The Application of Digital Literacy Improves Technological Literacy in The Scope of Education in Talang Duku Village

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Abstract— **Technological developments present challenges in the digital world. The demand for mastery of various devices is one of them. But not all people are able to master technology. One of the efforts of this problem is the application of digital literacy. Digital literacy must be done as early as possible, including that in children in the world of education. In this study, we conducted the application of digital literacy within the scope of education in Talang Duku village. Located at SDN 40 Talang Duku, MtsN 1 Muaro Jambi, and Man 3 Muaro Jambi with the subject of research on children of Talang Duku village in a span of two months from September 25 to November 25, 2023. Assisting in making online flipbooks at Man 3 Muaro Jambi. Procurement of design classes and socialization on digital literacy at MtsN 1 Muaro Jambi. Featuring visualizations of educational videos to watch together at SDN 40 Talang Duku.**

Keywords— **Digital literacy, Technology Literacy, Talang Duku Village**

I. INTRODUCTION

That in global education, technology and Digitalization is the real impact of the presence of globalization. Globalization, which was popularized by Theodore Levitte in 1985, does not yet have a complete definition (Nazeha et al., 2020). Globalization is where the barriers or boundaries between countries disappear in every aspect of life such as economics, politics, social and culture (Bi et al., 2019). That way we can understand, globalization makes people merge into one with all people in various parts of the world (Montero Delgado et al., 2020). Globalization has united the world in one community "world village" or global village (Peck et al., 2019). The unity of humans and their civilization in the world village almost covers all aspects of life, including economic aspects (economic globalization), political aspects (political globalization), educational aspects (education

globalization), cultural aspects (cultural globalization), religious aspects (religious globalization), aspects of knowledge and information (knowledge and information globalization).

The influence of globalization is certainly a lot, including digitalization (Bryanov & Vziatysheva, 2021). Dewi (2019) mentions that the entry of science and technology has an impact on the development and progress of society to be more creative, innovative, but on the other hand, people's lives are filled with materialism and reject transcendental reality (Radesky et al., 2020). Fikri (2019) mentions one of the negative effects of globalization on education including the commercialization of education, the dangers of cyberspace, and dependence (Van Deursen, 2020). These influences are related to the technology brought in globalization.

Digitalization has the origin of the word "digital" which comes from the Greek "Digitus" which means "fingers" (Sieck et al., 2021). Digital is a complex, flexible method that makes it a staple in human life (Aji, 2016). Lev Monovich (2002) identified five characteristics of digital, namely numerical representation, modularity (the principle of assembling larger units from smaller ones, automation, variability, and transcoding (the relationship between computing and everyday culture).

The development of education is not only influenced by science, the development of education is also influenced by the development of digital technology (Junaedi, 2024). The world of education is faced with the challenges of digitalization (Tejedor et al., 2020). The ability to use various devices is a must in all circles. This is a problem when technology literacy is low in the digitalization era (Torous et al., 2020). When the demands of the era are no longer just being able to use, but also to sort and filter what is obtained from the influence of globalization.

One of the efforts that can be made is to promote digital literacy. The word "literacy", which means the ability to read and write, has slowly expanded its meaning with the development of media technology to the digital era (Sabrina, 2018). W. James Potter (2001:4) explains that some experts expanded the meaning of literacy from reading literacy to visual literacy and computer literacy (Çetin, 2021). The term digital literacy is then interpreted as the ability to understand information based on digital formats such as words, sound recordings, and images that merge into one.

Digital literacy involves authentic multi-text, processed with various devices and code switching to understand the content of many single subjects (Vasilescu et al., 2020). Literacy has an important meaning in communication life for three reasons, first, the use of digital media, especially the internet and social media, is increasingly intense, second, people's dependence on search engine sites and social media platforms to find information, third, to select information from the many sources available.

In this study, digital literacy is applied in the world of education in Talang Duku village. Administratively, this village is included in the Muaro Jambi Regency, Jambi Province (Crawford & Serhal, 2020). This village is an industrial area, more or less affected by the existence of the Talang Duku Port (Sánchez-Cruzado et al., 2021). Education facilities in the village are fairly good, consisting of 3 elementary schools of the same level, 1 MTs, and 1 Man (Zeike et al., 2019). The community of Talang Duku village is very diverse, but the majority is still related to the industries in the Talang Duku area.

