



THE ROLE OF SOCIAL STUDIES IN DIGITAL LITERATION FOR “DIGITAL NATIVE”

Parulian Irwansyah
parulianirwansyah@upi.edu
Universitas Pendidikan Indonesia

Siti Nurbayani K
s.nurbayani@upi.edu
Universitas Pendidikan Indonesia

Abstract : Industry 4.0 through internet as a new media show up the digitalization. This situation makes the new generation of "digital natives" who need digital literacy skills for the predicate. This article shows that the role of social studies interventions is needed through representative the teacher roles or getting the title “digital natives” in learning. And learning strategies that develop for digital literacy skills can include the digital content in the main learning with appropriate learning strategies such as reflective design based learning, designing netotiated learning, storytelling digital approaches and information processing learning models.

Keywords : digital natives, social studies and digital literacy

I. INTRODUCTION

The industry new concept 4.0 was introduced in Germany at the Honnover Fair in 2011. When countries in Europe face many problems such as aging populations and competition of developing countries. These problems encourage the development of technology industry to reduce labor, shorten the time to develop products, use the efficient resources. Industry of Digitalization 4.0 does not only end in factories and businesses but also the products and the customers. The products are produced by Industry 4.0 are the smart products (Qin, Liu, & Grosvenor, 2016).

The digital phenomena show up to a domino effect on the changes in various parts of life or digitalization. In the economic part, the digital technology has made an online shopping community that allows the exchange of information or feedback between the customers based on their experience of making a influence decision in buying products (Cheung, Liu, & Lee, 2015). The internet supports information acces for jobs, communication and access to public services, especially social programs such as e-health, e-government and e-commerce (Mariscal AvilÃ©s, BenÃ-tez Larghi, & MartÃ-nez Aguayo, 2016). In the disaster part, Web 2.0 like Facebook provides efficiency instantly information on important events compared with traditional media (Brengarth & Mujkic, 2016). The use of social media and applications such as flood monitoring and parks by smart city, Qlue, and the other applications that strengthen management disaster services, especially floods in DKI Jakarta. In the education part, the digital technology offers the benefits such as web 2.0 in education, one of which is e-learning. The success of using e-learning for each individual needs to be supported by digital literacy. This part is related to e-learning services that allow the use of taking information, making, getting the data, and online interaction online (Mohammadyari & Singh, 2015).



The internet users both digital natives and digital migrants use it regularly or routine. But children and teenagers play a major role in daily life both as family, peers, and school (Vélez & Zuazua, 2017). The terms of digital natives and digital migrants who only point to natural digital skills without the education support are myths. This generation only deal with the digital world but unable to handle digital technology effectively and efficiently (Kirschner & De Bruyckere, 2017). Most of students are able to do the technical and procedural activities using computers and the internet but not with the complex tasks (Calvani, Fini, Ranieri, & Picci, 2012). Student digital literacy in Malaysia for educational needs shows the students have difficulty finding relevant content and evaluating digital content (credibility, originality, reliability) (Shariman, Razak, & Noor, 2012). Digital learning are provided to migrants or who born before the digital era can develop the digital literacy (Millard, Baldassar, & Wilding, 2018). For becoming a digital native innate factors such as age are not determinants but the skills (Akçayır, M., Dündar, H., & Akçayır, G., 2016, hlm. 439). Both the home environment and the individuals preferences who get the trust in using ICT to process information play an important role in digital competence (Hatlevik, Guomundsdóttir, & Loi, 2015).

In a society that has become a digital demand for competently digitally developing. In relation to the role of education, of course, the school cannot change the home environment. So that the pedagogik practice in the class becomes important to provide the opportunities for all students. It is important considered to reduce the gap between people who are "rich information" and "poor information". Therefore this article will discuss the role of education in shape digital literacy for "the digital natives".

