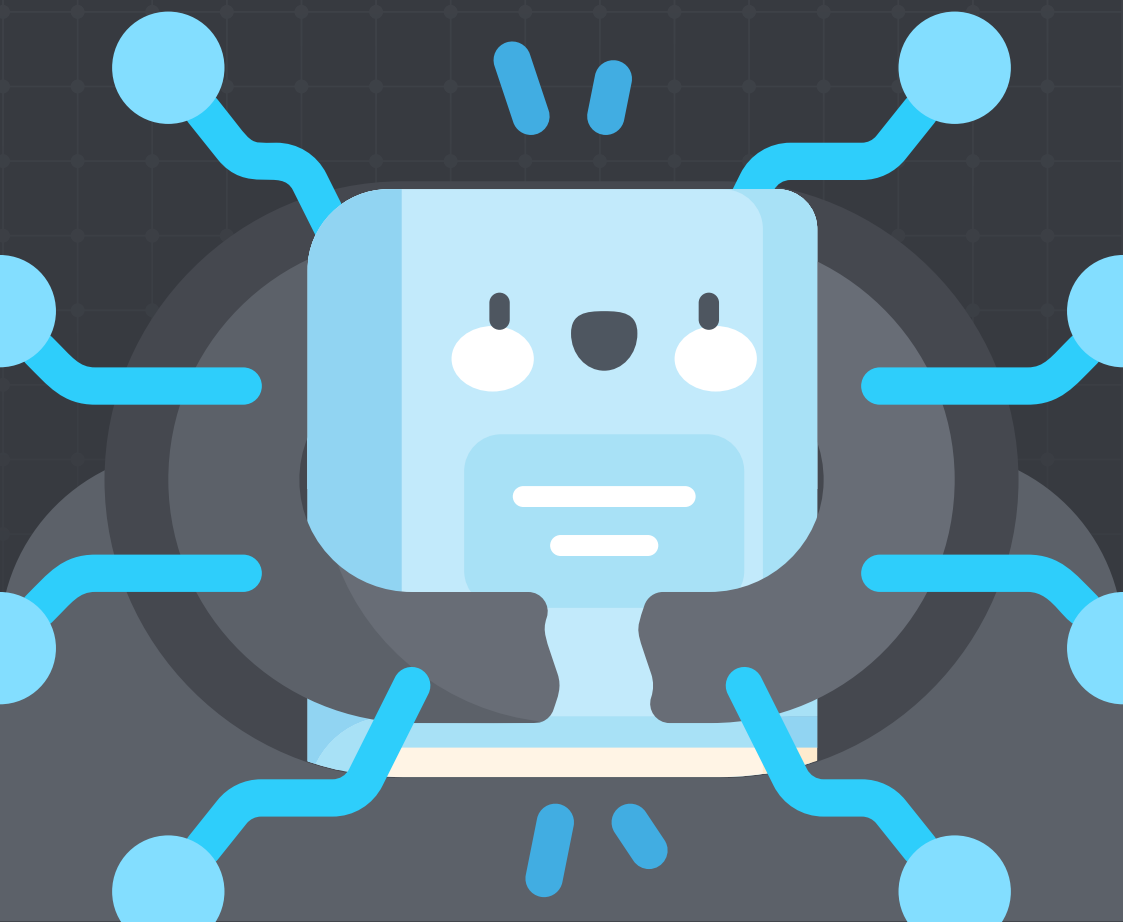


THE PROSPECT OF DIGITAL LITERACY

IN THE INDONESIAN CURRICULUM





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In recent years following the mass use of digital devices and the Internet, challenges have arisen concerning how to utilize them optimally and stay safe while doing so. The Internet is not a haven where anyone can be safe and happy to immerse themselves.¹ Threatening and dangerous challenges have been posed by Internet users globally. Scams, identity thefts, and misinformation are widespread, and with no single authority to regulate the Internet, users must take it upon themselves to safeguard their activities and well-being.

Digital literacy, though still not a definitive term, stands for the skills and knowledge Internet users may possess to confidently use the technology, allowing themselves to get the most value out of their surfing experience. By and large, digital literacy is obtained autodidactically.² Most users either have to learn to protect themselves the hard way or through some close friends or relatives. However, seeing that digital literacy is important because of the increasing access to digital devices and the Internet, one can imagine it molded into premade courses as a preemptive measure to protect to-be Internet users, mainly young children, from the get-go.

