Strategies to Address the Negative Impact of Misinformation through Strengthening Digital Literacy

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Abstract	The spread of misinformation, or what is usually called hoax, ahead of the general election has increased sharply. There are increasingly new ways to disseminate misinformation; one example is context collapse. Digital literacy skills are considered effective in preventing negative impacts from spreading misinformation. This research uses a qualitative approach by reviewing the literature in depth regarding digital literacy skills to respond to the negative effects of misinformation. This research aims to explain various methods of digital literacy skills. Digital literacy methods can be applied, namely social networking, transliteracy, maintaining privacy, filtering, and selecting content. An approach to harmonizing digital literacy concepts, conducting periodic surveys regarding the digital literacy index every year, being an initiator in creating a digital literacy landscape, making the digital literacy curriculum an essential part of a sustainable program, and including more measurable targets in responding to misinformation. At the same time, increasing the digital literacy index in Indonesia in 2023 will become a fundamental strategy as a form of prevention in preparing for the Indonesian nation's annual activities, namely the general election in 2024.
Keywords	Digital Literacy Skills; Misinformation; Social Aspect; Indonesia

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1. INTRODUCTION

In today's digital era, misinformation has become a prominent issue. Based on data from the Ministry of Communication and Information 2023, from January to June 2023, more than 700 content were identified as misinformation. This content, both writing and photos, was specially marked by the Ministry of Communication and Information and announced as misinformation so that the public would no longer share it. However, there is still a tendency for internet users to disseminate misinformation, and the trend continues to increase ahead of the 2024 General Election. From a regulatory perspective, the government is also very concerned about developing trends regarding misinformation. Based on Subiakto's explanation (2023), there is already a legal basis for spreading misinformation among the public. A future regulation is being drafted, which will provide fines for platform providers who do not take sufficient steps to prevent misinformation. Based on data from

Mafindo (Indonesian Anti-Defamation Society), reports on the number of hoaxes successfully recorded and verified from 2018 to January 2019. In 2018, the number of recorded hoaxes reached 997, with 488 hoaxes, or 49.94 percent, having a political theme. In January 2019, the number of hoaxes reached 109, with 58 having a political theme. This condition further strengthens the importance of digital literacy skills in society.

Therefore, the importance of digital literacy skills is one potential strategy to combat the negative impact of misinformation. This paper explores the role of digital literacy skills in addressing the spread of misinformation and its effects on individuals and society. Through an in-depth analysis of current conditions, this research seeks to provide insight into the potential effectiveness of digital literacy as a strategy to overcome the spread of misinformation. Digital literacy skills play an essential role in overcoming the negative impacts of misinformation. By equipping individuals with the skills necessary to critically evaluate and distinguish trustworthy information from misleading sources, digital literacy acts as a form of defense against the widespread dissemination of misinformation. Additionally, digital literacy skills enable individuals to navigate and utilize online platforms effectively, empowering them to engage in responsible information sharing and creation. By improving an individual's ability to identify and verify information sources, digital literacy skills can help individuals become more intelligent consumers of news and information.

Several previous research findings have identified the role of digital literacy skills. There are various approaches used in digital literacy skills. Research by Hoesin, Poplavskaya, and Hossain (2022) found that digital literacy is needed to prevent and overcome the spread of fake news related to COVID-19 in Indonesia. This emphasizes the importance of developing skills to identify misinformation and correct pandemic information in society.

Diepiveen & Pinet (2022) titled User perspectives on digital literacy as a response to misinformation. This research found several results, including that students outside the government can search for valid information and minimize the dissemination of hoax information which can cause unexpected conflicts. Technical terms should be defined. Symbols, abbreviations, and acronyms should be defined the first time they are used. All tables and figures should be cited in numerical order.

Another result is that the younger generation experiences misinformation that intersects with other issues in the digital public space, including cyber security and inequality of access. The latest finding is that there is a significant relationship between digital media literacy and the spread of fake news among immigrants. With respondents from students and immigrants, students with digital literacy skills can

play a role in responding to the impact of disseminating misinformation. Meanwhile, immigrants who still need access to information still have disparities.

Irhamdhika (2022) conveyed recommendations under the title mitigating hoaxes in the era of disruption through digital literacy. This research proposes using digital literacy as a strategic approach to reduce hoaxes and fake news, emphasizing the importance of critical thinking and understanding the cultural context in evaluating information. The qualitative research method provides insight into the phenomena and dynamics of hoaxes and digital literacy.

