

DIGITAL LITERACY PRACTICES IN HIGHER EDUCATION: A REVIEW

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Abstract

Based on the research, there are numerous of studies done in order to identify the impact and enhancement of digital literacy towards student in higher education. The purpose of the research is to identify the impact and enhancement of digital literacy towards student higher education. The significant of the research address what is the impact of digital literacy towards higher education. This study is important that will give the contribution to society. There are huge impact appear in higher education either positive or negative to the students.

Keywords: digital literacy, education, higher education, literacy, review

1. Introduction

Digital literacy is the capability to easily use computers and the Internet to publish a work or create content from digital media. This can include exertion in daily activity; cognition; and understanding participation and security in the digital world. Nowadays, with the Internet have surround and able to access almost anywhere, and at any time, digital literacy surely is one of the crucial process of lifelong learning both as formal and informal learning. Digital technology plays a major in technological development. Another definition of digital literacy is the individual with digital literacy must be able to use technology as the digital's age information management tools (Kaephanuek ... [et al], 2018). It is generally known that a digital technology plays a major role in the digital age. A number of scholars define digital literacy as circumstance of technological development. Individual with digital literacy must be able to use technology as the digital's age information management tools (Kaephanuek ... [et al], 2018). Although access to technology has increased, there is nevertheless still a small group which does not participate in this modern information society. The definition of digital literacy as an individual's ability to properly use technology as a tool in order to facilitate information management, as well as to create and present new forms of information, to solve problems and to apply digital literacy in daily life concerning individual responsibilities and rights for oneself and for others

Based on the research, there are numerous of studies done in order to identify the impact and enhancement of digital literacy towards student in higher education. According to Mansour (2017) students need to learn technology and automation to know how digital literacy was transformed with information technology. Simpson argued the involvement of digital literacy in the curriculum (Simpson, 2014). The inclusion of digital literacy will totally becoming a huge division in order to assist student use the right ethic of work. This study conducted to assemble the impact and significance of digital literacy towards student higher education. The purpose of the research is to

identify the impact and enhancement of digital literacy towards student higher education. The significant of the research address what is the impact of digital literacy towards higher education. This study is important that will give the contribution to society. There are huge impact appear in higher education either positive or negative to the students. Other than that, this study also give impact to the body of knowledge. In doing the research, we had proposed new framework as before this there is no framework exist about the impact and the enhancement of digital literacy towards higher education. So the research framework in this study can be used by people to accomplish their work.

2. Literature Review

2.1 *Impacts of Digital Literacy Towards Students in Higher Education*

Digital Literacy refers to the ability to identify, locate, understand, evaluate and analyze and use information through digital technology. Bawden (2008) wrote that literacy means an ability to know a new information and used the technology in reading and writing habits. However, digital literacy was more important in this era because all students in higher education used digital literacy in their learning. The study that will be conducted is actually about the impact of digital literacy towards the student in higher education. Digital literacy is one of the information needs that the student needs to master in 21st-century learning. On this research, I will focus on the impact of digital literacy towards the student in higher education and types of digital literacy tools that appropriate for students learning in higher education because nowadays, learning in higher education prefer to use the digital method rather traditional method. The variable of impact digital literacy is information technology, teaching & learning, and information professionals. In this chapter, all variable will be discussed.

2.1.1 *Information Technology*

Technology tool is a part of the things which can increase the knowledge of the information in digital literacy among students. Technology has going advance, the demand for digital technologies in digital literacy can increase because they need to learn something new and know how digital literacy was function. To meet the changing and demand, iPods, iPads, and the SMARTBoards are needed into some classroom for some country because this thing was important. Portable electronic touchscreen devices such as the iPad and iPod are increasing a part of technology tools in aspects of current childhood experiences. According to Monsour (2017) changing new technology students needed to learn technology and automation to know how digital literacy was transformed with information technology. Technology innovation also can give the impact of digital literacy among students or information professionals. Nowadays, the technologies have been changing day to day so we need to follow by the technology (Cohen, 2018). Digital literacy also changed because technology has been updated day to day. However, Hughes (2017) said practical activities of information technology were a lack of digital literacy and will take a full advantage of

these technologies nowadays to the community. Information technology needs to be a good source because in learning through digital literacy it will encompass the knowledge skill and behavior in the uses of technology communication will give the increase of impact in digital literacy to the information technology if we do not use it properly (Tuamsuk & Subramaniam, 2017). According to Urbancikova et al. (2017) when the development of information and communication is increased it will impact information technology used in digital literacy in higher education. The information technology can give any impacts on digital literacy nowadays because technology always been updated from time to time. So, it will make the impact of information technology increased in digital literacy.