Consequently, there have been programs and courses by NGOs or public schools to teach digital literacy or even attempts to integrate it into the curriculum. The main goal of this study is to see whether Indonesia is apt for this kind of attempt. This study will first look at cases of digital literacy policy developments and courses/programs in foreign schools, namely the UK, Canada, Japan, and Malaysia. We will then address the issue of the digital divide in Indonesia and how, in the dawn of increasing national digital access, we might prepare to implement digital literacy education. Lastly, we will take a closer look at the Kurikulum Merdeka design and consider the prospects of digital literacy in the midst of its problems.

¹ Rumpf, H. -J., & Effertz, T., & Montag, C. (2022). The cost burden of problematic internet usage. *Current Opinion in Behavioral Sciences*, 44, 101107. <https://doi.org/10.1016/j.cobeha.2022.101107>

² Boie, M. A. K., Dalsgaard, C., & Caviglia, F. (2024). Digital instinct—A keyword for making sense of students' digital practice and digital literacy. *British Journal of Educational Technology*, 55(2), 668-686. <https://doi.org/10.1111/bjet.13398>

→ DIGITAL LITERACY IN GLOBAL SCHOOLS

This section will discuss the conditions surrounding digital literacy education efforts in a global context. The discussion will serve as a comparison framework to introduce approaches that have been taken in several countries to nurture digital literacy. To attempt a more comprehensive comparison, the four countries discussed will take place in European, North American, and (East and Southeast) Asian contexts.

→ **Table 1.** Digital literacy approaches in Canada, applicable to global contexts³

<i>Digital literacy approaches</i>	<i>Brief characteristics</i>
Infusion	Recognizing the fundamental shift in the meaning of literacy; in the 21st century, literacy necessarily requires information and communication technology (ICT); Literacy with ICT (LwICT)
Cross-curricular competencies	Situated digital literacy across the curriculum; Student competencies assessed but not graded in a traditional sense
Integration	Rigid and rigorous ICT curriculum with rubrics and benchmark assessments
Dispersion	Minimal specific direction for teachers; no guarantee of consistency

³ Hoehsmann, M., & DeWaard, H. (2015). Mapping digital literacy policy and practice in the Canadian education landscape. *MediaSmarts*. [online]. Tersedia di: <https://mediasmarts.ca/teacher-resources/digital-literacy-framework/mapping-digital-literacy-policy-practice-canadian-education-landscape>

* Inggris

In the UK, despite the pervasiveness of digital technologies in everyday life, students exhibit significant gaps in their ability to navigate and critically assess online information. A ²⁰¹⁸ study by the National Literacy Trust revealed that only 2% of primary and secondary school students could accurately identify false information in a misinformation quiz. This raises concerns about the effectiveness of current educational strategies in addressing digital literacy in the UK. Furthermore, three out of five students reported that misinformation has undermined their trust in news sources, and half expressed anxiety over their ability to discern truthful from misleading content.⁴

However, the UK's approach to digital literacy education remains fragmented, as the country, like many others in Europe, lacks a unified framework for teaching digital literacy.⁵ While digital skills are increasingly necessary in today's information landscape, the curriculum in England has largely neglected the expertise of digital specialists, which should provide valuable insights for enhancing digital literacy education.⁶ Despite these concerns, the UK Government has maintained that digital literacy is adequately integrated across the curriculum.⁷ Many educators disagree. More than half of UK teachers believe that the current curriculum does not adequately equip students with the necessary literacy skills for the digital age.⁸

⁴ National Literacy Trust. (2018). *Fake news and critical literacy: The final report of the Commission on Fake News and the Teaching of Critical Literacy in Schools*. [online]. Tersedia di: https://nlt.cdn.ngo/media/documents/Fake_news_and_critical_literacy_-_final_report.pdf

⁵ Frau-Meigs, D., Velez, L., & Michel, J. F. (Eds.). (2017). *Public policies in media and information literacy in Europe*. Routledge.

⁶ Polizzi, G. (2020). Digital literacy and the national curriculum for England: Learning from how the experts engage with and evaluate online content. *Computers & Education*, 152, 103859. <https://doi.org/10.1016/j.compedu.2020.103859>

⁷ Digital, Culture, Media and Sport Committee. (2018). *Disinformation and "fake news": Interim report: Government response to the committee's fifth report of session 2017-19*. [online]. Tersedia di: <https://publications.parliament.uk/pa/cm201719/cmselect/cmcumeds/1630/1630.pdf>

Kanada

In Canada, digital literacy and media education (respectively shortened as DL and ME in the literature) are shaped by a decentralized and diverse landscape, driven largely by grassroots and community-led initiatives. Peer-to-peer learning, the sharing of open resources, and learner-driven approaches such as unconferences have emerged as key elements in the Canadian digital literacy ecosystem. This grassroots movement also includes lobbying efforts to secure a place for media and digital literacy within official curricula.⁹ However, the absence of a unified national strategy complicates the integration of these skills into education. Since education is under provincial and territorial jurisdiction, Canada's approach to digital literacy is fragmented, leading to varying implementations across the country.¹⁰

