Research Article

Digital Literacy Analysis of Primary School Students

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Abstract.

Digital Literacy plays an important role from contributing to education to giving birth to a generation that is ready and can contribute to the times. The study aims is to describe the situation and condition of students' digital literacy in the city of Palembang. This is a qualitative type of research with a survey technique. Data were collected through field observations, student questionnaires and interviews, using the Miles and Huberman model data analysis techniques including: (1) data display, (2) reduction, (3) conclusion drawing, and (4) data verification. Based on the results of the study, it showed that students' digital literacy from the critical thinking aspect (the ability to analyze and think critically in using digital technology) reached 83%, in the E-safety aspect (able to maintain security when using digital technology) reached 58%, in the digital cultural component (have the ability to communicate and contribute through digital technology media) reaching 58%, in the collaboration and creativity component (the ability to collaborate and be imaginative in using digital technology media) reaching 55%, in the find information component (the ability to select good or bad information), good reached 73.3%, in the communication component (the ability to communicate and also socialize through digital technology media) reached 63.3%, and in the functional and skill component (students are able to operate digital technology media according to their needs and functions) reached 76 %. Based on observations, it shows that the cultivation of digital literacy has been carried out in learning with the support of adequate facilities and infrastructure such as the availability of internet access, computers, projectors, and several digital teaching aids and other facilities and infrastructure.

Keywords: Digital Literacy, Primary School, Qualitative Research

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1. INTRODUCTION

In the 21 st century, social activity has been mediated through digital facilities such as e-mail, newsgroups, message boards, internet telephony, chat rooms, instant messaging, and digital video conferencing, making digitally enabled communities a way of life. Not only have social communities grown, the Internet also offers limitless information.Science and technology is developing very rapidly so that it can affect all aspects of life. With the rapid development of information and communication technology (ICT) in this digital era, the required competencies are fundamentally different from the previous

era [1]. One of the literacy that must be mastered by humans is digital literacy. One needs good digital literacy not only to take advantage of digitizing almost all aspects of life, but also to reduce exposure to risks and threats in the daily digital environment related to device protection, protection of personal data and privacy, and health and well-being [2]. The development of digital media and information technology currently poses challenges for users in accessing, selecting and utilizing information and the ability to search for such information requires the accuracy and quality of the information obtained by users. The importance of digital literacy needs to be instilled in students from an early age.

Digital literacy is a term that has been discussed by several different scientific and professional disciplines, often from different perspectives or discourses [3] [4] [5] [6] [7]. These perspectives do not differ or contradict one another; rather, they represent three distinct approaches to digital literacy rooted in diverse scientific traditions and different ways of thinking about what literacy is, and how literacy is applied in formal and informal settings.

While organizing this section of our article around these three discourses, we recognize that other organizing principles may have been chosen, and other scholars may describe digital literacy in very different terms. This ability is currently known as literacy which is understood as well as reading, writing, and arithmetic. Literacy is the ability of individuals to use all their potential and skills in their lives. With the understanding that literacy includes the ability to read words and read the world [8]. Digital literacy is the ability to understand and use information in various forms from a very wide variety of sources that are accessed through computer devices [9].

Digital literacy is a skill, knowledge and understanding, which enables critical, creative, intelligent and safe practice when engaging with digital technology in all areas of life [10]. Digital literacy is the ability to create and share in different modes, such as creating, collaborating, communicating effectively and having an understanding of when and how to use information technology tools to support these goals [11]. In the 21st century, technological developments are very rapid with the widespread use of digital media in various circles that can obtain information and interact with the environment.

Madern (2013) states that digital literacy is divided into several types, namely the first Internet, where every user can access various pages and also the web [12]. Second, social media, which is a medium that can be used to interact with one another online without any time limit. Third, Electronic Talking Books (ETB), namely story books in digital form, this device allows users to download a collection of digital stories. the fourth is E-book, which is a digital book that allows users to store digital books by downloading

them. Fifth Blog or weblog, which is a person's writing written on a web page. The six Smartphones, namely handheld cellphones that can be used by users to communicate and obtain information online.

According to Hague & Payton, (2010) to be able to see a person's digital literacy is based on the components of digital literacy, namely; first Critical Thinking This component emphasizes that you should not only receive information and interpret information passively but should also contribute, analyze and sharpen your critical thinking when dealing with information. Both E-Safety The E-Safety component emphasizes the ability to ensure security when users explore, create, collaborate with digital technology. third Digital Cultural Digital cultural component that emphasizes contributing to life that can communicate, collaborate, explore, socialize with people around the world. Fourth Collaboration The collaboration component emphasizes working together in a team. Opening opportunities for participation and then collaborating with others to build ideas and creations in content. Fifth Creativity This component emphasizes the ability to think creatively and imaginatively to create ideas and share various kinds of information or ideas by utilizing digital technology. Sixth Find Information This component focuses on the ability to find and select information. In other words to be careful about the search for information. Seventh Communication that can shape a person to be digital literate which means being able to communicate by utilizing digital technology media. Effective communication is the ability to share thoughts and ideas. Eight Functional Skills This component emphasizes the ability or skills and their relationships in building content from various digital media. then focuses on the ability to operate digital technology according to its needs and functions.

