Digital Literacy

as Basic Competency
for Post-Pandemic Life

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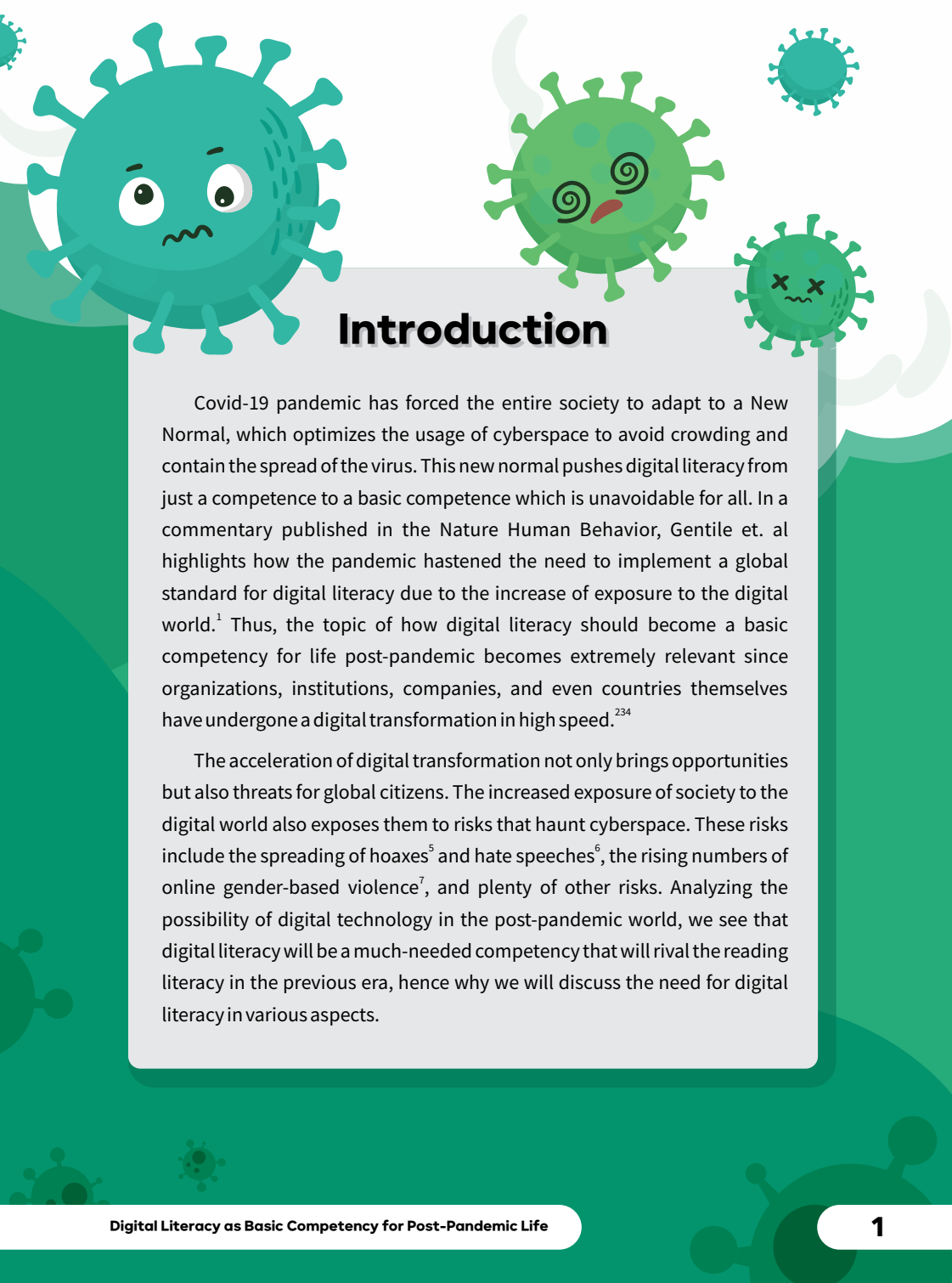Dhalia Ndaru Herlusiatri Rahayu
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Introduction