To generalize, there are four primary approaches to digital literacy education in Canada: infusion, cross-curricular competencies, integration, and dispersion (see Table 1).¹¹ These reflect the diverse strategies adopted by different provinces and territories, often resulting in an uneven experience for students depending on their location. Additionally, various pedagogical principles influence how digital literacy is taught, including imagination-based learning, connections-based learning, integrative thinking, and new pedagogies for deep learning.

Professional learning networks (PLNs) play a critical role in supporting educators who are striving to stay updated on the evolving media and digital landscape. Canadian teachers and students are actively engaged in creating and sharing media and digital artifacts, promoting an experiential and collaborative approach to digital literacy. MediaSmarts, a Canadian non-profit organization, has been instrumental in offering resources and frameworks to guide educators.¹²

⁹ DeWaard, H., & Hoechsmann, M. (2020). Landscape and terrain of digital literacy policy and practice: Canada in the twenty-first century. In D. Frau-Meigs, S. Kotilainen, M. Pathak-Shelat, M. Hoechsmann, & S. R. Poyntz (Eds.), *The handbook of media education research* (hlm. 363-371). Wiley Blackwell.

¹⁰ Hoechsmann & DeWaard, *Mapping digital literacy*, hlm. 1-2.

¹¹ Hoechsmann & DeWaard, *Mapping digital literacy*, hlm. 15-17.

¹² DeWaard & Hoechsmann, *Landscape and terrain*, hlm. 367-368.



* Jepang

A shift is occurring in Japan's education system, moving away from traditional standardized tests and rote learning toward a more holistic approach. As reported, there have been plans to change the general direction of Japan's education policy where conventional learning methods have long dominated.¹³

In 2018, Japan's Ministry of Education, Culture, Sports, Science, and Technology (shortened MEXT) introduced a new "Guideline for Higher Education" to address the growing need for media and digital literacy. For the first time, "Information" was made a compulsory subject in high schools, with plans to incorporate it into the general university entrance examination (colloquially referred to as the "*Center Shiken*") by 2025.¹⁴ This move underscores the recognition of digital literacy as an essential skill for Japanese students.

The new guideline for the curriculum divides digital literacy into two: Information 1 and Information 2. Information 1, directed at general high school students, covers topics like problem-solving in the digital world, communication and information design, programming, information and communication networks, and data usage. These areas will be introduced before and early into high school to prepare foundational competencies. Information 2, directed at vocational high school students, delves deeper, covering data science, information systems, and the use of technology to identify and solve societal problems.¹⁵

However, Japan's education system remains deeply influenced by university entrance exams, which continue to shape students' learning priorities. Many teachers also "teach for the exam", sidelining pedagogical priorities that could be more meaningful for students. The upcoming inclusion of digital literacy in the general university entrance

¹³Yamanaka, S., & Suzuki K. H. (2020). Japanese education reform towards twenty-first century education. In F. M. Reimers (Ed.), *Audacious education purposes* (hlm. 81-103). Springer.

¹⁴Wu, T. (2019). Media information literacy education and evaluation system in Japan: An example of Japanese high school information curriculum. *NIDA Development Journal*, 59(4), 79-96.

¹⁵Wu, Media information literacy, hlm. 87-88.

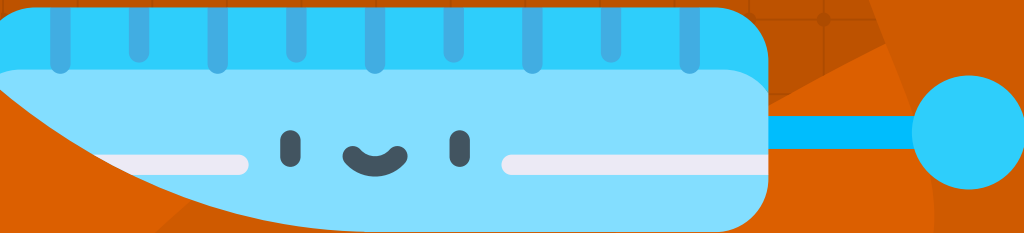
exam is a progressive step, yet the competitive nature of these exams often drives students to prioritize test preparation over critical thinking or creativity. This system reinforces a rigid social hierarchy based on academic success, affecting both social relations and career opportunities. While the focus on digital literacy may loosen up the curriculum, allowing for more innovative education policies in the future, the current challenge remains to balance exam preparation with the broader goal of fostering safety and security in the Internet for students and young adults alike.

