

## Implementation of digital literacy for the advancement of education

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### Abstract

The digital era has become a technology that is full of various technological developments, especially in the world of education. Technological innovation and rapid technological advances in training have provided improvements and developments in acquiring knowledge about the latest technology. However, between the many generations and networks of the internet, it offers the evil that flows within. Therefore, the scarcity of digital literacy in the use of the current generation and the lack of knowledge of students' perspectives on training in the use of digital media as media knowledge has a tendency to be misunderstood, and abuse occurs. Therefore, the presence of digital literacy makes a technique to overcome these problems. The reason for this research is to find out how the perspective of digital literacy training is used as a bridge to gain knowledge. This study uses a descriptive qualitative approach. The influence of this view, mainly based entirely on the verses studied, the nation that the idea of digital literacy as a medium of acquiring knowledge in academic attitudes strives earnestly to get a satisfactory and accurate effect, improving overall performance. through the creation, and management of assets and utilization of the right generation without deviating. of the current rules. Given the training, the use of digital media as a means of obtaining media knowledge needs to be careful, we must realize the importance of understanding the notes, the content of the information, and must be extra careful, and now it is no longer easy to agree with resets whose origins are unclear. So, in creating, selecting or disseminating archives to gain knowledge of the process, it may be best to analyze them first.

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### INTRODUCTION

The rise of digital technology that spreads in various parts of the world, especially in Indonesia. Kominfo (2014) suggests that which has approximately 30 million internet technology users, with most of the users coming from children, young people and the elderly who have not been able to use the technology properly and correctly. The misuse of this technology can have a bad impact on both individual and social life. Furthermore, Kominfo (2014) shows that regarding the behavior of children and adolescents in using the internet still needs to be improved. Therefore, digital literacy is very necessary, one of which is to bridge the progress and development as well as the smooth running of education in the current era as well as to explain the law of good use of technology. Most people who do not have knowledge of technology will cause digital crime because they do not understand the function of technology. Azzahra and Amanta (2021) suggest that digital literacy is highly dependent on basic literacy skills reading and writing comprehension. Unfortunately, Indonesia consistently shows poor performance in literacy skills.

Mustofa and Budiwati (2019) suggests that digital literacy is the view and expertise of individuals in the use of digital technology, good communication systems used to track, organize, contact, assess or create something current, which can make contact with other people so that they can play a dynamic role in society as well as the developing socio-cultural context. Research by Sukri (2021) suggests that digital literacy is knowledge and skills to use digital media, communication tools, or networks in finding, evaluating, using, creating information, and using it in a healthy, wise, intelligent, careful manner. appropriate, and obey the law in order to foster

communication and interaction in everyday life. Based on the understanding from previous research, we draw the conclusion that, digital literacy is used to bridge learning media to develop one's knowledge of learning materials and encourage students' curiosity and creativity.

Therefore, digital literacy is very much needed in education, especially children and adolescents to choose the news that is displayed on social media. Digital literacy can be interpreted as a skill to understand, analyze and evaluate information. The nature of adolescents and children who tend to be unstable resulting in a lack of understanding of digital literacy can be fatal to the attitudes and character of children and adolescents. So, it must be implemented to teach digital literacy because gradually negative digital literacy will have an effect on the psychology of children and adolescents where they are the next generation of the nation that has a big influence and plays an important role in the progress of education and the progress of the Indonesian nation.

Research by Prasasti (2021) suggests that Indonesia is the country with the 4th largest number of internet users in the world and has internet penetration of 73.7 percent of the total population or 202.6 million users and during the Covid-19 pandemic, digital service users in the country experienced a growth of around 37 percent. A number of special problems arise for parents in the process of educating their children. Facing such internet developments, people must choose the internet wisely and surf the internet wisely and have the necessary digital literacy, as well as the use of the internet so that it is not misused by children, so parents are required to understand basic developments in the online world, both social, cultural and educational.

Research by Mustofa and Budiwati (2019) suggests that literacy is the power to recognize, interpret, produce, communicate and use writing and print related to various situations. Or digital literacy can also be referred to as a series of fundamental strengths to operate computer and internet devices. Digital literacy is defined as the capacity to explore and use news in various types from many sources that are not limited and can be searched through computer devices. While digital literacy is more directed at the linkage of basic technical skills in tracing, integrating, observing, and disseminating information. Early childhood is a very valuable time for human development, whether physical, emotional or social. The emotional aspect is the most important aspect for a child. Children grow by connecting with the natural environment and society, and starting from the family environment. A child is the next generation that must be maintained both its development and environment in order to avoid things that are not desirable in the era of rapid technology, because children are one of the important figures who play a role in the progress of an education.