Covid-19 pandemic has forced the entire society to adapt to a New Normal, which optimizes the usage of cyberspace to avoid crowding and contain the spread of the virus. This new normal pushes digital literacy from just a competence to a basic competence which is unavoidable for all. In a commentary published in the Nature Human Behavior, Gentile et. al highlights how the pandemic hastened the need to implement a global standard for digital literacy due to the increase of exposure to the digital world.[1] Thus, the topic of how digital literacy should become a basic competency for life post-pandemic becomes extremely relevant since organizations, institutions, companies, and even countries themselves have undergone a digital transformation in high speed.[234]

The acceleration of digital transformation not only brings opportunities but also threats for global citizens. The increased exposure of society to the digital world also exposes them to risks that haunt cyberspace. These risks include the spreading of hoaxes[5] and hate speeches[6], the rising numbers of online gender-based violence[7], and plenty of other risks. Analyzing the possibility of digital technology in the post-pandemic world, we see that digital literacy will be a much-needed competency that will rival the reading literacy in the previous era, hence why we will discuss the need for digital literacy in various aspects.

Indonesia and the Awareness of Digital Literacy

A study done by the Center for Indonesian Policy Studies has shown the importance of digital literacy for Indonesia's society, particularly in children. The research finds that in 2015-2019, Internet users in Indonesia reached 22%. In 2019, 43.5% of 270 million people in Indonesia had access to the internet.[8] Katadata Insight Center partnered with the Ministry of Communications and Informatics (MoCI) to survey 34 provinces to determine the status of Indonesia's digital literacy in 2020. The survey showed that as of then, Indonesia's digital literacy had not reached a satisfactory level by scoring 3.47 on a scale of 1 to 5.[9] Generally, this data is a legitimate concern since the internet has become such an integral part of practically everyone's lives during the pandemic.

But the Indonesian government has realized the importance of digital literacy and competency for the people of Indonesia. On May 20th, 2021, the MoCI launched a national digital literacy program themed "Indonesia Makin Cakap Digital 2021" (Digitally Skilled Indonesia 2021), which program includes digital literacy classes held in 514 districts and cities simultaneously.[10] As an effort to increase digital literacy, the MoCI also held at least 20 thousand training based on modules and curriculums zooming into the four pillars of digital literacy: digital ethics, digital society, digital skills, and digital culture. Annually, said program reached 12.4 million participants in 514 districts and cities across 34 provinces.[11]

Digital Literacy as a Competence

Digital literacy isn't a new term, and discussions surrounding this topic have been going on for more than a decade. The need for digital literacy has been predicted for quite some time. According to the writings posted on Western Sydney University's website, digital literacy can be understood as a series of competencies needed by modern people to live, learn, and even work in a society where communication and access to information increase through digital technology.[12] Whereas according to Spires et. al, digital literacy is the ability to consume, create, and communicate information gathered from digital technology, which happens simultaneously with a critical evaluation process.[13]
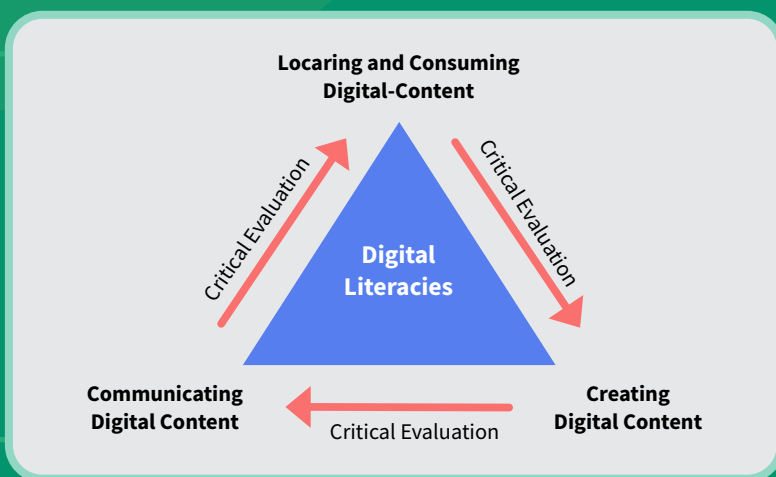
From those two definitions, it can be inferred that digital literacy is a set of skills to use digital products which consists of a few sub-components such as the knowledge to use technological wares, accepting and processing information, and communicating information ethically via information technology itself. The process is not a step-by-step one but happens simultaneously.