2.1.2 Teaching & Learning

Teaching and learning is a process that used a material to gain knowledge. These materials also can interact as student and teacher towards their goals to get new knowledge, skill and attitude in study to learn new experience. According to Mansour (2017), it can be motivated to the learners because of practical learning in their study can be increasing self –confidence to the learners and teacher. Digital literacy was importantly used in teaching and learning nowadays. Digital literacy can increase the flexibility of learning spaces that be accessibility to learning and can be extended of the students in teaching and learning (Pates & Summer, 2016). Learning space was important to the students in teaching and learning because it also can give more impact to digital literacy. Based on previous research, the process of hearing other media such as micro-video can give impact one's ability to learn in process teaching and learning to digital literacy (Frydenberg & Andone, 2016). The other media was important in teaching and learning because we can learn a variety of techniques to process teaching and learning. Many students or teacher also do not have the right skills in teaching and learning and that also can create the negative impact on the digital literacy or the used media in digital literacy (Ukwoma & Iwundu, 2016). As we know digital literacy need to have the skills in teaching and used new media or technology to make an easy to students or user.

2.1.3 Information Professionals

Nowadays, digital literacy was important towards information professionals because they were learned a new skill to improve their skill but all the new skill can give impact in their teaching or study. The impact of digital literacy on information professionals are higher demands of the digital information society on their teaching and demands on their knowledge on digital literacy (Mansour, 2017). According to the previous research, lack of funding was the biggest challenge to the information professionals and can give the impact to the digital literacy (Cohen, 2017). However, Besseah et al. (2017) said social media tools are one format of new technologies that are being forced to the information professionals and also can give new impact to the information professional in digital literacy skilled.

Table 1. Review of analysis

Authors	Information technology	Teaching & Learning	Information professionals
Mansour (2017)	✓	✓	✓
Al-Qallaf (2016)	✓		
Pates & Summer (2016)		✓	
Bokek-Cohen (2018)	✓		✓
Hughes (2017)	✓		
Tuamsuk & Subramaniam (2017)	✓		
Frydenberg & Andone (2016)		✓	
Hasgall et al. (2015)	✓		
Ukwoma & Iwundu (2016)	✓	✓	
Besseah et al. (2017)			✓
Urbancikova et al. (2017)	✓		
Hamilton & Neilson (2014)	✓		

2.2 The Enhancement of Digital Literacy

2.2.1 Learning Process

In the process of the digital literacy development, clearly the digital literacy enhancement of students and their skills in using ICTs is a major part for the successful performance and achieving better results in the learning process (Kaeophanuek, 2018). In order to develop skills from the learning process aspect, students have to think critically, evaluate, making decision and select information which higher order thinking skills take place in today current era of the world. The information science students should be taught every necessary skills and knowledge in order to manage digital creation project while being literate at the same time. In order to create effective teaching and learning environment, it require the organization or the university to create a clear policies to support the basic structure of technology usage. The structure of the technology will align with the curriculum and content in each subject is adjusted according to each subject adjusted well by include the digital skills into related subjects. Moreover, instructors have to adopt optimal techniques, teaching methods and evaluation that encourage students to develop their thinking skills to question, discuss, debate and create projects using proper digital tools. Information professional may also encourage students to become aware of the important role of an information professional as digital content creator. The learning process can also occurred by proposing a learning system for digital literacy attach with knowledge basic which then develop into a certain feature. Digital divide in some country requires digital literacy delivered through several knowledge mechanism (Rahmah, 2015). Some of the informal initiatives focusing in parenting with the parents themselves as the role model. Sharing

with students textual example provide opportunities for analyzing how multiple text and multiple media use as a particular composing concept. As composing with many assignment, student needs various example of the media the composed in. Having an access to such text can be challenging when working with emerging media and when working with limited sources. Student can also using reflection method and analyze their ability to apply the concept they have learned in the previous lesson. Engaging with unfamiliar media and analyzing media comparatively facilitates the acquisition of critical media awareness and media adaptability which benefits students in the class and future. In dealing with rising of the technologies, students need to be encouraged and ready to obtain lifelong knowledge and learning environment (Baharudin, 2016). Digital literacy are preferred to use for student applying the skills in real life for the knowledge seeking purpose. Some ideas for classroom-ness can be one of many choices which possible since student will gain a great impact technologies provided. In order to increase the knowledge practice and develop a sturdy strength in communication, online surfing and social media would be a decent choice in delivering the internet-base task. The implementation of blended learning model leads to improvise the digital literacy among students (Patmanthara, 2018). Student nowadays are familiar with the word digital, hence the implementation of the learning model which combining conventional and blended learning is a breakthrough. By obtaining the basic skills of literacy and competences in digital literacy, one should be able to access, obtain, analyze and merge information, new knowledge and skills. By improving the digital literacy skills, student will achieve a better result in the learning process (Shopova, 2014). Most of the student who attend to university do not have the skills needed for using the internet and information technology when it comes to solving problem or perform various task individually or in team. The necessity of providing the student guidance, courage, motivation and support in the direction of developing skills needed.