This research will be carried out at SDN 40 Talang Duku, MtsN 1 Muaro Jambi, and MAN 3 Muaro Jambi with the title "Implementation of Digital Literacy as an Effort to Be Technologically Literate in the Education Circle of Talang Duku Village" which was carried out for two months in the span of September 25 to November 25, 2023.

II. METHOD

The method used in this research is field research (fields reserch) with qualitative descriptive analysis techniques (Lee et al., 2021). Researchers use a qualitative approach in the form of documents, sentences, and statements. Field research is research whose data sources and research processes use specific scenes and locations (Musficon, 2012). A qualitative approach is research that seeks to describe a symptom, event, incident, which occurs at the present time (Jones-Jang et al., 2021). The research activity referred to here is the application of digital literacy in the scope of education in Talang Duku village (Weng & Li, 2020). The research sites were SDN 40 Talang Duku, MtsN 1 Muaro Jambi, and Man 3 Muaro Jambi. The

research time was from September 25 to November 25, 2023 (Philippas & Avdoulas, 2020). The data source of this research consists of primary data and secondary data. Primary data from this research is the process of implementing digital literacy, while secondary data is obtained from interviews and literature studies (Philippas & Avdoulas, 2020). The data collection techniques used were observation, implementation, interviews, and documentation. The focus of this research is on the children of Talang Duku village.

III. RESULTS AND DISCUSSION

The concept and term digital literacy was introduced by Paul Gilster with the definition as the ability to understand and use information in various formats with an emphasis on critical thinking rather than just skills in mastering information and communication technology (Benazaria, 2018). Digital literacy can be understood in three aspects, namely digital competence, digital use, and digital transformation (Chan, et al., 2017).

This digital literacy involves technological, cognitive, and social competencies in dealing with changes in digital technology (Del-Moral-Pérez et al., 2019). Users must be digitally literate in order to master the sociological, cognitive and pedagogical challenges posed by increasing Internet penetration (Toropova et al., 2021). These skills include: the ability to operate and access computers effectively, master large amounts of information, evaluate the reliability of information, and critically assess technological tools naturally. Individuals must learn, collaborate, and problem-solve effectively in virtual environments, and communicate effectively in technology-mediated social environments (Buckingham, 2019). Not only that, digital literacy is also related to issues of information dynamics, intellectual property and ownership, copyright, content authenticity, and plagiarism.

The purpose of having digital literacy skills is to give audiences more control in interpreting messages that pass through digital media (Abuhassna et al., 2020). All media messages have visible meanings, with many deeper meanings stored in them. Differences in literacy levels will of course have an impact on differences in individual control in the process of interpreting existing information (Sabrina, 2018).

Application at MAN 3 Muaro Jambi

MAN 3 Muaro Jambi is the only senior high school education facility in Talang Duku village (Segijn & Van Ooijen, 2020). Although this school is the only school at the senior high school level in this village, not all children in this village continue their high school level at this school (Falloon, 2020). Thus, there are not many students in this school (Buselic, 2019). There are 12 classes divided into three levels with a total of no more than 200 students.

The application of digital literacy implemented at this school is the creation of online flipbooks. Where it is focused on grade 10 children who are divided into 4 classes (Zou et al., 2021). The implementation process took place in the range of October 20-28, 2023 by taking place in the MAN 3 Muaro Jambi classroom. This activity was very well received and received support from the school. Mouh Juddah (2023) said that digital literacy is very important amid the onslaught of technological developments today, especially seeing the conditions of children who are deemed necessary for their future needs.

Figure 1: Digital Literacy Implementation Assistance Process

Digital literacy is provided in the form of assistance in operating various software. One of the software that is given assistance is Microsoft Office. Children are taught to familiarize themselves with its use. Its use is quite simple, but if it is rarely or even never done, confusion will arise in its use. In this software, the thing that can be done is typing. Children are guided to write down their ideas in digital ink (Estacio et al., 2019). In accordance with digital literacy, these children are given directions to write the stories of national heroes (Dienlin & Johannes, 2020). Here is the division of themes for each class.

