Digital Literacy Skills of Slukat Learning Center Students in Keramas Village

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**Abstract**

Information literacy, especially digital information, is one of the special skills in the 21st century that must be mastered by students. Digital literacy skills can help students find, evaluate, utilize, create and communicate content/information. There are three main parts of the digital literacy framework which are the focus of this research. Those three are: protection, rights, and empowerment. This study aims to provide an overview of the level of understanding of digital literacy of students in rural areas, specifically students of the Slukat Learning Center. Data obtained by using a questionnaire given to 26 students intermediate level. The questionnaire was compiled based on three main parts of the digital literacy framework using the Likert scale. The results of data analysis show that: (1) the average understanding of the digital literacy framework for the protection section falls in the poor category for 59.75%, (2) the average understanding of the digital literacy framework for the rights section falls into the poor category for 45,18%, (3) the average understanding in the empowerment section falls into the fair category for 50.67%.

**Keywords:**

***Digital Literacy, 21st Century Learning, Rural Area.***

**Introduction**

The goal of education is to prepare students to contribute to the world of work and social life. This has become one of the biggest challenges of the century. Learning to work and live in the 21st century means helping as many children as possible learn to apply 21st-century skills and a strong understanding of core to face the challenges of the times. The global world in the dimension of the 21st century is understood as the flow of transformation of knowledge based on competitiveness characterized by a system of information disclosure (Ziaurrahman & Surjono, 2017).

Life in the 21st century requires students to master important skills related to the four pillars of life, namely learning to know, learning to do, learning to be, and learning to live together. In these four pillars, each special skill is contained which needs to be applied in learning activities, such as critical thinking skills, problem-solving, metacognition, communication skills, collaboration skills, creation and innovation, and information literacy (Saavedra & Opfer, 2012).

Information literacy includes two aspects: information technology and communication technology. Information technology is related to processes such as supporting tools and manipulating and managing information (Mac Callum et al., 2014). Literacy is defined as a person's ability to read, write and count. This can be interpreted as a set of competencies and knowledge someone has (Yanti, 2016). Communication technology is about using supporting tools to transfer and process data across devices. Digital literacy is a set of skills related to the use of contemporary technology for information processing and communication (Wilson et al., 2015). Digital literacy competencies are useful for dealing with information from various digital sources that continue to grow along with the development of information and communication technology as an impact of the phenomenon of media convergence (A'yuni, 2015).

The government defines digital literacy as: "Awareness and understanding of the importance of information and the utilization of information and communication technology in the community in the context of developing an information culture towards the realization of the information society (Kominfo, 2003). Digital literacy is important to be included in education at all levels, especially at tertiary level. This level is responsible for educating citizens who will actively participate in the country's economic progress (Tuamsuk & Subramaniam, 2017).

The community uses a variety of technologies that can help their daily lives. Gadgets such as smartphones, tablets and laptops are one of the fastest in accessing information media (Satrio & Gafur, 2017). Surrounded by digital media and various media choices, 21st-century students must understand how to apply available media resources to learning, and use tools to create media in various forms of products that are useful for students themselves (Trilling & Fadel, 2009). The ease of access and the abundance of information that can be obtained through the internet, results in students being less selective in choosing the source of information to be used (Nurjanah et al., 2017).

There are many models of digital literacy that can be found on the Internet, with various names and forms. Based on ICT Watch's experience in carrying out the pillars of Internet Safety "Healthy Internet" since 2002 and continued with the pillars of continuous Internet Rights and Internet Governance until now, a digital literacy framework is formulated consisting of three main parts: 1). Protection, 2). Rights, and 3). Empowerment (Syaripudin et al., 2017).

The digital literacy framework according to Syaripudin et al (2017) explains in the first part that the protection aspect in the framework of digital literacy provides an understanding of the need for awareness of a number of things related to the safety and comfort of any Internet user. Some of them are personal data protection, online safety & security and individual privacy. A number of challenges in cyberspace include personal risks such as cyberbully issues, cyberstalking, cyber harassment, and cyber fraud.

The next digital literacy framework is a number of fundamental rights that must be known and respected by Internet users. These rights are related to freedom of expression and intellectual property rights like copyright and user rights such as the Creative Commons license model (CC). Then of course the right to assemble and associate, including in the virtual domain, is a necessity when talking about social activism. For example: to give social criticism through hashtags on social media, advocacy through multimedia works (memes, cartoons, videos, etc.) to encourage change with online petitions.

