# STRENGTHENING DIGITAL LITERACY THROUGH EDUCATIONAL SYSTEM

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**ABSTRAK**

Pada tahun 2020, Microsoft melakukan penelitian dan menyimpulkan bahwa netizen Indonesia dinilai memiliki tingkat kesopanan yang lebih rendah dibandingkan negara lain di Asia Tenggara. Hasil penelitian ini menunjukkan bahwa Pendidikan literasi digital dapat dilaksanakan melalui jalur pendidikan formal, nonformal, maupun informal. Pada jalur pendidikan nonformal, literasi digital dapat dilakukan oleh masyarakat sipil. Pada jalur pendidikan informal, keluarga mempunyai peran yang sangat strategis. Kesimpulan ini merupakan kritik yang perlu disikapi secara bijak dan proporsional. Salah satu respon yang dapat dilakukan adalah dengan memperkuat pendidikan tentang literasi digital kepada siswa melalui jalur pendidikan. Yang diperlukan untuk memperkuat literasi digital adalah penyusunan kebijakan pendidikan dan struktur kurikulum pendidikan. Pemerintah perlu membuat kebijakan pendidikan dan lembaga pendidikan melaksanakannya dengan merancang kurikulum.
**Kata kunci**: Literasi digital, Sistem pendidikan, Kurikulum

***ABSTRACT***

*In 2020, Microsoft conducted research and concluded that Indonesian netizens were considered to have a lower level of politeness than other countries in Southeast Asia. The result of this study that digital literacy education can be carried out through formal, non-formal or informal education channels. In the non-formal education pathway, digital literacy can be carried out by civil society. In the informal education pathway, the family has a very strategic role. This conclusion is a criticism that needs to be responded to wisely and proportionally. One response that can be done is to strengthen education about digital literacy for students through educational channels. What is needed to strengthen digital literacy is the preparation of educational policies and the structure of the educational curriculum. The government needs to make educational policies and educational institutions implement them by designing curriculum.*

*Keywords: Digital literacy, Educational system, Curriculum*

## INTRODUCTION

The digital era is marked by advances in information and communication technology. Previously, in the 80s, advances in information and communication technology only occurred and were enjoyed by developed countries in Europe, but since the 90s, advances in information and communication technology have been

enjoyed by most countries in the world. At the beginning of 2000, third countries were no longer able to enjoy advances in information technology, but were able to carry out technological engineering. The decade of the 80s, when computers were still a luxury item, was the beginning of the development of information technology and reached its boom period 25 years later (Nuryanto, 2012) .

Currently, information and communication technology continues to develop, including in countries in Southeast Asia, one of which is Indonesia. In almost all urban areas in Indonesia, people can enjoy advances in information technology. Statistically, 65% of Indonesia's territory can enjoy advances in information technology and the remaining 35% of Indonesia's territory is expected to catch up in the last five years.

The challenge that the Indonesian government is currently facing is paving the way for development and information technology networks in the outermost regions of Indonesia. To accelerate target achievement, the government designed a policy to accelerate the development of information and communication technology, as well as allocate a proportional budget. Indonesian society today is expected to be able to live with advances in information technology and digital civilization or culture.

*Problems of the Digital Era*

The problem currently facing the Indonesian nation, apart from equal distribution of information and communication technology infrastructure services, is the development of digital civilization. Equal distribution of information technology services is physical infrastructure, while development of digital civilization is socio-cultural infrastructure. Physical infrastructure development is the government's duty and authority, because it is related to development politics, asset management and policy. The development of social infrastructure is a common domain and interest, for the government and society, including civil society. Civil society has a different role from the government in developing society. Civil society has a more cultural approach, not bureaucratic and procedural (Sulisworo, 2013).

For some communities in the outermost regions of Indonesia, the problem they face is how they can immediately enjoy advances in information technology. They still face obstacles in learning, using and exploiting information technology to support their lives. Because they cannot yet enjoy digital technology and services, people still have problems with time efficiency, costs, processes, procedures and long chains in all areas of life. They also have not mastered the use of information technology to improve life skills and competencies, as well as productivity.