Digital literacy is as important as reading, writing, arithmetic to participate in this modern era. The generation that grew up with unlimited access to digital technology has a different mindset than the previous generation. In the context of digital literacy education, it plays an important role in developing individual knowledge about learning materials or accessing certain information and encouraging curiosity and creativity.

Education in this digital information era can be formulated as a human development effort which is marked by increasing knowledge, skills and attitudes of individuals and groups through continuous learning activities. Thus education is one of the long-term investments and as the front line in developing a nation that has experienced great challenges, so that in the world of education it should have a role to play in improving the quality of human resources (HR) who are ready to compete in this digital revolution era. In the world of education, students are one of the users of information. The information needed by students is not only through print media. The internet network has started

to present information and knowledge in a different presentation format, namely digital. Primary school education is the initial education for students, basic education is the foundation that underlies further education. Therefore, in basic education it is necessary to apply digital literacy so that students can explore digital literacy at the next stage of education.

Because of the importance of digital literacy, teachers should be able to play a more active role in cultivating digital literacy in students. Several studies have attempted to improve digital literacy in elementary school students through digital content, creation and communication [13][14]. Schools are also responsible for teaching and developing literacy skills. Various literacy studies have highlighted the importance of investigating how literacy differs across contexts, and there is extensive research on literacy within and outside school [15][16][17][18]. All of these studies emphasize the dichotomy between formalized, standardized, institutionalized, and dominant literacy, like most school literacy, and literacy that is personal, informal, and vernacular [19][20][21][22][23][24].

2. METHOD

This type of research is a qualitative research. The technique used is a survey technique. This research was conducted to determine the social situation. This research was conducted in the city of Palembang, South Sumatra. While the time span of the research that the author did was approximately two months starting from April to May 2021. This study aims to determine the skills, roles of teachers and facilities and infrastructure for digital literacy of students in the City. The technique of determining informants in this study was carried out by *purposive sampling* namely data collection techniques with certain considerations. In the *purposive sampling technique* the number of informants is determined by information considerations as explained by Sugiyono (2019) that the determination of the sample unit or informant is considered adequate if it has reached the level of *redundancy* or data that has been saturated [25].

The instruments used in this study were interviews, observations, questionnaires and also documentation. The interviews conducted were in-depth interviews with school principals, teachers and students. The questions are based on digital literacy indicators and have been validated by the validator. While the observations were carried out in the school environment while the questionnaire was carried out in the presence of students. The data analysis technique was carried out in the study using three stages, namely first data reduction, second data display and third conclusions and data verification. Testing the validity of the research data, the researchers used the credibility test of the

data. In the credibility test, there are various ways of testing the credibility of the data or trust in the research data. In this study, researchers used triangulation techniques to test the credibility of the data by checking the data from the same source with different techniques.

3. RESULTS AND DISCUSSION

Digital literacy is one of the most important aspects to face the challenges in education in the 21st century in order to encourage students to be able to develop knowledge and insight in each individual which will later form a millennial generation who thinks critically, creatively and innovatively. This is in line with the opinion of Hague & Payton (2010) which states that in the context of digital literacy education, it plays an important role in developing one's knowledge and insight regarding learning materials by encouraging curiosity and creativity of each individual. Based on the observations, the presentation data on Digital Literacy achievements are shown in Figure 1.

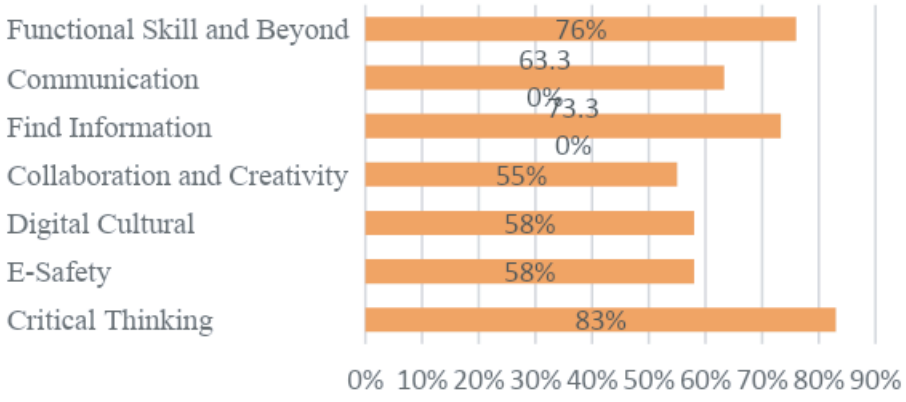

Figure 1: Digital Literacy Achievements of Palembang Elementary School Students. The Following is a discussion of each digital literacy achievement which includes; (1) **Critical Thinking, (2) E-Safety, (3) Digital Cultural, (4) Collaboration and Creativity, (5) Find Information, (6) Communication, (7) Functional Skill and Beyond.**.