No.	Class	Title

1.	X A1	General Soedirman, Spirit of Struggle with One Lung
2.	X A2	Ir. Soekarno, the Spirit of Independence
3.	X A3	Cut Nyak Dhien, Aceh's Queen of War
4.	X A4	R.A. Kartini, For All Great Indonesian Women

Table 1. Division of story theme titles

Children are taught to make short stories with the themes they have determined respectively (Usart Rodríguez et al., 2020). Starting from looking for sources that are valid and can be accounted for then the children are literate by reading from the sources obtained then interpreting what has been read and pouring it into writings in Microsoft Word.

After the stories have been made, the stories are typed in Microsoft Word and then visualize the stories that have been made. Children are taught graphic design software such as canva, photoshop, adobe and pixellab. Visualization is done by providing an overview of the story that has been made. The goal is to increase digital literacy for children. This graphic design visualization makes picture books in digital format. Furthermore, after the digital book is finished, it is uploaded into a flipbook with the aim of making it easier to distribute and process information from the digital book that has been made.

Implementation at MTSN 1 Muaro Jambi

This school is the only junior high school in the Talang Duku village area. Like other schools in general, this school is divided into 3 grade levels with a total of 12 classes. The implementation of digital literacy at MtsN 1 Muaro Jambi was carried out between October 28 and November 11, 2023.

The implementation of digital literacy at MtsN 1 Muaro Jambi is by holding a design class with members of children from MtsN 1 Muaro Jambi. The activity process is outside of class hours so as not to interfere with children's learning hours. Sumbagawati (2023) as one of the teachers here said that activities like this are necessary for children because who else wants to teach children while graphic design needs are needed now.

In the early stages of the activity, there was still awkwardness in operating the device, because the devices used were still relatively new such as pixellab, adobe, photoshop, and canva (Bojanic & Warnick, 2020). At this stage it is still limited to an introduction to the various software that can be used in supporting the graphic design process. At the next stage, we began to teach how to create graphic designs using the layouts that had been prepared (Ng et al., 2022). The graphic design created is still relatively simple because it is still in the process of introduction and habituation. Here are some of the works from the design class.

Figure 3: Design class process

In addition to conducting design classes, one of the activities is the socialization of digital literacy to children. MtsN 1 Muaro Jambi. This socialization process was carried out from class to class and also by gathering all MtsN 1 Muaro Jambi children in one meeting room. The purpose of this socialization is to campaign for digital literacy by explaining the meaning and importance of digital literacy in everyday life in the digital era.

Figure 5: Digital literacy socialization process

Implementation at SDN 40 Talang Duku

The digital literacy process must be carried out as early as possible, including at the elementary school level. In this case, at the elementary school

level in Talang Duku Village, there is SDN 40 Talang Duku. In this school, the digital literacy activity carried out is watching together with the children of SDN 40 Talang Duku. This activity was carried out on November 15, 2023. Children are taught to visually see what is shown and then judge what is shown. The videos shown are educational videos that can be a lesson for children who see them.

After seeing the video displayed, children are invited to play games. Assess whether the children understand from the video shown by giving feedback to the children again. In addition to playing guessing games using the visualization of images displayed on the projector. Abdul Wahab (2023), the school principal, said that activities like this are very useful, especially in increasing students' interest in learning.

Figure 6: Implementation of digital literacy at SDN 40 Talang Duku

IV. CONCLUSIONS

The development of technology is both a challenge and a challenge in the era of digitalization. Mastery of technology is a necessity for every individual. However, today the demands are not only on mastery, but also on understanding and interpretation. The solution to this problem is digital literacy. Digital literacy is not only limited to being able to use digital devices, but the ability to understand information based on digital formats such as words, sound recordings, and images that merge into one. Digital literacy must be done as early as possible, including in education. In the research, digital literacy is applied in the scope of education in Talang duku village. At MAN 3 Muaro Jambi, they assisted in making online flipbooks. At

MtsN 1 Muaro Jambi conducted socialization about digital literacy and procurement of design classes. At SN 40 Talang Duku together watched a visualization of educational videos to attract and improve children's digital literacy. The result of the application of this literacy is an increase in technological literacy for children and is useful for everyday life.

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