The internet can of course help users to produce more productive and meaningful works and performance for themselves, the environment and the wider community. For this reason, in the last part of the digital literacy framework, a number of topics have become challenges These topics include good quality citizen journalism, entrepreneurship related to the use of ICTs and/or digital products such as those done by technopreneur and digital start-up and MSME owners. This section also emphasizes information ethics that highlights the challenges of hoaxes, disinformation, and utterances of hatred and attempts to deal with them in a selective manner of information. Be smart while online and think before posting.

Based on the above, it can be concluded that the understanding of digital literacy is very much needed by students of the Slukat Learning Center in order to increase awareness and understanding of the importance of information. The utilization of good and responsible information and communication technology as a requirement for 21st-century life skills determine the ability of digital literacy skills of Slukat Learning Center students in Keramas village.

**Methods**

The research method used was descriptive quantitative, data obtained from the sample population were analyzed according to the statistical method used (Sugiyono, 2012). Descriptive research is intended to get an overview and description of student responses regarding understanding digital literacy skills.

This research targeted an after-school learning center called Slukat (SLC) which is based in Keramas Village, Blahbatuh, Gianyar, Bali. Data retrieval is done by using a questionnaire that was distributed through google form to 26 intermediate class students (middle and high school students age) in the concentration class learning English at SLC. The questionnaire provided is to find out the basic knowledge of students' digital literacy framework with 3 main frameworks in it, namely, aspects of protection, rights, and empowerment. The protection aspect contains 12 statement indicators regarding personal data protection, online security, and individual privacy. The aspect of rights contains 7 indicators regarding freedom of expression, intellectual property, and social activism. The empowerment aspect contains 9 indicators regarding citizen journalism, entrepreneurship, and information ethics.

From the quantitative data that has been calculated the average is then transformed into qualitative values ​with the reference put forward by Eko Putro W. that have been translated from Bahasa below.

**Table 1.** Conversion of quantitative to qualitative data (Widoyoko, 2009)

|  |  |  |
| --- | --- | --- |
| **Score interval** | **Average score** | **Category** |
| ***X* > + 1,8 sbi** | *X* > 3,4 | Excellent |
| **+ 0,6 sbi < *X* ≤ + 1,8 sbi** | 2,8 < *X* ≤ 3,4 | Good |
| **- 0,6 sbi < *X* ≤ + 0,6 sbi** | 2,2 < *X* ≤ 2,8 | Fair |
| **– 1,8 sbi < *X* ≤ - 0,6 sbi** | 1,6 < *X* ≤ 2,2 | Poor |
| ***X* ≤ - 1,8 sbi** | *X* ≤ 1,6 | Very Poor |

**Table 2.** Conversion of quantitative to qualitative data aspects of protection (Widoyoko, 2009)

|  |  |  |  |
| --- | --- | --- | --- |
| **Scale** | **Score Interval** | **Average Score** | **Category** |
| **Scale 5** | *X* > 40,8 | *X* > 3,4 | Excellent |
| **Scale 4** | 33,6 < *X* ≤ 40,8 | 2,8 < *X* ≤ 3,4 | Good |
| **Scale 3** | 26,4< *X* ≤ 33,6 | 2,2 < *X* ≤ 2,8 | Fair |
| **Scale 2** | 19,2 < *X* ≤ 26,4 | 1,6 < *X* ≤ 2,2 | Poor |
| **Scale 1** | 19,2 | *X* ≤ 1,6 | Very Poor |

**Table 3.** Conversion of quantitative to qualitative data aspects of rights (Widoyoko, 2009)

|  |  |  |  |
| --- | --- | --- | --- |
| **Scale** | **Score Interval** | **Average Score** | **Category** |
| **Scale 5** | *X* > 23,8 | *X* > 3,4 | Excellent |
| **Scale 4** | 19,6 < *X* ≤ 23,8 | 2,8 < *X* ≤ 3,4 | Good |
| **Scale 3** | 15,4< *X* ≤ 19,6 | 2,2 < *X* ≤ 2,8 | Fair |
| **Scale 2** | 11,2 < *X* ≤ 15,4 | 1,6 < *X* ≤ 2,2 | Poor |
| **Scale 1** | *X* ≤ 11,2 | *X* ≤ 1,6 | Very Poor |

**Table 4.** Conversion of quantitative to qualitative data aspects of empowerment (Widoyoko, 2009)

|  |  |  |  |
| --- | --- | --- | --- |
| **Scale** | **Score Interval** | **Average Score** | **Category** |
| **Scale 5** | *X* > 30,6 | *X* > 3,4 | Excellent |
| **Scale 4** | 25,2 < *X* ≤ 30,6 | 2,8 < *X* ≤ 3,4 | Good |
| **Scale 3** | 18< *X* ≤ 25,2 | 2,2 < *X* ≤ 2,8 | Fair |
| **Scale 2** | 14,4 < *X* ≤ 18 | 1,6 < *X* ≤ 2,2 | Poor |
| **Scale 1** | *X* ≤ 14,4 | *X* ≤ 1,6 | Very Poor |

**Findings and Discussion**

Based on the analysis of the digital literacy skills of the Slukat Learning Center students, the following results were obtained.