II. LITERATURE REVIEW

The term digital literacy was first used by Paul Gilster in 1997 in his book "digital literacy", which clearly emphasized "digital literacy is about mastering ideas, not keystrokes" (Bawden, 2008). Gilster set out an appropriate term for mentioning digital communication and the internet era different from previous concepts of computer-related literacy such as visual literacy, computer literacy and technology literacy in digital space (Belshaw, 2011). Digital literacy in public services that provides intensive the knowledge such as education, health and e-government can reduce the digital divide or digital opportunities towards sustainable development (Sharma, Fantin, Prabhu, Guan, & Dattakumar, 2014).

Can digital literacy skills for digital natives get only through non-formal education or formal education? Because, the digital literacy in children is also close related to the role of adults such as parents and teachers in guiding online behavior (Vélez, Olivencia, & Zuazua, 2017). Digital literacy learning has two ways that can be used, there are school education (formal) and community (non-formal) (Herlina, 2015). Formal education has a role to expand native digital horizons in using and adopting digital technology, especially creating a sense of comfort (Ng, 2012). The changes in the education system are carried out to supply students with key skills to replace the economic status (Abdullah & Osman, 2010; Ongardwanich, Kanjanawasee, & Tuipae, 2015).

European Information Society Thematic Protocol in Belshaw said "to participate and take benefit, the citizens must be literate digital with these skills will get benefit and participate in the information society (Belshaw, 2011). Social sciences education according to the National Council for Social Studies (NCSS) has a role to help students become good citizens as part of the world community (Sapriya, 2012). Digital literacy in social sciences education according to P21 in the form of: First using the digital technology, communication devices and or networks that can be accessed, managed, integrated, evaluated, and created information so that



it can function in knowledge. Second, using technology as devices to research, organize, evaluate, and communicate the information and basic understanding of ethical issues or rules about access and information mastery (Partnership for 21st century Skill, 2008). Mastery of digital literacy this is what distinguishes the 21st century from the previous century. Especially in learning social sciences to help students become good citizens in the digital age or become citizens net.

In some teacher's parts plays an important role in preparing the digital success. But it does not imply that the teacher format the skills, however to guide the students. In this case, for example, the teachers can help the students develop their skills to use search engines effectively using the web, or help to develop the strategies to manage the technological disruptions in learning (Thompson, 2013). This has revolutionized learning and created the teachers need for digital literate. It is important to realize that these teachers are responsible for teaching and training the digital natives to acquire digital knowledge, abilities, skills and competencies in learning. In studies conducted on pre-service teachers in Spain showed that the use of positive web 2.0 teachers tools have digital literacy competencies. This is rated good because it can optimize the learning process according to 21st century literacy practices and encourage the education promotion for digital natives (García-Martín & García-Sánchez, 2017). The teacher has a dual responsibility in this matter that is not only using technology for educational purposes but also developing digital competencies of pre-service professional teachers. So that for the digital integration competencies of professional professionals to occur, teachers need access to relevant equipment, workplace support and a positive attitude about technology (Instefjord & Munthe, 2017). For this reason, in promoting the role of education for digital natives with digital literacy skills a representative teacher is also needed. In this case the teacher must also have a digital native predicate in which there are digital literacy competencies.

It should be understood that digital literacy is a process of sustainability that does not develop quickly but become part and developing from the student learning process. In digitalization Slovakia in education is realized widely and long term into the education system. There are at least three pillars of digitalisation education strategies, there are human, infrastructure and content. Especially the content such as digital technology in the education process, focusing on important digital competencies, providing software, e-portals and supporting research. This study recommends that digital competencies involve content standards at defined purpose in key subjects, certify digital technology used, and focusing on specifications (Javorský & Horváth, 2014). Literature studies reveal the information processing learning models can improve information processing capabilities. This learning model focuses on the process or information management activities to improve students' capabilities through the learning process. Information processing refers to how to blunt / receive stimuli from the environment, organize data, solve problems, find concepts and use verbal and visual symbols (Rehalat, 2014). Studies in the Netherlands offer a Reflective Design based Learning (RDBL) framework in the form of making digital equipment to teach digital literacy in elementary and secondary schools. In the application of several things that need to be considered in the form of learning support provided different elementary schools are more structured and medium towards independent learning; the complexity of design problems is adjusted to the level of design skills; and the learning objectives of digital literacy skills must be adjusted to the grade level of students (Bekker, Bakker, Douma, van der Poel, & Scheltenaar, 2015). Although many studies have doubted on digital literacy skills on natives digital. But it cannot be denied that students get certain digital literacy independently, sometimes more skilled than the teachers. Through designing negotiated learning pedagogy (the design of negotiation learning) the teachers connect the differently perspective from school learning with digital literacy get from outside of the school. Utilizing the trends of digital literacy development in these students