Mrah (2022) provides the findings of his research entitled Digital Media Literacy In the Age of Mis/Disinformation: The Case of Moroccan University Students. This paper contributes to understanding the relationship between digital media literacy skills and identifying and evaluating misinformation and disinformation on social networking sites. It was also discovered, highlighting the importance of digital literacy in fighting the spread of hoaxes and fake news, especially among students. Next, other findings provide empirical insight into the complex relationship between digital media literacy and online information processing, highlighting the factors that influence an individual's ability to identify and evaluate the credibility of online information. It offers strategies and implications for higher education institutions to increase digital media literacy among students, aiming to make them more critical and intelligent information consumers.

Using the method used by Ali and Qazi (2022), a field survey of 674 Facebook users in urban Pakistan was conducted to assess their digital literacy skills and their ability to use standard Facebook features. Data analysis was performed using quantitative data analysis techniques to analyze survey responses and identify significant differences in digital literacy among different demographic groups. The research findings emphasize the importance of digital literacy in improving the information well-being of Internet users and the need to address gaps in digital literacy among various groups.

2. METHODS

This research uses a qualitative approach by conducting an in-depth literature review. According to Hart and Kitchenham, the literature review is the process of selecting relevant documents/research (both published and unpublished) based on fascinating research questions, topics, and phenomena to meet specific objectives by identifying, evaluating, and interpreting the selected research (Hart, 1998; Kitchenham, 2004). A literature review is used to review scientific literature to avoid bias and subjective understanding of the research. In addition, the literature review provides an overview of methodological trends and the scope of research fields in previous research (Yemen et al., 2019).

The stages in this literature review are focusing on specific problems, connecting the literature with

the problem in a balanced way, including clear research statements based on the methodology in the literature, and analyzing and critically evaluating the literature review based on the research discussion (Hart, 1998). Several journal articles were obtained via Google Scholar and SciSpace. With the keywords The Role Of Digital Literacy Skills, Strategy To Address The Negative Impact of misinformation in 2019-2022. The journal articles found were used as material for literature studies such as Hoesin, Poplavskaya, and Hossain (2022), Diepiveen & Pinet (2022), Irhamdhika (2022), Mrah (2022) and Ali and Qazi (2022).

Table 1. Previous Research

No	Authors	Metode	Finding	Similar	Gap
1	Hoesin, Poplavskaya, dan Hossain (2022)	This paper uses a qualitative research approach, such as interviews, observation, and documentation, to collect data and analyze the role of digital literacy in responding to hoaxes on Instagram.	The findings discuss the need for digital literacy in preventing and overcoming the spread of fake news related to COVID-19 in Indonesia. This emphasizes the importance of developing skills to identify misinformation and correct infodemic in society.	There is a need for digital literacy to combat the Covid-19 infodemic.	There needs to be a discussion regarding the role of digital literacy skills in society.
2	Diepiveen & Pinet (2022)	This empirical analysis is based on two online consultations held in the early months of the Covid-19 pandemic, which explored young people's views on misinformation.	This paper provides insight into how young people view and respond to misinformation online, particularly in the context of the COVID-19 pandemic, thereby increasing understanding of the impact of misinformation on young people's well-being.	There is a need for digital literacy to combat the Covid-19 infodemic.	There is no discussion regarding the role of digital literacy skills in society.
3	Irhamdhika (2022)	This research uses a qualitative method with a literature study approach.	Digital literacy can be one solution in mitigating hoaxes	It is necessary to develop digital literacy to reduce	There is no discussion regarding the

			circulating massively in the digital world. With digital literacy, people can process information more critically. However, the current development of digital literacy has not yet reached a "good" rating.	the negative impact of circulating hoaxes.	role of digital literacy skills in society.
4	Mrah (2022)	This correlation study explores undergraduate students' perceptions, attitudes, and practices toward information disorder on social networking sites.	There is a significant relationship between digital media literacy skills (DMLS) and students' ability to identify information disorder online (IDO).	Based on empirical findings, important implications and strategies for higher education institutions are aimed at helping students become digital media literate information consumers.	More than just my digital literacy skills are needed.
5	Ali dan Qazi (2022)	Using a field sample of 674 Facebook users taken randomly from low and low-income groups and middle-income neighborhoods in Pakistan	Results show that older individuals, women, less educated, and people with lower education household expenditures tend to be significantly less digitally literate.	Research finds that digital literacy is positively related to understanding the truth.	It does not discuss specific strategies to overcome the negative impacts of misinformation.

