



Youth Empowerment Through Digital Literacy Education

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Abstract. Youth as pioneers of community development need to be stimulated through programs to strengthen youth capacity and increase competence following the demands of the digital technology era. The PPM program was youth empowerment through digital literacy education. It aimed to 1) increase understanding and awareness of the youth to ITE Law, 2) improve the ability of youth in using information technology for learning resources, and 3) improve the ability of youth in using information technology for online business. This PPM program was well implemented through the methods of 1) capacity building of youth in seminars, 2) training on the use of digital technology, and 3) online business mentoring. The PPM program was well implemented through seminars, training, and mentoring in the use of digital technology. PPM activities increased the understanding and awareness of the youth to ITE Law, improve the ability of youth in using information technology for learning resources, and improve the ability of youth in using information technology for online business.

Keywords: Youth Empowerment · Digital Literacy Education · Tepus Village

1 Introduction

Indonesian people have a low technology literacy culture. The low literacy culture is seen in everyday life, such as low interest in reading and writing. People prefer watching TV and listening to music, etc. In this era of gadgets and the internet, the low literacy culture can weaken their identity as students. The low literacy culture today can cause stuttering in the face of communication and information technology that has rapid and extraordinary development. The public is easy to access and disseminate hoax news or information. The cases, such as bullying, fraud, and pornography/actions start from a lack of literacy, both directly and indirectly [1].

People who do not have the readiness to use information technology, and not literate to the information brought by the media, can cause various problems, such as physical and psychological problems. For students who are not wise to digital media, it may lead to consumptive actions, such as addiction to watching television, playing games both online and offline, social media without paying attention to time, accessing pornographic sites, and other useless information. Most students are more likely to internalize media messages and integrate them in self-formation so that they can foster individualism,

radicalism in thinking and exist more in the virtual world than in the real world. Many students believe the image that appears on television is a real thing, so they have an image of themselves as characters and singers, starting from the style of dress, haircut, to everyday behavior [1].

Digital literacy is an individual's interest in attitudes and abilities in using the tools of digital communication and technology, that used to analyze, manage, evaluate and access information, communicate with others, a new knowledge gaining. By those ability and attitudes, they can participate effectively in society. While literacy of media is a perspective that is used actively by an individual in accessing and interpreting the messages conveyed by a media [9]. The term digital literacy is used to denote a fundamental aspect of new media, namely digitalization [1].

The digital world development create two opposite sides, relating to the digital literacy development. The development of digital tools and channels for information in digital form provides both challenges and opportunities. One of the concerns arisen is that the very high number of young people who access the internet, which is approximately 70 million. They spend their time on the internet, for example using mobile phones, personal computers, or laptops, which is approaching 5 h in a day [2].

The potential for involvement of parents is very influential in current era of digital. Supported by digital literacy as a life skill that includes not only the capacity to utilize technology, information, and communication devices, but also the ability to engage, learn, and think critically, creatively, and inspirationally as digital competency [3].

Research published by Mitchell Kapoor showed that the younger generation who can access digital media today have not matched their capacity to use digital media to gain self-development knowledge. Also, this is not supported by the increasing number of materials or information presented in digital media which are of various types, relevance, and validation [2].

The current device of information and communication among people has been transformed into a device that not only provides telecommunication features but also data access. The global information society considers wireless communication devices as a necessity that influences lifestyles, especially in accessing and distributing information. The Indonesian people have currently been affected by the advances in information technology, which is proved by the ownership number of mobile phones, almost every person has a mobile phone [4].

According to UNESCO, digital literacy is the capacity to utilize Information and Communication Technology (ICT) to assess, use, locate, communicate, and create information and content using technical and cognitive abilities. The purpose is to educate and advocate for internet users. Protection aspects include personal data protection, online security, and individual privacy. Knowledge of the protection aspect is very important so that the personal data of internet users is not misused by others, anticipates online fraud, and has personal privacy in cyberspace. On the other hand, the rights aspects consist of freedom of expression, intellectual property, and social activism. Freedom of expression is part of Human Rights (HAM) which manifests into the right to express opinions, ideas, opinions, and feelings so that they are known by others without violating the rights of other parties and the public interest. Through intellectual property, the initiator protects

the product. Meanwhile, social activism is an online meeting and gathering activity to realize a social change [5].

