use of digital media in learning to improve students' digital literacy. However, the use of digital media has a negative impact if it is used too often. What's more, it can lead to addiction for children to teenagers.

Based on existing research, it shows that teenagers are more likely to use gadgets for social media, and the use of social media has a relationship with gadget addiction. Regarding the use of social media, teenage boys and girls have differences in publishing content on

their profiles. Compared to girls, boys are more likely to post self-promotion and obscene images or comments (involving sex or alcohol) on their profiles. Whereas girls are more likely than boys to post romantic or "cute" pictures and/or information [15].

The intensity of the use of gadgets by students also indicates that students can operate the device. This condition also indicates that they often consume information circulating through online media, so it is important for students to be proficient in selecting and filtering the content they will consume [14]. The results of the study show that media content can increase feelings of admiration for someone. Therefore, it is very likely that there is content that students like to meet their needs or their search for meaning, inspiration, to entertainment that can make them excited [16].

For this reason, one of the actions that teachers can take is to guide students wisely in utilizing and interacting using digital media, especially online social media. Guardians or parents of students can coordinate with teachers to accompany and guide students while at

home. Teachers can also make educational content that is in accordance with the material as learning media. Teachers can also directly take on a role, namely by creating up-to-date educational content by considering the characteristics of their students. These efforts will be much more effective and efficient because teachers directly create educational content based on the needs and conditions of students.

5. CONCLUSION

There is a relationship between digital literacy skills and literacy skills. The intensity of students in using digital media can be used to improve students' literacy skills by distributing educational content and information through digital media. However, it is necessary to provide assistance and guidance to students in using digital media, because the content spread on digital media is very complex and needs to be filtered to suit the age and needs of students.

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