* Malaysia

Malaysia is making strides in digital literacy as part of its national educational transformation. In response to rapid technological advancements, the country recognizes the importance of equipping students with “21st-century skills”, namely critical thinking, problem-solving, and effective communication through digital platforms. Additionally, social media is increasingly seen as a tool for enhancing learning outcomes, while integrating religious education with ICT provides an interactive and engaging experience for students.

Digital literacy in Malaysia entails a collaborative effort, with an emphasis on group-based projects and teamwork, together with interactive learning. This approach is particularly effective in integrating technology with religious education, where Islamic digital content is provided as engaging educational resources.¹⁶

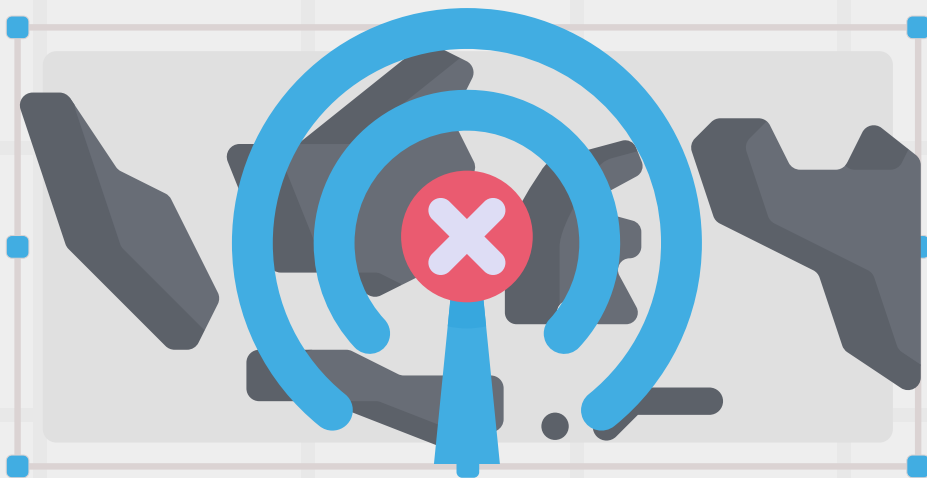
¹⁶ Ashari, M. K., & Faizin, M. (2023). Religious digital literacy of students in Indonesia and Malaysia. *Tadris: Jurnal Pendidikan Islam*, 18(1), 189-210. <https://doi.org/10.19105/tjpi.v18i1.8794>



As Malaysia's neighboring country, Indonesia shares many educational challenges and goals. Collaboration between the two countries, and extensively with ASEAN in the future, could lead to joint initiatives, such as sharing digital resources, developing region-specific curricula, and leveraging social media for educational purposes.

→ **Table 2.** Digital literacy education comparison

	<i>Main actor</i>	<i>Main approach</i>	<i>Gaps</i>
 UK	Educator	Cross-curricular	No unifying framework; disregard of digital experts
 Canada	NGO	Mixed	Jurisdictionally fragmented; donor- and volunteer-dependency could mean instability
 Japan	Government	Integration	Traditional rote learning still holds wide support; rigid exam-oriented
 Malaysia	Educator	Infusion	Largely focuses on using ICT as pedagogical tools, not critical assessment of media and digital content



DIGITAL DIVIDE AND PREPARING FOR INCREASING DIGITAL ACCESS

Despite being one of the top countries for social media usage, Indonesia faces a significant digital divide that disproportionately impacts rural communities. This gap highlights the inequalities between urban and rural areas, as well as the more developed western and less developed eastern parts of the country. In 2019, 94 million adults in Indonesia lacked access to mobile internet, with the vast majority nearly 80% residing in non-metropolitan rural areas in Sumatra, Jawa, and Bali. These regions still struggle with inadequate infrastructure and unreliable internet connectivity, even though the three islands are home to a substantial population of Indonesia. The disparity is even starker in Indonesia's eastern regions, like Maluku, Nusa Tenggara, and Papua. 60 to 70% of the population living in the eastern provinces remains poorly connected due to variable service quality.¹⁷

¹⁷ Setiawan, I., Pape, U., & Beschoner, N. (2022). How to bridge the gap in Indonesia's inequality in internet access. *World Bank*. [online]. Tersedia di: <https://blogs.worldbank.org/en/eastasiapacific/how-bridge-gap-indonesias-inequality-internet-access>

This digital divide is not just an issue of access, however. It also reflects broader socioeconomic qualities. Rural communities and women are often the hardest impacted, as they have less access to educational resources, employment opportunities, and digital literacy programs. Studies in ²⁰¹³ and ²⁰¹⁶ highlight the gender inequalities and largely overlooked development in rural areas which further influences the digital divide.¹⁸ This insight helps us understand the role of digital literacy as a gateway to economic participation, education, and social mobility.