Today, literacy of media is more defined as social media using, in which, is specified in literacy of digital, might be as a derivative of wider literacy of media. Media literacy cover many medias, such as film, television, and printed media. According to Kurniawati and Baroroh (2016), the concept of media literacy is made up of two words: media and literacy. Literacy can be defined simply as the capacity to write and read. While media may be described as people, objects, or events. To summarize, digital literacy is described as the capacity to study, search for, and utilise numerous media sources [6].

Young people frequently report a lack of comprehension of the digital world and the publication of information on social media that has a negative influence on their usage of social media. Stefany et al. (2017) define media literacy as social media users' capacity to critically and creatively access and manage information [6].

The public's awareness about the damaging effects of mass media is referred to as media literacy. As we all know, the media has two sides of the coin in terms of influence, either positive or negative. The downsides can outweigh the pros, such as diminishing individual privacy, raising the possibility for crime, and causing communication overload. Through media literacy, consumers of mass media may react and assess a message transmitted by media with full understanding and a sense of responsibility [6].

Digital literacy may be defined as an individual's ability to employ functional abilities on digital devices.. Then, a person can think critically, communicate effectively, select and find information, be collaborate with others and creative, and ignorance the security on electronic and the developed socio-cultural contexts (Hague & Payton, 2010).

Digitalization entails improving digital literacy and abilities. Mastering current information technology for life and business, as well as the capacity to analyse, seek, and evaluate information, constitutes digital literacy. Meanwhile, digital skill is an individual's ability to use and use information technology. The term is divided into three, general, professional and complementary. The general term refer to using the technologies for everyday life, like browsing the Internet to look for an information, and using software like data processing and analyzing, and for office need etc.). The professional term is needed to create resources and services of information technologies. And, the complementary or a blended term is the mix of general and professional term, such as using digital messengers and social network for work and other.) [7].

Digital literacy always need to up-to-date because the rapid development of digital technology from time to time. Martin (2006) classified digital literacy into three levels. First, digital competence. It is a digital of how and know. Second, digital usage. The term refer to using and applying digital competence. And, digital transformation that defined as building a new insight of digital usage. Prior et al. (2016) observe students and discover that they may have different of digital literacy levels. Then, it assumes that all students have a certain level or same level of digital literacy. By those differences of level can lead to problems in online learning. As the result, students capability in performing or doing might be different from the expectations of teachers[8].

In educational context, adequate literacy of digital also has an important role in developing insight of material to the certain subject through encourage the creativity and curiosity [9]. Research shows that using technology, such as e-library and e-text,

lead students to be better due to it allowing them to be creative, good, and up-to-date presentations. Payton & Hague (2010), showed the students who extensively and intensively use technology tend to easily adopt the strategies of learning by using technological devices to support the process of learning [10].

Digital literacy, as defined in the late 1990s, is the capacity to absorb and utilise information in diverse formats from a broad variety of sources when provided via computers, notably the internet (Gilster, in Pool, 1997). Furthermore, this definition provides a great beginning point for digital activities and texts, which are becoming more complicated, such as mobile media development, which is driving the world's growth (see Pearce, 2013). It is only one illustration of how different and divergent digital activities may be. According to research on vernacular practices with technology (Dussel et al., 2013), different settings have diverse technological, political, and pedagogical histories that impact adoption and use of digital technologies, as well as how digital literacy is defined [11].

Also, Radovan (2014) shows that digital literacy has a significant positive impact on academic performance. Digital literacy contributes to more efficient task completion through the help of computer and software programs, such as worksheets and word processors (Argentin, 2014).