Based on the questionnaire using the Likert scale, the results for the 59.75% protection were included in the poor category. Many of the people were still not good enough in understanding the public domain, whether it was online or offline. This was due to the impact of social media use, intentionally or unintentionally uploading personal data in the form of self-identity, address, photos, and videos.

Hundreds of millions of users are now contributing to social media using Web 2.0 and social networking sites (SNS) such as Facebook and Twitter (Sobaih et al., 2016). We shifted more from our lives into virtual domains such as social media, Oh et al., 2016). It is very important for people to know the boundaries of the public and private domains. There are many mental and legal health risks, including cyberbullying, exposure to online predators, posts that are considered unsettling to be unwanted, and even criminal responsibility (Costello, 2017). Exposing personal data to social media, in the form of self-sensitive things, is also still done by people who are not responsible for committing crimes.

Software updates on personal computers or gadgets have not been properly addressed in the possibility that these electronic devices are easily infiltrated by dangerous viruses and malware. With the increasing use of the Internet in communication, online resources, and information sharing, users have become easy targets for hackers and crackers to obtain financial benefits that harm the internet users (Singh et al., 2017).

The results of this study are not only much noticed, but also have not been much noticed. by respondents who have an impact on fraud and in buying and selling transactions. This is an act that violates the governing laws of the use of pirated software. In Law Number 28 of 2014 concerning Copyright, Article 113 (1) paragraph 1 for a letter I for commercial use shall be finished with the longest imprisonment of 1 (one) year and/or a maximum fine of Rp. 100,000,000 (one hundred million rupiahs) (Kansil, 2018).

The results of the rights aspect are 45.18%. The first response to opinions, ideas, feelings and criticism of the government through social media have not been well applied by the respondents. Distributing untested information is still often done by respondents. Social media allows people to interact remotely, but the threat of deception also increases on social media which increases the risk of mass panic. It’s not really clear if the mass panic is justified by correct information or unjustified by incorrect information (Santoso et al., 2017). Most respondents are still rarely including writing, design, photo’s or pictures of someone else and claim them as theirs. Permission from the copyright owner before duplicating or disseminating his work, whether for commercial purposes or not, has not been done by the respondents. Furthermore, related activities to social activism through the internet or online media are also still low. The respondents are not using online petitions about a problem to evoke change and neither do they use the internet to raise funds for social activism.

The last aspect is Empowerment in a sufficient category with 50.67%. The first indicator of citizen journalism has not been done much by the respondents, one of them is doing citizen journalism in the form of reports, analysis, and delivery of information and news through various online applications. Citizen journalism has become the address to publish last because it reflects the ongoing norms related to news related to civil communication related to communication in old journals related to journalism related to democracy (Wall, 2015). This aspect of Empowerment is not to mention the concern about products/services through social media (Twitter, Instagram, Facebook, etc.) and this activity falls into the category that is often carried out by people because the business potential of buying and selling products (special products with great value from the island and beyond) in Bali is very high.

Educating themselves about information ethics and things that are more practical as re-checking the news received through social media by searching for sources has not been done by the respondents. "Fake news" is often used on several different phenomena. The great news about what false news makes it an understanding of social hazards it makes and makes solutions to these hazards difficult (Verstraete et al., 2017). Ideally, the respondents should have only trusted sources of information such as respected media of whom their quality and credibility is established.

**Conclusion**

The results of data analysis show that: (1) the average understanding of the digital literacy framework for the protection section falls in the poor category for 59.75%, (2) the average understanding of the digital literacy framework for the rights: 45,18% falls into the poor category (3) the average understanding in the empowerment section falls into the fair category for 50.67%. In other words, the Slukat Learning Center students' understanding of digital literacy skills still needs to be improved. The students familiarity with information and communication technology is unavoidably increasing and it is necessary to balance it with good knowledge of digital literacy skills. It is highly recommended to conduct proportional digital literacy skills training / learning to improve the digital literacy skills of Slukat Learning Center students.