For Indonesian people who have been able to enjoy advances in information technology, the problem they face, although they are often less aware of it, is their unpreparedness to use information technology. This unpreparedness results in the use of information technology not being optimal and or even counterproductive to the nature of technology, namely facilitating and increasing effectiveness and productivity. This unpreparedness can be grouped into two, first, unpreparedness in adapting to technology and second, unpreparedness in living with the civilization or culture of the information technology era.

Digital civilization is at least related to three main elements, namely (1) digital productivity (2) digital security (3) digital culture. Digital productivity is related to the use of information and communication technology in carrying out life activities. Productivity consists of physical productivity and non-physical productivity. Physical productivity, for example, the use of information and communication technology in industry, both micro, medium and macro scale. Non-physical productivity can be in the form of digital products, such as changes in the media industry, from print media, electronic media to digital media. Other products include the use of digital technology in the world of medicine, education, marketing and so on.

The second element in digital civilization is digital security. Digital security is related to the use of information technology in managing important assets. Assets in this context have a broad meaning, assets in various shapes and forms. Assets in physical form, for example money and other movable assets. Assets in non-physical form, for example intellectual property rights, personal data, state secrets and so on.

The third element in digital civilization is digital culture. Digital culture is related to the perspective and way of life of individuals in society in the digital era. The change in connotation from a society in the real world to a society in the virtual world and also a village in a local geographic sense to a global village connotation in a digital sense, brings many implications. When humans live in a digital civilization, social boundaries are no longer marked by physical boundaries, visible lines or areas. Social boundaries in digital civilization are individual, community-based. Individuals in a village that is physically and geographically remote can become an active part of society and the global community.

*Unpreparedness*

The problem faced by some people who use digital technology today is unpreparedness. Unpreparedness in three areas, namely digital productivity, digital security and digital culture. The following is a table illustrating this unpreparedness.

Table 1. Description of unpreparedness of digital technology users

| Item | Description | Example |
|---|---|---|
| Digital Security | There are many violations of privacy in public spaces | Recording images without permission, publishing without permission |
| | Not safeguarding the nature of private documents and assets | Illegally publishing personal documents, personal identities or confidential ones |
| Digital Productivity | Copyright infringement | Using technology to duplicate, change, plagiarize a work, both physical and non-physical |
| Digital Culture | Being impolite, uncultured | Upload pornography (words, images, sounds), provocation, racism, sarcasm, etc. |

The behavior shown in the table above is counterproductive to the idealism of using technology. Scientifically, technology is the result of the work of human thought which shows the progress of their natural thinking. Socially, technological progress

is used to build a more humane human civilization. Physically, technology is used to increase work efficiency, reduce costs and increase productivity or assets. The following is a table of ideals for using digital technology in human life.

Table 2. Good practices in using digital technology

| Item | Description | Example |
|---|---|---|
| Digital Security | Maintain and manage assets | Using information technology to maintain the confidentiality of documents, state data, passwords, archives, protect against data theft and so on. |
| Digital Productivity | Utilize technology to increase productivity | Create online business applications, online learning applications, tutorials, e-libraries, create vlogs and video content and so on |
| Diggital Culture | Utilizing information technology for cultural development | Create public education, anti-violence campaigns, fight fake news (hoaxes), care for nature campaigns, and so on. |

*Digital literacy education*

An anomaly or discrepancy between the reality of digital behavior and the expected idealism indicates that there is a problem that needs to be found for a solution. The intended orientation is to narrow the anomalous space, so that the distance between reality and ideality is not too far.

There are three educational pathways that can be used to strengthen society's digital literacy, namely formal, non-formal and informal education pathways (Sekretariat DPR RI, 2004). The formal education route is through educational institutions, from basic education to higher education. The non-formal education pathway is madrasas, community education institutions, including PKBM, while the informal education pathway is the family.