Some required abilities include the ability to operate a computer, smartphone, and the internet, as well as creativity in online learning, collaborative skills, and the capacity to evaluate and utilise information. These talents are referred to as digital literacy capabilities. Thus, digital literacy skills play a very strategic role in determining the success of learning (Dinata, 2021).

Digital literacy is described by Paul Gilster in his book *Digital Literacy* (1997) as the ability to understand and use information in various forms from a very big variety of sources that are accessed through computer devices [12].

Bawden (2001) "offers a new understanding of digital literacy rooted in computer literacy and information literacy. Computer literacy was firstly developed in the 1980s, when microcomputers were increasingly used, not only for the business environment but also in society. However, information literacy just spread widely in the 1990s when information was more easily compiled, accessed, and disseminated through networked information technology." Therefore, the opinion of Bawden associated the digital literacy with technical skills in compiling, accessing, disseminating and understanding information. And, it needs to have a cultural approach in learning to filter the information [12].

Brian in 2015 in a journal written by Maulana (Maulana, 2015) describes 10 benefits of digital literacy. They are saving time, Learning faster, Saving money, Safer, Up-to-date, Staying connected, Making better decisions, being able to make someone work, Making Happier, and Influencing the World [13].

Digital literacy is considered as an essential part of the development of the learning process in higher education. The findings in the research of Kurnia, Santi, and Astuti (2017) show that universities are the main actors in the digital literacy movement by 56.14%. The Ministry of Information and Technology in collaboration with UNICEF provides information that around 79.5% of children and adolescents aged 10–19 years

in Indonesia are internet and digital media users. The age of 17–19 years in the findings indicates the age of students in universities [14].

Harjono (2018) argues that digital literacy is a combination of critical thinking, social awareness, information and communication technology skills, and collaboration skills. Eshet Alkalai and Chajut (2009)'s framework consists of a set of competencies. Firstly, photo visual literacy is the capacity to interact successfully with digital settings, such as user interfaces, through graphic communication. Secondly, reproductive literacy is the ability to generate significant textual, genuine, and artistic works by modifying and reproducing pictures, audio clips, and pre-existing digital text. Thirdly, branch literacy is the capacity to generate knowledge through nonlinear navigation within knowledge domains such as the Internet and other hypermedia environments. Furthermore, information literacy is the capacity to critically ingest information as well as sort out and filter inaccurate and biased information [15].

Digital literacy is a need to implement to all the subjects. The incorporation of digital literacy into the teaching-learning process gives possibilities for literacy through the use of engaging reading materials, interaction between students and teachers, communication, references, and problem-solving. According to Santoso and Lestari (2019), digital literacy can assist students better grasp their learning content. The Ministry of Education and Culture, in partnership with the Ministry of Communications and Information, is also campaigning on the importance of digital literacy in the teaching-learning process. The cooperation actively promotes community digital literacy. According to Mcloughlin [16], digital literacy may foster curiosity and creativity while also expanding one's knowledge. Most students are proficient in utilizing the internet as a community in cyberspace, as well as social networking, e-mail, and Skype. Consequently, in this digital age, students should keep up with technological and scientific advancements in order for learning to be relevant to students' needs and the times [17].

Tepus Village is located in Tepus District, Gunungkidul Regency, and Special Region of Yogyakarta. The village is geographically located in the area of Gunung Sewu Geopark, which is close to the south coast. It consists of 20 padukuhan (hamlet) areas, namely Padukuhan Gembuk, Tegalweru, Trosari 1, Trosari 2, Blekonang 1, Blekonang 2, Blekonang 3, Tepus 1, Tepus 2, Tepus 3, Jeruk, Singkil, Ngasem, Klumpit, Ngalangan, Kanigoro, Dongsari, Pacungan, Pudak, Pakel.

The total population of Tepus village is 9.829 people consisting of 4.690 males and 4.675 females. Most of the people have a profession as farmers, farm-laborers, and private workers. Others profession is as fishermen, civil servants, and sellers. On the level of education, the majority of Tepus villagers graduated from elementary school to high school, and some of them have bachelor's degrees.