Improving digital literacy from an early age aims to minimize harmful online risks, prepare children to become voters and consumers of tomorrow with the skills and understanding they need to fulfill this role, and to maximize the beneficial use of the internet. Most Indonesians have low digital literacy. Therefore, having digital literacy skills can give birth to a more innovative young generation. Efforts to improve digital literacy can be done by implementing character values which include strengthening character and responsibility in using digital media as a learning tool, providing an understanding of the importance of digital literacy by preparing various reading sources, getting used to reading and using digital media in the teaching and learning process, prepare learning links, use applications in learning.

## RESEARCH METHOD

In this study, a qualitative descriptive method was used. The use of this method is a literature and literature review survey strategy about reasonable thinking with information collected and examined carefully consider resource accessibility information. The examination uses a content investigation technique strategy. That is, capturing the essence of data, messages, or data introduced in a different setting realistic.

## RESULTS AND DISCUSSION

The results of research on the use of Indonesian people's internet access in improving digital literacy skills in the new normal era are as follows:

Subsection

### **Use of the internet in improving digital literacy**

Internet users in Indonesia increased by 22% between 2015-2019. As of 2019, 43.5% of Indonesia's 270 million people have internet access. Of the approximately 117.5 million people who have internet access, 25.5% are children and adolescents. In addition, the intensity of digital activities is also increasing, especially during the Covid-19 pandemic. Improving digital literacy from an early age aims to minimize harmful online risks, prepare children to become voters and future consumers with the skills and understanding they need to fulfill this role, and to maximize the beneficial use of the internet. Most Indonesians have low digital literacy. So, efforts to improve digital literacy skills, especially among teenagers, are needed in this modern era. In addition, children are also very connected on the internet, especially on social media.

Based on research by Kominfo, 98% of children use more than 1 social media to take into account entertainment, communication, and education. And 79.5% of them are not only users but also content creators. Awareness of hoaxes and misinformation is critical in terms of the social threats created by populists and those in radical internet content that can threaten democratic and institutional norms. As future voters, citizens and political participants, children must be prepared to be able to confront and recognize harmful and distorted content and resources. In the current pandemic era, internet access plays an important role in learning. The education sector is required to be able to keep up with technological developments. If initially learning was carried out in the school room, now learning can be accessed anytime and anywhere by using internet access. With the existing facilities, it is hoped that the skills or abilities of students will develop in the 21st century. Therefore, having digital literacy skills can create more innovative young people.

### **Efforts that can be done in improving digital literacy**

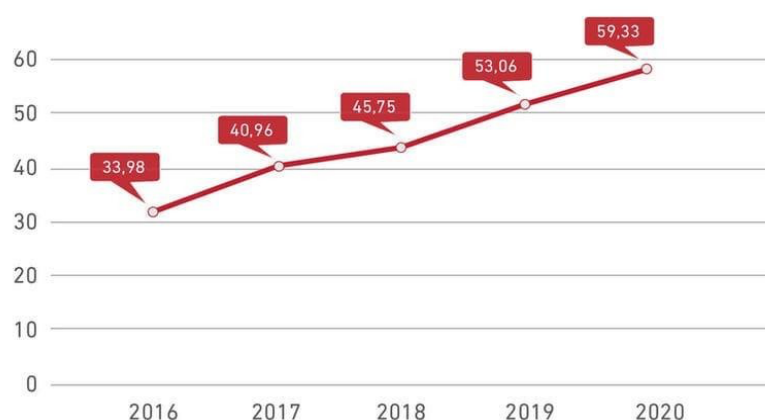
Efforts to improve digital literacy start from the basic level of general literacy improvement by guiding the ability to understand, interpret, create, and communicate texts. In addition, the efforts made must also include improving critical thinking and observing skills, analyzing and interpreting information and logical relationships between several ideas, until finally creating a rational individual decision-making process. Finally, and by following a more specific definition of digital literacy, users are expected to have the ability to find, evaluate, use and create content on digital platforms. The Ministry of Education and Culture Regulation Number 21 of 2016 concerning Content Standards for Primary and Secondary Education also mentions critical thinking skills as an indicator of mastery of school subjects. Critical thinking skills are an important prerequisite for improving digital literacy. Critical thinking is required to understand and validate information from digital sources. Gramedia (2020) suggests that in developed countries like Finland, critical thinking is an integral aspect of education. This can be seen from the education system in Finland which updated its education curriculum in 2014, education in Finland changed by giving autonomy to schools. In addition to the education system, Finland also inherited an attitude called "sisu". Sisu is a unique concept which when translated means a strong will and determination to act rationally in the face of adversity.

MoEC and MoRA should rethink and provide guidance on how to better integrate critical thinking skills across learning activities, while drawing lessons from the shortcomings of this strategy for ICT education. Practices such as working collaboratively with peers, using HOTS content and questions for assignments and exams, and establishing the habit of asking, analyzing, and making arguments in discussions should be part of every classroom activity. Improving

internet and technology access, especially in rural areas of Indonesia, must remain a priority for the government to tackle the digital divide and open up opportunities for underprivileged families.