3. FINDINGS AND DISCUSSION

3.1. Digital Literacy Concept

In 2018, the United Nations Educational, Scientific and Cultural Organization (UNESCO) defined digital literacy as an individual's ability to access, understand, create, communicate, and evaluate information through digital technology. Over time, this definition has shifted with the increasing influence of the negative impact of disseminating misinformation. At the global level, in 2023, according to UNESCO, as many as 763 million adults in the world lack digital literacy. (Tempo, 2023). Therefore, the definition of digital literacy also involves learning to socialize, think critically, be creative, and be

inspired in a digital competition (Tempo, 2023). Because of this data, more than 140 UNESCO member countries have committed to aligning the vision and right to lifelong learning into a reality through the Seventh International Conference on Adult Education (CONFINTEA VII) in Morocco in 2022.

Approaching the political year in 2024, Indonesia must be more prepared to respond to potential weaknesses in the context of the dissemination of false information. The latest data regarding the digital literacy index in Indonesia shows an increase in the value from 2021, which was only 3.49 points; in 2022, it rose to 3.54 points (Ditjen Aptika, 2023). This trend must continue to improve in the coming years. The ways that can be done to increase the role of digital literacy skills are by harmonizing digital literacy concepts, conducting periodic surveys regarding the digital literacy index every year, becoming an initiator in creating a digital literacy landscape, and creating a digital literacy curriculum.

3.2. Harmonization of Digital Literacy Concepts

In harmonizing the concept of digital literacy, we must look at priority aspects, for example, the development of social media released by Andrew Hutchinson (2022). Data from social media use will increase sharply in 2022.
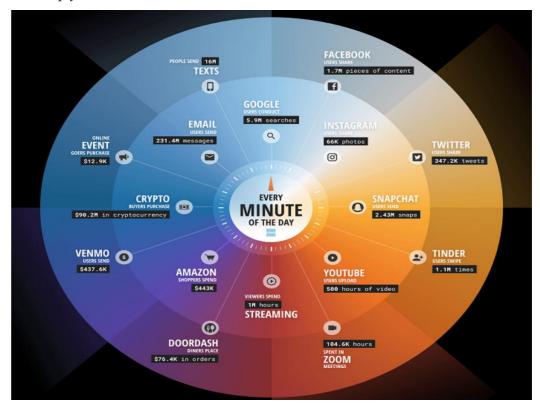

Figure 1. Every Minute of The Day (2022)

This can be part of harmonization to address digital literacy in Indonesia. There are four digital literacy frameworks, namely Digital Skills, Digital Safety, Digital Ethics, and Digital Culture. According

to the author, it is necessary to add another framework, namely Digital Creator. The growth and development of never-sleep data must also be balanced with the enthusiasm to become a creator. While digital skills only prioritize the soft skills of utilization, creators can go beyond that with the skills to create and produce various digital services society needs. In this way, it can be balanced alongside other frameworks, for example, Digital Culture.

3.3. *Periodic Survey Regarding the Digital Literacy Index*

Based on the website https://survei.literasidigital.id/, the latest data obtained is from 2022. This would be a shame if it were not done regularly. In fact 2024, there will be a big celebration for the Indonesian nation by holding simultaneous general elections. This is a common concern so that preventive action can be taken from the parties to increase the potential for the spread of false information. They were reflecting on France, which saw an increase in disseminating misinformation based on data from disinfo ahead of the general election.EU, there was an increase of 1202 misinformation in 2022.

3.4. *Initiator in Creating a Digital Literacy Landscape*

The digital literacy landscape in Indonesia is classified as needing more optimal attention. This is different from several other countries that have seriously paid attention to this topic of discussion. This was done in Poland with many approaches that were gradually implemented. This landspace will later become a focus in responding to the negative impacts of false information. Examples of reports carried out by the Polish Government: https://ffb.org.pl/wp-content/uploads/2023/02/Raport_Przeciwdzialanie_dezinformacji.pdf published in 2022. This report also collaborates within one community under the European Union. So, it must also be upgraded to global-scale cooperation such as ASEAN.

3.5. *Digital Literacy Curriculum*

In 2015, the Government created the National Literacy Movement (GLN) as part of the implementation of Minister of Education and Culture Regulation Number 23 of 2015 concerning the development of character. However, until 2023, there was no curriculum regarding digital literacy in early childhood, primary, and secondary education. Based on research, Sirlin et al. (2021) found that "an important implication of our findings is that digital literacy may be useful (e.g., for policymakers or social media platforms) when trying to identify users who are vulnerable to believing misinformation, but it does not seem particularly promising for identifying users who are likely to spread

misinformation." On this basis, the existence of a digital literacy curriculum to be used in the 2013 curriculum could be an option for increasing digital literacy skills in Indonesia. Other supporting data that can be used as a basis for making regulations regarding the digital literacy curriculum is that according to Forbes, digital literacy is the number 1 most important skill, with the article titled "The 20 Most Important Skills Everyone Needs To Succeed In A Digital World" Marr (2022). According to Wheeler in Melansari (2022), the digital literacy curriculum can be divided into 9 Digital Literacy Learning Components:

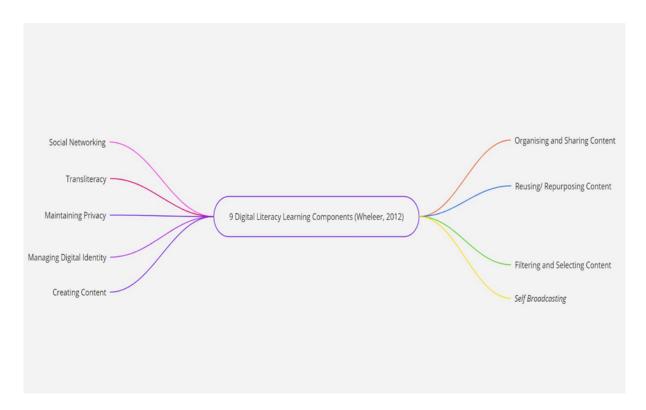**Figure 2.** Mind Map of 9 Components of Digital Literacy Learning

1. Social Networking

Utilizing the features in social media applications is basic knowledge that users must have.

2. Transliteracy

Efforts to utilize various platforms to create and communicate Content. This prioritizes the ability to communicate with various social media, discussion groups, or other online services.

3. Maintaining Privacy

Privacy is an essential thing in digital literacy. We, as users, must understand cybercrime (a cybercrime that involves illegal activities using computers, digital devices, or networks). Examples of cyber crimes that often occur are online theft via credit cards (carding), hacking via email, and theft of personal information (phishing).

4. Managing Digital Identity

How do platform users use their identities appropriately on our various social media?

5. Creating ConteContentform user skills in creating or creating content examples, the PowToon platform, Blogspot, WordPress, and others.

6. Organizing and Sharing ConteContentplatform users organize and share information content to be more easily disseminated to the general public.

7. Reusing/ Repurposing Content

How platform users 'reprocess' existing Content so it can be reused according to their needs.

8. Filtering and Selecting ConteContent filtering and selecting content components prioritizes the ability to search and filter the correct information according to our needs through search engines on the internet.

9. Self Broadcasting

Share ideas, concepts, and multimedia Content on various blogs or online forums. Self-broadcasting can be an effort to participate in online social communities in digital literacy activities.

The curriculum can be divided into needs for early childhood, primary, and secondary education in the technical mapping process. So that when they grow older, they are better prepared to respond to the negative impacts of disseminating false information.

3.6. Increasing the Role of Digital Literacy Capabilities

Ability in digital literacy is an essential ability needed for strategies to respond to the negative impacts of false information. The current condition in Indonesia, with the emergence of New Media products such as TikTok and Telegram, is a phenomenon that is still actively contributing to the rise of misinformation. This is reinforced by the theory presented by Graham in Nasrullah (2014) regarding New Media. One form of New Media is interactivity. Interactivity is a way that works between users

and machines (technology) by enabling users and devices to connect interactively. Interaction is one of the characteristics of cyber media as a communication tool. The increasingly widespread hoax information phenomenon can be caused by the increasingly widespread interaction between individual humans owning and using New Media products. Regulations regarding digital literacy have indeed been implemented in the context of the packaging of the "Makin Cakap Digital" program, which the Ministry of Communication and Information coordinates. However, from the literature review data, many parts have yet to be optimized, and there is a research gap that does not discuss what strategies need to be implemented to improve the basic capabilities of the community. Therefore, researchers consider it necessary to convey ways to increase digital literacy skills so that they are sustainable and positively impact the dissemination of false information. The methods used are to harmonize digital literacy concepts, conduct periodic surveys regarding the digital literacy index every year, become an initiator in creating a digital literacy landscape, and create a digital literacy curriculum. Increasing the role of digital literacy skills is a preventive preparation for facing the general election, which will be held in 2024.

4. CONCLUSION

Activities from sustainable digital literacy programs and improving fundamental skills are critical strategies for responding to the negative impact of disseminating misinformation. The gaps in the literature review from previous research include social aspects, including policies and challenges often found and discussed. However, technical aspects also need to be researched and used as material for analysis so that it can become a kind of policy brief for the benefit of the wider community.

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Dwi Fajar Saputra / Strategies to Address the Negative Impact of Misinformation through Strengthening Digital Literacy

161