The Palapa Ring Project and other projects aimed at expanding internet infrastructure across the archipelago is a step in the right direction, but alone, it's insufficient to address the socioeconomic inequalities. Future problems, too, can be expected. The broadening internet infrastructure will of course propel the Indonesian internet and social media usage, which calls for the anticipation and preparation for an increase in cybercrimes and online misinformation. We may consider the prospects of digital literacy education as one effort to mitigate the digital divide and unsafe digital experience.

¹⁸ Setiawan, I., Pape, U., & Beschoner, N. (2022). How to bridge the gap in Indonesia's inequality in internet access. *World Bank*. [online]. Tersedia di: <https://blogs.worldbank.org/en/eastasiapacific/how-bridge-gap-indonesias-inequality-internet-access>

→ DIGITAL LITERACY EDUCATION IN KURIKULUM MERDEKA

There are many questions we have to tackle in order to arrange a comprehensive guideline for national digital literacy education. This section will only give a partial overview of such questions and provide the necessary considerations for future, more dedicated policymaking.

Kurikulum Merdeka has loosened the curriculum further than what we might have imagined. In contrast to the previously more rigid competency-based curriculum, like Kurikulum Tingkat Satuan Pendidikan (KTSP) and Kurikulum ²⁰¹³ (K-¹³), Kurikulum Merdeka is, to a greater extent, committed to giving more freedom and opportunities for students. The idea was to create a more locally relevant learning environment suited to varying student needs and potentials. However, at the cost of this, Kurikulum Merdeka suffers from leaving schools and teachers on their own to figure out what is best for their class. In addition to learning textbooks, teachers now have to create their own teaching modules.

This form of curriculum does allow us to include digital literacy education anywhere relevant. The dispersion approach—i.e. letting teachers decide when and how to teach digital literacy—is exactly this: there is no need for digital literacy education in the curriculum, just let





teachers do it independently. The problem arises when a teacher does not know how to teach digital literacy or is not digitally competent. In ²⁰¹⁷, The Ministry of Education and Culture launched *PembaTIK (Pembelajaran Berbasis TIK/ICT-based Learning)*, an ICT usage training to facilitate classroom learning. Yet, the program is limited to a select category of teachers, excluding, for one, public *madrasah* teachers.¹⁹

Moreover, seeing the importance of digital literacy, digital literacy education should not be fragmented across regions, schools, or even between classes. For now, the dispersion approach is the best we have, but we will need a more unified approach as soon as possible. Sure, “Informatics” or “ICT” subjects have been in the curriculum since K-13, but its implementation is often inhibited by short class periods, along with students’ already too heavy study burden.

¹⁹PembaTIK. (2024). Frequently asked questions. [online]. Tersedia di: <https://pembatik.kemdikbud.go.id/faq/>

→ CONCLUDING REMARKS

The path to a unified framework for digital literacy education has not been smooth. It is a bumpy terrain, with many complicating factors. Digital literacy education and policy development always face the challenge of the rapid change of its object. Within seconds to months, new media, new features, and new modes of cybercrimes appear. A digital education curriculum, if premade and not routinely updated, will become obsolete in no time. An accompanying issue, especially in Indonesia, is the geographical and socioeconomic diversity which makes what constitutes “engaging and relevant education” different for different people.

This geographical diversity greatly warrants a decentralization of digital literacy education. Kurikulum Merdeka allows local content (*muatan lokal*; “*mulok*”) to be included in a region’s school curricula and syllabi. Regional governments and schools urgently need to consider a locally-tailored digital literacy education in local content instead of, or at least in complementarity to, entrepreneurship and crafts. Though nationally fragmented, digital literacy education led by regional government initiatives is nonetheless needed for young Indonesian netizens.

Future studies might reconsider the prospects of infusion, cross-curricular, and integration approaches for Indonesian digital literacy education. A mixed but systematic approach might also be imagined, with a top-down framework synchronizing with horizontal efforts by teachers and NGOs. The underlying problems of poverty, inequalities, and lack of teacher welfare must also be added as factors. Regardless of the eventual approach, it is important that digital literacy education be implemented with rigor, and as engaging as possible. Digital literacy cannot be a peripheral subject.

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