What makes digital literacy so important? There are many factors we analyzed to answer this question which further highlights the urgency of digital literacy as a basic competency in the future.

A Information Filtering

The first urgency of having digital literacy is about processing information available on the internet. Data and contents available on the internet are not always reliable. In fact, they are more often unreliable. The MoCI has stated that there are at least eight hundred thousand sites that active spreads hoaxes and fake information in Indonesia[14] in 2017. Just two years after, the MoCI reported the highest number of hoaxes ever at 1.731 fake news[15] which encompass multiple categories such as politics, health, and education, and they aren't always handled wisely. Surveys done by Katadata Insight Center (KIC) shows that 30% to 60% of Internet users in Indonesia are exposed to hoax, but only 21% to 36% recognize said information as a hoax.[16]

These data reflect the huge concern over the users' ability to filter over the information on the internet. The existence of a "supply" for hoax content and users who are unable to recognize said hoaxes are one of the many reasons why digital literacy is such an important skill and competence. Digital literacy can act as a barrier for users to filter and process proper information which comes from reliable sources.

BREAKING

HOAX DETECTED
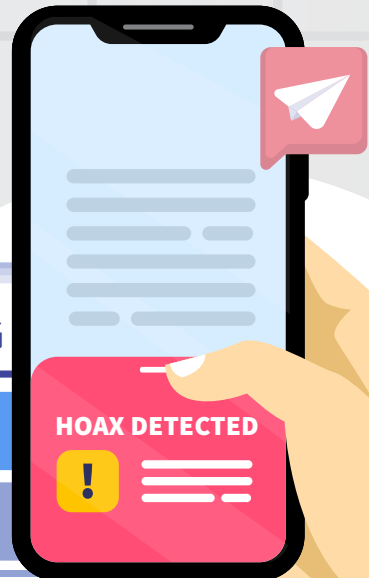
B Minimizing the Risk of Cybercrime

The urgency for digital literacy as a basic competency in the life post-pandemic also correlates with the ever-growing risk of cybercrime. Before we discuss how digital literacy can function as a mitigating factor for minimizing the risk of cybercrime, we need to understand the portrait of cybercrime in Indonesia.

Kompas.com reported that cybercrime in Indonesia had risen four times during the pandemic, reaching over 190 million cases reported from January to August 2020.[17] Furthermore, the data are taken from Patrol Siber by Lokadata also shows that thousands of cybercrimes in Indonesia were reported from 2019 to May 2020.[18] There are many variants of the reported crime, with the highest, reaching 2.584 cases, being online fraud.