shows that appropriate learning design can motivate students to develop their own learning autonomy. Finally, optimize digital literacy skills for ICTs in the learning process can also encourage students' digital literacy (Ting, 2015). Developing students' digital literacy through a digital storytelling approach provides the opportunities for students to solve problems and get digital literacy skills through authentic practice and experimentation because it allows students to use their creativity to develop storylines from different angles to communicate with viewers by using music effects, shooting, editing, microphone, tripod, and video editing (Chan & Chiu, 2017).

III. CONCLUSION

Industry 4.0 show up the internet in the digital era and networking communities that have access on information. The role of educational interventions is important to answer the problem of "digital natives". Moreover, the phenomenon of digitalization in various part of life such as the online shopping community that allows creat and exchange the information; access of the poor society to digital social programs; the role of social media and applications in communication face effective and efficient disasters; e-learning learning makes digital natives faced with digital literacy needs. Complex communication requires digging skills, quickly filtering valuable information to make decisions. 21st century key skills in the dimensions of digital literacy skills are evaluating information to avoid bias.

Digital literacy can be learned in formal and non-formal education, one of them through social studies. For this reason the role of the representative teacher with digital literacy skills is needed to optimize the learning process. The teacher does not play a role in forming but helping the students to develop digital literacy skills through learning strategies and managing learning disorders. Learning digital literacy skills can be developed focusing on the digital technology content standards in main subjects. There are several learning strategies that have a positive impact on digital literacy skills offered such as Reflective Design based Learning (RDBL) in the form of making digital equipment to teach digital literacy in elementary and secondary schools; designing netotiated learning pedagogy (the design of negotiation learning) the teachers associate perspective differently from school learning with digital literacy get from outside of school; Information processing learning models and digital storytelling approaches through practices and authentic experiments to develop storylines from different angles to communicate with viewers using digital devices.

REFERENCES

- Sapriya. (2012). *Pendidikan IPS konsep dan pembelajaran*. Bandung: PT Remja Rosdakarya.
- Bawden, D. 2008. Origins and concepts of digital literacy. *Digital Literacies*, 30 (1), 17–32.
- Bekker, T., Bakker, S., Douma, I., van der Poel, J., & Scheltenaar, K. 2015. Teaching children digital literacy through design-based learning with digital toolkits in schools. *International Journal of Child-Computer Interaction*, 5, 29–38.
- Brengarth, L. B., & Mujkic, E. 2016. WEB 2.0: How social media applications leverage nonprofit responses during a wildfire crisis. *Computers in Human Behavior*, 54, 589–596.
- Calvani, A., Fini, A., Ranieri, M., & Picci, P. (2012). Are young generations in secondary school digitally competent? A study on Italian teenagers. *Computers and Education*, 58 (2), 797–807.
- Chan, B. S. K., & Chiu, T. K. F. 2017. Digital Literacy Learning In Higher Education Through Digital Storytelling Approach. *Journal of International Education Research*, 13 (1), 1–16.