From an age perspective, the population proportion of Tepus village is almost balanced between the elderly, youth, and children. Most of the youth in Tepus village work outside the village, and the rest are still in school. Along with the development of digital technology, all the youth of Tepus village already have mobile phones. The rapid development of information technology is a factor that encourages the emergence of problems in society, including among the youth in the Tepus village. There are various problems. First, young people who are still in school, are lazy to read either books or textbooks as most of their time is used to playing and accessing the internet through a smartphone.

Most of the youth in Tepus village already have a smartphone to access the internet. But, young people, who are still students, use their time to use smartphones, both at home and outside the home. For youths whose homes do not have internet access, they go to find a location with WiFi. This kind of habit causes them to forget and be lazy to read either books or textbooks.

Second, young people use the internet unwisely, because they are used more for unproductive and useless things. The youth in Taji village use the internet more for chatting and status updates through social media such as Whatsapp, Facebook, or Instagram. No youths use the internet for productive activities that can earn income. In general, they do not know how to use internet facilities to earn income.

Third, young people do not understand and are not aware of the Law on Information and Electronic Transactions and the consequences of using social media. Not understanding the law regarding electronic information and transactions will be very risky for violating the law due to improper social media behavior.

Based on the problems and background, the formulations of the problem are, (1) How to increase youth understanding and awareness toward the ITE Law? (2) How to increase youth's ability to use information technology for learning resources?, and (3) How to improve youth's ability to use information technology for an online business?

2 Implementation Method

The target audience of this Community Service (PPM) activity was the youth of Tepus village, Tepus District, Gunung Kidul Regency, and Special Region of Yogyakarta. And, the total subject was 26 people. The implementation methods on PPM activity were through several ways. First, Improving youth capacity. Youth capacity building is carried out through seminars in the context of disseminating the ITE law. Second, Training. The training consisted of the use of the internet as a source of learning and to earn income. Third, Mentoring. The mentoring activity was an online business, aiming the subject can successfully use the internet as a source of income.

The steps in the implementation of the PPM activity were as follows. First, it conducted coordination among the parties, such as the PPM Team, KKN (Community Service Activity) students, and the Village government of the Tepus village. Second, Dissemination and registration of training participants. Third, the step of implementing the seminar activity toward ITE laws. Next, training in using information technology as a learning resource. After that, it continued to train on the use of information technology for online business. And, mentoring activity in using information technology for online business.

3 Implementation of PPM Activity

3.1 Result of the Implementation of PPM Activity

The PPM activity was carried out on September 22 and 29, 2019 at the Tepus Village Hall. The PPM activities were a seminar on the ITE Law, training pertinent to the use of information technology as a learning resource and online business, and mentoring

for online business. Participants in seminars, training and mentoring were youths from Tepus village. The participants for seminar, training and mentoring were 28 people. The materials provided to the participants were (1) Information about the ITE Law, the risk of violating the ITE Law, and ethics in using social media, (2) Skills in using information technology as a learning resource, and (3) Skills in using information technology for online business.

Based on the evaluation of the training activities, concluded that (1) 77% of participants have an excellent understanding and 23% have a good understanding of the materials of the ITE laws. (2) 70% of participants have an excellent understanding and 30% have a good understanding of the use of the internet as a learning resource and communication. (3) 84% of participants have an excellent understanding and 16% have a good understanding of the material for using the internet for online business. (4) 65% of participants stated that the implementation of PPM activities runs very well and interestingly. Meanwhile, 35% of participants stated the implementation of PPM activities runs well and interestingly. After two days of training, mentoring is carried out once a week until November 2019. Based on the mentoring activities, one hamlet has succeeded in developing an online store using the Instagram platform. The name was PAKEL SHOP, and IG address: <https://instagram.com/pakelpadukuhangk/>. The name PAKEL SHOP is taken from the name of the hamlet. The Pakel hamlet develops food products, made from cassava. PAKEL SHOP is used to upload and sell products, of Pathilo and cassava crackers. At the beginning of November 2019, PAKEL SHOP has sold 150 packs of Pathilo products, with a turnover of IDR 750,000.00.