Jenis Kejahatan Siber di Indonesia 2019-2020
Data 2020 per-Mei

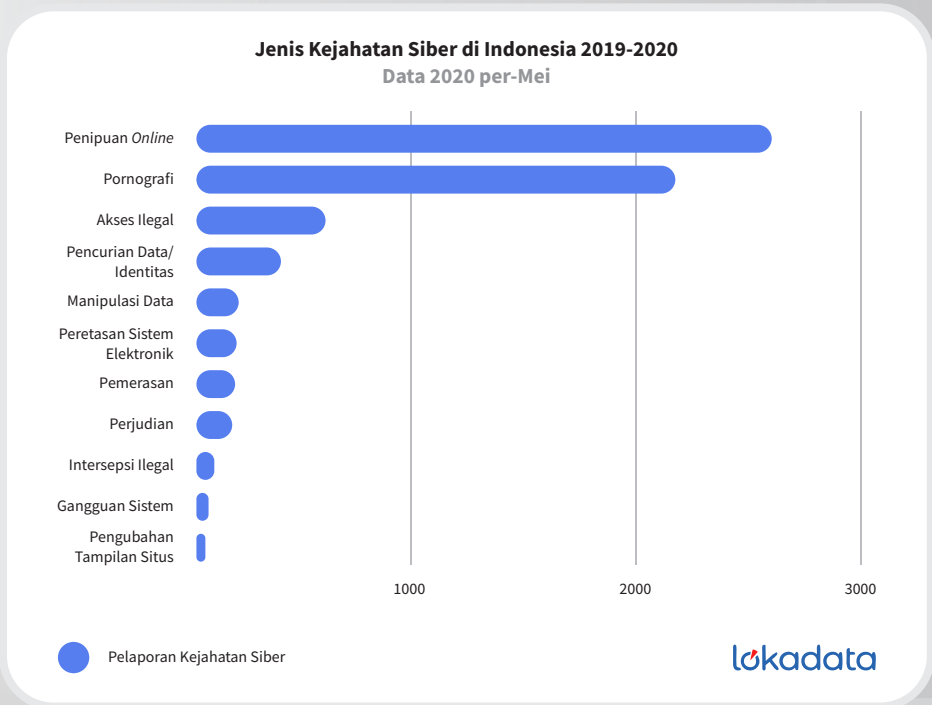Pelaporan Kejahatan Siber

lokadata

Figure 1: Graph depicting Cybercrime cases reported in 2019-2020.
Source: Cyber Patrol, taken from Lokadata

But it doesn't stop there. In 2021, specifically in March, Indonesia's House of Representatives stated that there are approximately 3.500 cases of cybercrime which are dominated by issues concerning ethnicity, religion, race, and inter-group relations[19] followed by cases of fraudulent online practices, pornography, illegal access, hacking, and others.[20] The latest case which made the news was the data breach of 279 million Indonesians' data which got sold through raidforums by an account named Kotz. Pratama Persadha, a cybersecurity expert and head of Communication & Information System Security Research Center (CISSReC) mentioned that this data breach happened in BPJS Kesehatan (Indonesia's Health Social Security Agency), and a sample of 1 million from those data are shared for free by Kotz with the entire data set priced at six thousand US dollar.[21]

The many cases of cybercrime reported in Indonesia support the fact that digital literacy is a competency that's necessary for all Indonesians. Frydenberg and Lorenz have stated that having the ability to realize the risk of cybercrime is extremely crucial, and this ability can be measured in the form of the capacity to detect spamming, phishing, malware, and other types of cyberattacks. Digital literacy as a skill allows people to detect various suspicious activity which potentially leads to cybercrime, thus making it invaluable for individuals striving to protect their personal data and determine whether or not information coming from the internet is valid.[22] World Economic Forum specifically termed this competency as cyber-risk literacy.[23]

Cyber-risk literacy is measured in a Cyber Risk Literacy and Education Index, which shows five main factors relating to literacy and education on cyber risks. These five factors are public motivation, government policy, education system, labor market, and population inclusivity. In this ranking, Indonesia ranked 46 out of 50 countries in all five factors. This rank serves as a reminder that Indonesia still has a lot of work to be done in tackling cybercrimes, which highly boosted the need for promoting the general digital literacy movement before heading a much more segmented cyber risk literacy.
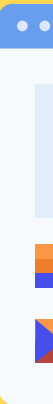
C Education

Since the beginning of the pandemic, the government has been taking actions to do our daily life virtually, including formal schoolings. This policy mandated school-aged children to do remote learning, which makes them spend even longer hours on the internet, thus exposing them to even more contents and digital products.[25]

After the pandemic hits, most Indonesians aged 16 to 64 spends almost 8 hours per day on the internet, higher than the global rate of 6 hours and 54 minutes per day.[26] Unfortunately, existing internet platforms aren't really designed for underaged users. This condition caused children to be more vulnerable to unsavory content and online threats.[27] Seeing as remote learning will have a lasting impact on children, then a school-aged specific digital literacy curriculum is desperately needed.