- Cheung, C. M. K., Liu, I. L. B. L., & Lee, M. K. . 2015. How Online Social Interactions Influence Customer Information Contribution Behavior in Online Social Shopping Communities: A Social Learning Theory Perspective. *Journal Of The Association For Information Science And Technology*, 1–11.
- García-Martín, J., & García-Sánchez, J. N. 2017. Pre-service teachers' perceptions of the competence dimensions of digital literacy and of psychological and educational measures. *Computers and Education*, 107, 54–67.
- Hatlevik, O. E., Guomundsdóttir, G. B., & Loi, M. 2015. Digital diversity among upper secondary students: A multilevel analysis of the relationship between cultural capital, self-efficacy, strategic use of information and digital competence. *Computers and Education*, 81, 345–353.
- Herlina, D. 2015. Membangun karakter bangsa melalui literasi digital. In *Prosiding seminar nasional konstibusi ilmu-ilmu sosial dalam persepatan pembangunan Indonesia bermartabat*.
- Instefjord, E. J., & Munthe, E. 2017. Educating digitally competent teachers: A study of integration of professional digital competence in teacher education. *Teaching and Teacher Education*, 67, 37–45.
- Javorský, S., & Horváth, R. 2014. Phenomenon of Digital Literacy in Scope of European Cross-curricular Comparison. *Procedia - Social and Behavioral Sciences*, 143, 769–777.
- Kirschner, P. A., & De Bruyckere, P. 2017. The myths of the digital native and the multitasker. *Teaching and Teacher Education*, 67, 135–142.
- Mariscal AvilÃ©s, J., BenÃ-tez Larghi, S., & MartÃ-nez Aguayo, M. A. 2016. The informational life of the poor: A study of digital access in three Mexican towns. *Telecommunications Policy*, 40 (7), 661–672.
- Millard, A., Baldassar, L., & Wilding, R. 2018. The significance of digital citizenship in the well-being of older migrants. *Public Health*, 3–7.
- Mohammadyari, S., & Singh, H. 2015. Understanding the effect of e-learning on individual performance: The role of digital literacy. *Computers and Education*, 82, 11–25.
- Ng, W. 2012. Can we teach digital natives digital literacy? *Computers and Education*, 59 (3), 1065–1078.
- Qin, J., Liu, Y., & Grosvenor, R. 2016. A Categorical Framework of Manufacturing for Industry 4.0 and beyond. *Procedia CIRP*, 52, 173–178.
- Rehalat, A. 2014. Model Pembelajaran Pemrosesan Informasi. *Jurnal Pendidikan Ilmu Sosial*, 23 (2), 1–10.
- Shariman, T. P. N. T., Razak, N. A., & Noor, N. F. M. 2012. Digital Literacy Competence for Academic Needs: An Analysis of Malaysian Students in Three Universities. *Procedia - Social and Behavioral Sciences*, 69, 1489–1496.
- Sharma, R., Fantin, A. R., Prabhu, N., Guan, C., & Dattakumar, A. 2014. Digital literacy and knowledge societies: A grounded theory investigation of sustainable development. *Telecommunications Policy*, 40 (7), 628–643.
- Thompson, P. 2013. The digital natives as learners: Technology use patterns and approaches to learning. *Computers and Education*, 65, 12–33.



- Ting, Y. L. 2015. Tapping into students' digital literacy and designing negotiated learning to promote learner autonomy. *Internet and Higher Education*, 26, 25–32.
- Vélez, A. P., Olivencia, J. J. L., & Zuazua, I. I. 2017. The Role of Adults in Children Digital Literacy. *Procedia - Social and Behavioral Sciences*, 237, 887–892.
- Vélez, A. P., & Zuazua, I. I. 2017. Digital Literacy and Cyberconvivencia in Primary Education. *Procedia - Social and Behavioral Sciences*, 237, 110–117.
- Belshaw, D. 2011. What is digital literacy? A Pragmatic investigation. *EdD Thesis, Durham: University of Durham, ...*, 274.
- Partnership for 21st century Skill. 2008. First-ever 21st century skills map released. (Retrieved from http://www.p21.org/index.php?option=com_content&task=view&id=458&itemid=64, 9 April 2018).