3.2 Discussion of the Result of the Implementation of PPM Activity

This service program was originally proposed in the Plembon hamlet, Taji Prambanan village, Klaten regency, and Central Java province. But, the location was not a location for KKN, the PPM location was moved to a KKN location in Tepus village, Tepus District, Gunungkidul regency. Since the PPM team leader is a DPL KKN for the special semester, the implementation of this PPM can only be carried out after the special semester KKN students are deployed, which was in September 2019.

The implementation of PPM begins with coordinating the PPM team with KKN students, as well as with the Village Head of Tepus village. After an agreement was reached with the KKN students and the village government, it carried out the dissemination and registration of participants, by sending invitation letters to 8 hamlets in Tepus village. Dissemination information and registration were carried out from September 16 to 20, 2019. Each hamlet was asked to send 4 youths as participants. As of Friday, September 20, 2019, 35 participants were registered. But, during the implementation, there were only 25 participants on the first day, and 28 participants on the second day. Participants who did not attend the agenda because they had urgent work.

The material on the first day consisted of general material on information technology by Dr. Sutirman, M.Pd., meanwhile information of the ITE Law and social media ethics conveyed by Rr. Chusnu Syarifa Diah Kusuma, M.Sc. And, the use of information technology as a communication medium and learning resource conveyed by Arwan Nur Ramadhan, M.Si. The third material was the use of information technology as a medium of communication and learning resources. The activity was carried out in practice by

using internet network facilities. The material presented at the second meeting was the use of information technology for online business and was delivered by Yuliansah, M.Pd. After that, it was followed by mentoring on business online.

Mentoring activities of Online business were focused on Pakel Hamlet as it has a product of Pathilo, a food made from cassava. Pakel hamlet managed to create a PAKEL SHOP Instagram account that was used to promote and sell Pathilo products. As of early November 2019, PAKEL SHOP has succeeded to sell 150 packs of Pathilo products.

3.3 Supporting and Inhibiting Factors

The Supporting and Inhibiting factors in the implementation of this PPM activity were, first (1) Supporting factors were the availability of funds from UNY through LPPM, good cooperation from the Tepus village, and availability of facilities, such Tepus village hall. Second, (2) Inhibiting factors were the Internet network at PPM location and not all youths have a clear online business plan, so they were difficult to practice an online business.

4 Conclusion

PPM activities in Tepus Village, Tepus District, Gunungkidul Regency have been carried out well in ways of training and mentoring in the use of information technology. The implementation of PPM activities can increase the youth understanding and awareness toward the ITE Law, Improve youth's ability to use information technology for learning resources and online business.

The suggestions were the need for programs to increase awareness and entrepreneurial skills for the youth in Tepus village and programs to improve youth skills to design a product marketing communications.

References

1. A. Asari, T. Kurniawan, S. Ansor, and A. B. N. R. Putra, "KOMPETENSI LITERASI DIGITAL BAGI GURU DAN PELAJAR DI LINGKUNGAN SEKOLAH KABUPATEN MALANG," *Jurnal Kajian Perpustakaan dan Informasi*, vol. 3, 2019, [Online]. Available: <http://journal2.um.ac.id/index.php/bibliotika>
2. Nursalam, Suardi, Syarifuddin, I. Ainun Mutiara, and Herdianty R, "PEMBERDAYAAN MASYARAKAT DESA MELALUI LITERASI DIGITAL BERBASIS QR CODE DI DESA BONTO JAI KECAMATAN BISSAPPU KABUPATEN BANTAENG," *Jurnal Pengabdian Kepada Masyarakat*, vol. 4, no. Membangun Negeri, pp. 228–238, 2020.
3. Didah, A. Indra Susanti, A. Nilam Sari, and F. Rinawan Ruluwedrata, "Pemberdayaan Orang Tua dalam Literasi Digital Berbasis Aplikasi Iposyandu Pemberdayaan Orang Tua dalam Literasi Digital Berbasis Aplikasi Iposyandu untuk Memantau Tumbuh Kembang Balita," *Media Karya Kesehatan*, vol. 4, 2021.
4. R. Veronika Br Ginting, D. Arindani, C. Mega Wati Lubis, and A. Pramai Shella, "LITERASI DIGITAL SEBAGAI WUJUD PEMBERDAYAAN MASYARAKAT DI ERA GLOBAL-ISASI," *JURNAL PASOPATI*, vol. 3, no. 2, pp. 118–122, 2021, [Online]. Available: <http://ejournal2.undip.ac.id/index.php/pasopati>.