Managerially, the government has more authority and affordability in managing formal education. In formal education, the government can directly supervise school education programs, while in non-formal or informal education,

the government does not have direct authority. However, this does not mean that non-formal and informal routes cannot be taken. Non-formal education, such as Islamic boarding schools, has quite strong characteristics in providing ethical and moral education. In informal education, families, especially parents, have a strategic role in shaping children's character. Apart from educating, parents also guide and supervise children's social development (Aziz, 2023).

In formal education, strengthening digital literacy can be done in two ways, first, designing the curriculum by adding digital literacy learning materials. Adding subjects to this curriculum structure is legally justified. Schools have the authority to design curriculum, according to the needs of students or according to the educational orientation being developed.

The legal basis that can be used to include digital literacy subjects is the national education system law currently in force, namely Law No. 20 of 2003. Apart from that, curriculum development is also encouraged, as is the concept and philosophy of the Merdeka curriculum. Educational institutions can develop their curricula flexibly, according to the needs of students and the challenges they face. Currently, students live in the digital era, therefore they have digital literacy needs.

Theoretically, curriculum development must continue to be carried out by considering several things, including the psychological development of students, social reality, developments in science and technology (Sukmadinata, 2003). Current social realities show that the world is moving towards a global village and therefore a global civilization is needed. Today's students live geographically, but interact virtually, digitally, in a borderless zone. Rahmat Raharjo stated that curriculum development needs to pay attention to philosophical, psychological, sociological and empirical principles (Raharjo, 2010).

If included in the intracurricular structure, digital literacy material can be given weight, for example 2 credits in primary and secondary education and it is very possible to be given a weight of 4 credits in higher education. In basic education (SD – SMP) and secondary education (SMA and equivalent) the orientation of digital literacy education is more directed at digital productivity and digital culture, so that a load of 2 credits can be considered sufficient.

In higher education, educational orientation or digital literacy, apart from being directed at digital productivity, can also be driven towards digital security competency, thus requiring a weight of 4 credits.

Table 3. Digital literacy education curricular pathway model

| Grade | Orientation | Credit |
|---|---|---|
| SD- SMP / Elemetary / Junior High School | Digital Culture | 2 |
| SMA/ Senior High School | Digital culture and digital productivity | 2 |
| University | Digital security, digital productivity, digital culture | 4 |

The second way is to provide digital literacy not in the form of subjects, but in the form of extracurriculars. This pattern is also justified in accordance with applicable laws and education policies currently in effect, namely the Merdeka Belajar policy. Schools are given the authority to offer extracurricular activities to their students. Students can choose extracurricular activities according to their potential, talents and interests (https://ditpsd.kemdikbud.go.id/hal/kurikulum-merdeka.)

Table 4. Digital literacy extracurricular activities

| Orientation | Activity |
|---|---|
| Digital Security | Recording personal data, storing and securing personal data, creating document storage applications, etc |
| Digital Productivity | Create educational videos, digital photography, banners, learning applications, game applications, create simple buying and selling applications, create friendship applications, etc. |
| Digital Culture | Create public education about digital manners, conduct content searches, etc. |

Schools can develop the two models above, both intracurricular and extracurricular models creatively. The opportunity and authority of schools and madrasas to develop this curriculum is currently a very open opportunity.

## CONCLUSION

The need to strengthen or educate digital literacy for Indonesian society is currently very urgent. Digital literacy education can be carried out through formal, non-formal or informal education channels. In the non-formal education pathway, digital literacy can be carried out by civil society. In the informal education pathway, the family has a very strategic role. In the formal education pathway, literacy education can be carried out by building a creative curriculum, both in the form of intracurricular and extracurricular curricula. The government can accelerate the strengthening of digital literacy through education, because the government has the authority to organize education. Strengthening digital literacy is important, so that the Indonesian nation becomes an advanced and civilized nation.

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