**References**

(A) Books

Sugiyono, 2012, Metode Penelitian Kuantitatif, Kualitatif Dan R&D, Cetakan Ke-15, Bandung, Alfabeta

Syaripudin, A., Ahmad, D., Ningrum, D. W., Banyumurt, I., & Magdalena, M. (2017). *Kerangka Literasi Digital*. Kominfo.

Widoyoko, S. E. P. (2009). Evaluasi Program Pembelajaran: Panduan Praktis Bagi Pendidik Dan Calon Pendidik. Pustaka Pelajar.

(B) Journal Article

A’yuni, Q. Q. (2015). Literasi Digital Remaja Di Kota Surabaya, 15.

Costello, C. R. (2017). 82.1 Social Media, Youth, And The Law: Legal Risks And Protection For Young People Interacting Online. Journal Of The American Academy Of Child & Adolescent Psychiatry, 56(10), S121–S122.

Kansil, G. C. A. (2018). Perlindungan Hukum Terhadap Hak Cipta Programmer Dari Pembajakan Program Komputer, (6), 8.

Mac Callum, K., Jeffrey, L., & Kinshuk. (2014). Comparing The Role Of Ict Literacy And Anxiety In The Adoption Of Mobile Learning. Computers In Human Behavior, 39, 8–19.

Nurjanah, E., Rusmana, A., & Yanto, A. (2017). Hubungan Literasi Digital Dengan Kualitas Penggunaan E-Resources. Lentera Pustaka: Jurnal Kajian Ilmu Perpustakaan, Informasi Dan Kearsipan, 3(2), 117.

Oh, S. J., Benenson, R., Fritz, M., & Schiele, B. (2016). Faceless Person Recognition: Privacy Implications In Social Media. Dalam B. Leibe, J. Matas, N. Sebe, & M. Welling (Ed.), Computer Vision – Eccv 2016 (Vol. 9907, Hlm. 19–35). Cham: Springer International Publishing.

Saavedra, A. R., & Opfer, V. D. (2012). Learning 21st-Century Skills Requires 21st-Century Teaching. Phi Delta Kappan, 94(2), 8–13.

Satrio, A., & Gafur, A. (2017). Pengembangan Visual Novel Game Mata Pelajaran Ilmu Pengetahuan Sosial Di Sekolah Menengah Pertama. Jurnal Inovasi Teknologi Pendidikan, 4(1), 1.

Singh, R., Kumar, H., Singla, R. K., & Ketti, R. R. (2017). Internet Attacks And Intrusion Detection System: A Review Of The Literature. Online Information Review, 41(2), 171–184.

Sobaih, A. E. E., Moustafa, M. A., Ghandforoush, P., & Khan, M. (2016). To Use Or Not To Use? Social Media In Higher Education In Developing Countries. Computers In Human Behavior, 58, 296–305.

Trilling, B., & Fadel, C. (2009). 21st Century Skills: Learning For Life In Our Times. John Wiley & Sons.

Tuamsuk, K., & Subramaniam, M. (2017). The Current State And Influential Factors In The Development Of Digital Literacy In Thailand’s Higher Education. Information And Learning Science, 118(5/6), 235–251.

Verstraete, M., Bambauer, D. E., & Bambauer, J. R. (2017). Identifying And Countering Fake News. Ssrn Electronic Journal.

Wall, M. (2015). Citizen Journalism: A Retrospective On What We Know, An Agenda For What We Don’t. Digital Journalism, 3(6), 797–813.

Wilson, M., Scalise, K., & Gochyyev, P. (2015). Rethinking Ict Literacy: From Computer Skills To Social Network Settings. Thinking Skills And Creativity, 18, 65–80.

Yanti, M. (2016). Determinan Literasi Digital Mahasiswa: Kasus Universitas Sriwijaya [Determinants Of Students Digital Literacy: The Case Of Sriwijaya University]. Buletin Pos Dan Telekomunikasi, 14(2), 79.

Ziaurrahman, Z., & Surjono, H. D. (2017). Pengembangan E-Learning Adaptif Pada Mata Pelajaran Pendidikan Agama Islam Untuk Kelas X Sma. Jurnal Inovasi Teknologi Pendidikan, 4(2), 119–129.

(C) Conference Paper/Proceeding

Santoso, I., Yohansen, I., Nealson, Warnars, H. L. H. S., & Hashimoto, K. (2017). Early Investigation Of Proposed Hoax Detection For Decreasing Hoax In Social Media. Dalam 2017 Ieee International Conference On Cybernetics And Computational Intelligence (Cyberneticscom) (Hlm. 175–179). Phuket: Ieee.