### Digitalization and digital literacy in Indonesia.

Social media users in Indonesia as much as 85% are connected to social media facebook groups (facebook, instagram, whatsapp messenger) which is the largest number. According to the APJII infographic, as many as 65 million actively use facebook every day and 50% join facebook group. instagram users as much as 45 million every day and if averaged post 2 times more than global average (APJII, 2017). Young people are also enjoying this increased Internet access. Over the past four years, the percentage of Indonesian students aged 5 to 24 with internet access has jumped from 33.98% to 59.3%. More than a quarter (25.5%) of internet users are children and adolescents.



**Figure 1.** Percentage of students aged 5–24 years who have internet access (2016–2020).

Based on the percentage of students aged 5-24 years, it always increases from year to year. And the most increased, namely in 2018 leading to 2019 where it increased by 7.31%. Indonesian respondents aged 16-64 years using the Internet an average of 7 hours 52 minutes a day. This figure is above the global average of 6 hours 54 minutes per day. In terms of time spent online, Indonesia ranks 8th out of 42 countries surveyed, higher than Singapore and Vietnam and lower than the Philippines and Malaysia.

### Discussion

Digital literacy skills as a medium for learning and developing teaching materials are divided into various categories, namely skills, critical understanding and communicative abilities. Skills in particular focus on the use of computers and internet access. Research by Anggrasari (2020) suggests that the category of critical understanding is the ability to analyze and evaluate media content extensively and completely. Meanwhile, the category of critical understanding focuses on skills in conducting extensive and complete media analysis and evaluation. Based on previous research surveys that we have analyzed, the ability increases along with the existence of e-learning. These subjects can take advantage of e-learning to prepare materials that are more creative, innovative, and critical. Strengthening digital literacy can encourage learning activities carried out online to run better, because students can sort information through digital media such as social media, blogs, web and YouTube (Afiandi, 2002) and sort out the information needed related to the e-learning-based learning process (Wijayanti, Degeng, & Sitompul, 2021).

Lin (2013) explaining digital literacy includes four components, namely functional consuming, critical consuming, functional presuppositions and critical presuppositions. Alevizou (2007) mentions functional consumption is the basic ability to access information in digital media and textually can understand it. These basic abilities include technical ability to use technology information or internet and understand literally understanding of media content. Then critical consumption able to interpret the content contained in the digital media. This ability is based on ability to analyze the meaning of text content and context, integrating their respective perspectives and critiques (Jenkins, 2009). Component functional consuming explains participation users in producing media content. Indicator This ability is seen in the creativity in generate information using various media platforms and spread it (Thoman & Jolls, 2008). And the last component critical presupposition is interpretation contextual as a form of participation in digital media. The indicators of this component are critical understanding of content and participation interactive in a digital media environment. Dinata (2021) suggests that digital literacy skills play an important role in supporting the success of online learning. students with good digital literacy skills will try to find and select important information and understand, communicate, and convey ideas in the digital space. The results of the study indicate that learning media and the development of teaching materials have changed from being usually face-to-face to being able to be done online with e-learning and the emergence of more modern teaching materials such as electronic books (e-books). Entering the New Normal era during the Covid-19 pandemic, the need for internet access has become a primary need for the entire community, but in using information media, users are expected to be wise and analyze or evaluate content that is not good for broadcast. This states that students as users of digital media are expected to be able to apply procedures or ethics in applying the use of technology, namely filtering information from various digital sources. Kurnianingsih et al. (2017) suggests that currently, the biggest challenge in implementing information literacy in schools comes from internal schools, including the inadequate ability of teachers and library staff in the field of information literacy, there is no school policy regarding information literacy programs, and there is no information literacy program in the school library, so that students do not have the ability to search, browse, process, and seek information effectively and efficiently.

According to Kominfo, the category of communicative ability is the ability of students to understand the content and function of digital media as learning media, have broad knowledge and regulations about media, as well as behavior in using media. In the communicative ability category, it is underlined that learning activities will always use and utilize the internet, therefore in this digital era it is very necessary to understand digital literacy. The use of new media in the form of e-learning in the learning process is one of the implementations of communication and collaboration in digital literacy. The increase in these three components through the use of e-learning makes the implementation of digital literacy stronger. Research by Aditya (2021) suggests that digital literacy can be applied with various activities, for example providing virtual classes as was done during the pandemic, digital archiving which saves more space, utilizing social media as a means of increasing business and entrepreneurship, as well as making online petitions as social control, looking for work.

## CONCLUSION

From the results of the discussion, it can be concluded that Digital literacy skills as a medium for learning and developing teaching materials are divided into various categories, namely skills, critical understanding and communicative abilities. The category of communicative ability is the ability of students to understand the content and function of digital media as learning media, have broad knowledge and regulations about media, as well as behavior in using media.

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