5. E. Z. L. Astuti, “Gerakan Literasi Digital: Studi Pemberdayaan Pemuda Melalui Program Sistem Informasi Potensi Kreatif Desa di Kulonprogo,” *Jurnal Pemberdayaan Masyarakat: Media Pemikiran dan Dakwah Pembangunan*, vol. 3, no. 2, Nov. 2019, doi: <https://doi.org/10.14421/jpm.2019.032-05>.
6. H. Silvana and Cecep, “PENDIDIKAN LITERASI DIGITAL DI KALANGAN USIA MUDA DI KOTA BANDUNG,” *Jurnal Ilmu Pendidikan*, 2019.
7. G. A. Abrosimova, “Digital literacy and digital skills in university study,” *International Journal of Higher Education*, vol. 9, no. 8, pp. 52–58, 2020, doi: <https://doi.org/10.5430/ijhe.v9n8p52>.
8. C. M. Tang and L. Y. Chaw, “Digital Literacy: A Prerequisite for Effective Learning in a Blended Learning Environment?,” *The Electronic Journal of e-Learning*, vol. 14, pp. 54–65, 2016, [Online]. Available: www.ejel.org.
9. S. Payton and C. Hague, *Digital literacy across the curriculum a Futurelab handbook*. 2011. [Online]. Available: www.futurelab.org.uk/.
10. M. Firman Akbar and F. D. Anggaraeni, “TEKNOLOGI DALAM PENDIDIKAN : LITERASI DIGITAL DAN SELF-DIRECTED LEARNING PADA MAHASISWA SKRIPSI,” *Jurnal Indigenous*, vol. 2, no. 1, pp. 28–38, 2017.
11. L. Pangrazio, A. L. Godhe, and A. G. L. Ledesma, “What is digital literacy? A comparative review of publications across three language contexts,” *E-Learning and Digital Media*, vol. 17, no. 6, pp. 442–459, Nov. 2020, doi: <https://doi.org/10.1177/2042753020946291>.
12. K. B. Dinata, “LITERASI DIGITAL DALAM PEMBELAJARAN DARING,” *Jurnal Eksponen*, vol. 11, pp. 21–27, 2021.
13. E. Sumiati and Wijonarko, “Manfaat Literasi Digital Bagi Masyarakat Dan Sektor Pendidikan Pada Saat Pandemi Covid-19,” *Buletin Perpustakaan Universitas Islam Indonesia*, vol. 3, no. 2, pp. 65–80, 2020.
14. H. Nelva Saputra and Salim, “Potret Sikap Mahasiswa dalam Penggunaan Literasi Digital,” *Jurnal Komunikasi Pendidikan*, vol. 4, no. 2, pp. 94–101, 2020, [Online]. Available: <http://journal.univetbantara.ac.id/index.php/komdik>.
15. Y. Anggeraini, A. Faridi, J. Mujiyanto, and D. Anggani Linggar Bharati, “Literasi Digital: Dampak dan Tantangan dalam Pembelajaran Bahasa,” 2019.
16. C. McLoughlin, “What ICT-related skills and capabilities should be considered central to the definition of digital literacy?,” 2011.
17. P. Hariati, “Implementation of Digital Literacy toward Pandemic Situation,” *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, vol. 4, no. 2, pp. 2920–2926, May 2021, doi: <https://doi.org/10.33258/birci.v4i2.2001>.

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