Digital literacy education is more than just being able to read what's available on the internet; but it is all about how to respond, filter, and deliver information. Early digital literacy education can help children and students practice self-defense by teaching them about which information should and should not be shared in the internet.[28]

D Labor: Socioeconomics and Business

Other than the general public and children/students, digital literacy is also crucial in the context of jobs and labor. By having digital literacy skills, individuals will be more competent in their jobs. They will be able to identify information that is important and needed for effective collaboration and strengthen teamwork, also reducing the generation gap between workers.[29]

Chang explained that there are three reasons why digital literacy will not be apart from the business condition in the future. First, digital literacy can play a huge factor in preventing organizations or companies from scientific lags in using technology, and giving digital literacy education will also save the company from huge expertise gaps. Second, it has to do with the generation gap; digital literacy will ensure that all workers (regardless of their generation) are able to get the same information and skills regarding digital technology equally, and all workers will be up to standards in their basic technical knowledge and operational skills, which promotes inclusivity. Third, a collaboration that increases productivity be it qualitatively or quantitatively.[30]
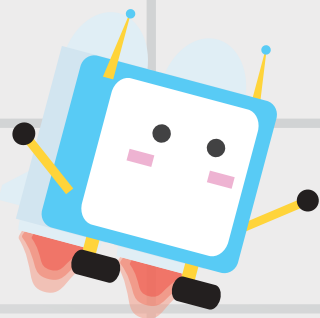
Other than the aspect of confidence and the increase of workers' digital skills in the post-pandemic world, digital literacy will be a competency that 'should be had' instead of 'good to have'. This argument is hinted at in LinkedIn's research, which is a part of Asia Pacific Economic Cooperation's Human Resource Working Group, which mentioned digital literacy as one of four digital skills wanted by companies who are looking to hire new workers from their site.[31] World Bank's report in 2016 noted that Indonesia suffers from the lack of nine million semi-skilled and skilled laborers within fifteen years. To cover this gap, Indonesia has to make six hundred thousand digital talents per year. Johnny G. Plate, Minister of Communication and Informatics, has made an announcement that Indonesia has made an effort to make these talents through various programs, one of them being the Digital Talent Scholarship sponsored by the government and many other sectors to achieve Indonesia's target of being Southeast Asia's biggest digital economy.[32][33]

Even though the Covid-19 pandemic hitting Indonesia in early 2020 has caused myriads of problems and losses for the Indonesians, the target to become the biggest digital economy has not changed. Hence it can be concluded even further that digital literacy will transform into a basic competency in the post-pandemic world.

E. The Government's Effort to Increase Digital Literacy Competency

The Indonesian government has made plenty of efforts to raise Indonesian people's digital skills. Currently, the MoCI, through Directorate General Application of Informatics, has been partnering with 108 stakeholders to give digital literacy training across Indonesia by programs such as Siberkreasi Cakap Digital (Siberkreasi Digitally Skilled) and Siberkreasi Empowering Inclusive Class for people in outer regions that are less-developed, people with disabilities, and the elderlies. Furthermore, digital literacy activities were also held publicly available classes via Siberkreasi's Youtube channel or other social media.[34] Those programs are held nationally and are part of MoCI's strategic plan for 2020-2024, which is also available for public.[35] Other than the MoCI, the Ministry of Education and Culture is also involved in the programs aiming to raise digital literacy skills which is a part National Literacy Movement program launched in 2017.[36]

The fact that increasing digital literacy has made it into the national-scale program agenda has strengthened our argument that digital literacy is a crucial skill for Indonesians to welcome the post-pandemic world.

Conclusion

Digital literacy, as massively promoted by the government, is extremely important for almost all aspects of our lives. Especially since the pandemic mandates for remote learning and work from home policies, we are closer than ever before to technology. But it is necessary to understand that we are in our core a group of people who are vulnerable to risks haunting us with the rise of digital technology. Hence a skill is needed to accompany our increased use of digital tech. These risks do not only haunt adults but also children since they also use technology for their formal studies.

Digital literacy competency will not only be crucial, but it will virtually become a much-needed basic competency like the reading-and-writing literacy is for this era. But to create a society that truly understands the importance of digital literacy, a team effort from all stakeholders to facilitate the educating infrastructures and the motivation for said education is needed to actually develop said skill into an actual competency.

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