3.1. Aspects of Critical Thinking

Aspects of *Critical Thinking* is an aspect that measures a student's literacy of digital technology seen from the ability to interpret information, evaluate information and also contribute to information or news. This statement proves that in managing information or news, one must be critical and careful because in this digital era there is a lot of false information scattered around which can lead to unfavorable opinions. From the

results of the questionnaire filled out by students, 83% of students have competence from this first indicator because we can see that students can contribute and interpret the information presented through digital technology.

3.2. Aspects of E-Safety

The aspect *of E-Safety* that measures a student is said to be literate in digital technology if he is aware of the potential risks of personal identity security when exploring, using, or sharing information in digital media. This will create good and independent internet technology users. From the results of the questionnaire filled out by students, it was proven that 58% of students have competence in maintaining security when using digital media, especially the internet, on average, students are able to provide passwords on their personal accounts.

3.3. Aspects Digital Cultural

Aspects *Digital* which measures a student can be said to be literate in digital technology when he is able to collaborate with other people all over the world with all types of tribes and cultures. Then being able to use digital to communicate with other people has made social practice possible. Based on the questionnaires filled out by students, 58% of students have competencies from the third indicator that uses digital to collaborate and communicate with others to being able to create content with other people.

3.4. Aspects Creativity and Collaboration

Aspect of *Creativity and Collaboration* which measures a student is said to be literate to digital technology when students are able to negotiate content between each other and work together in a team to include visual elements to enhance the overall look and feel of their presentation project and also students work together in editing, commenting or also references to complete the project. From the results of the questionnaire filled out by students, it is proven that 55% of students have the ability to contribute in creating and developing a project or digital-based content.

3.5. Aspect of Find Information

Aspect of *Find Information* In this case, students are said to be literate in digital technology if students can sort out real information, false information, and also biased information. For this reason, it is necessary to sort the news or information. then not only that, but students must also have the ability to search for accurate information which later on the information found will be evaluated. From the results of the questionnaire filled out by students, 73.3% of students can choose accurate information to distinguish false and real information or even news that is not true.

3.6. Aspect Communication

Aspect *Communication* which measures a student is said to be literate to digital media that the student can communicate directly with other people using social networking sites or other applications. Thus students are active on a digital footprint and polite online communication which will help them to set up a secure social media presence. From the results of the questionnaire filled out by students, 63.3% of students have competence in communicating, socializing using social networks or other applications that can help students' activities.

3.7. Aspect Functional Skill and Beyond

On *Functional Skill and* In this case, a student can be said to be literate in digital technology when he has the inherent ability to use technology that allows students to practice according to the function of the technology so as to create independent users. On the Aspect of *Functional Skills and Beyond* In this case, a student can be said to be literate in digital technology when he has the inherent ability to use technology that allows students to practice according to the function of the technology so as to create independent users. From the results of the questionnaire filled in by students, it proves that 76% of students have the ability to use technology according to their needs and functions.

Based on the data obtained, it shows that elementary school students in the city of Palembang already have good digital literacy, the results of data processing show that students have eight aspects of digital literacy, which means students already have the ability to use digital technology media. Students' digital literacy can be measured by the level of understanding of digital use in accordance with the components and levels

of digital literacy, namely at the second level which is already at the stage of digital use where students on average already have the competencies to implement digital literacy.

This elementary school student in the city of Palembang has implemented digital literacy in which predetermined indicators have been applied and some have not, this is due to limited ability. On the indicator of the intensity of the application and use of digital literacy in learning Students are proficient in using digital, especially in the realm of accessing and seeking information, receiving and sharing information, finding and answering school assignments related to lessons and students can communicate with peers or with teachers .

4. CONCLUSION

From the results of the study, it can be concluded that the digital literacy skills of elementary school students in the city of Palembang are close to good, which is indicated by the students having competencies in the indicators of implementing digital literacy. This will create good and independent internet users. In connection with this, it cannot be separated from the involvement of teachers who carry out various strategies to realize digital literacy students. This is proven by the results of interviews with school principals and teachers and students. In addition to support from teachers, the facilities and infrastructure owned by most elementary schools in the city of Palembang are quite adequate which can facilitate students in implementing digitization, this is in accordance with observations made by researchers directly. Thus students can face challenges in the world of education in the future. Digital literacy has an important role in achieving learning goals because digital literacy is able to enrich digital insight and motivate students and encourage students to seek information through various reference sources.

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