2.2.2 Skills and Competencies

One who got the digital literacy skill must be able to utilize the use of technology as the current information management. They also able to aware and acquire the basic knowledge of laws and ethical issue regarding the information access (Kaeophanuek, 2018). The researcher has divided the selected related information and divided the digital literacy skills into three parts which are information skills, digital tools usage, and digital transformation. Other than those three skills, the researcher does mention the importance of digital skills in current era of today world. According to Simpson (2014), in order to develop digital literacy, one must have two types of skills which are practice of language by using technology and the practice of the technology itself. From the competencies scope, the researchers has found that youth's or student's high self-evaluated competence and clear over confidence compared to the actual performance showed which showed low. This gap was especially obvious with the concern of social related skill which estimated higher compared to actual performance of social task was found to be the lowest (Porat, 2018). Effective education for digital literacy will help the competencies of youth and students in order to become a

skilled and competence digital literate student and able to use the technology to the fullest. In order to enhancing the skills and competencies of the students in digital literacy, a learning strategy is another key close to it as mentioned by Pamnthara (2018). Learning strategy by using social media platform such as Edmodo, it offers a rare opportunities to build a connection between teachers and the student in creating information and the learning becoming more fun. An adequate digital literacy skills elevate students to practice a creative thinking skills. One of the researcher found that by enhancing the digital literacy of students and their skills in using ICTs plays a crucial part and one of the major condition for successful performance and achieving a greater result in the learning process (Shopova, 2014).

2.2.3 Practices

Nowadays, digital literacy does play a significant role in academic environment. Simpson (Simpson, 2014) argued the involvement of digital literacy in the curriculum. The inclusion of digital literacy will totally becoming a huge division in order to assist student completed the task given by the teachers by using a correct ethic in using and quoting other people's work. Engaging in a comparative media analysis by comparing the layer between digital and non digital media, providing the opportunities for the student to observe how layering media concept applies (Blevin, 2017). This study has showed how crucial the digital literacy for this present-day by including it in the curriculum and to support the media awareness. Creer (2018) introduced the class and include Twitter as an example to everyday digital literacy practices. Creer includes the Twitter as assessment purpose as it connect people in real time. It have said that by using any social media, it does propose a way of understanding the relation between features of the digital text and the environment. Use of digital literacy at home are one of the practice that parents need to be aware too. Exercise activities at home between parents and children based on the technology usage. In spite of the fact that a foundation of digital literacy skills been provided by the school, the influence by parents on how to use the technology affected and complement the formal education in school (Theras, 2016). Digital literacy encompasses the knowledge, skills and behavior in the use of digital technologies. It is important to include in education at all levels for the development in the courses attended by the students.

Table 2. Review of Analysis

Authors	Learning Process	Skill competencies and	Practices
Kaeophanuek, 2018	✓	✓	
Rahmah, 2015	✓		

Simpson, 2014		✓	✓
Blevins, 2017	✓		✓
Baharudin, 2016	✓		
Erez Porat, 2018		✓	
Martín, 2017		✓	
Patmanthara, 2018	✓	✓	
Shopova, 2014	✓	✓	
Creer, 2018			✓
Theras, 2016			✓

3. Proposed Framework

This Figure show that purposed framework to guide this research with Digital Literacy towards students in higher education that are information technology, teaching & learning and information professionals. In this study, we identified three different independent variables. Independent variables are defines based on previous discussion in 2.1.1 Information technology, 2.1.2Teaching & Learning and 2.1.3Information professionals. This figure shows purposes framework to guide this research with enhancement of digital literacy. The enhancement is learning process, skills and competencies and practices. In this research, there are three independence variables that has been allocate, and all of this has been discussed in, 2.2.1 learning process, 2.2.2 skills and competencies and 2.2.3 practices.

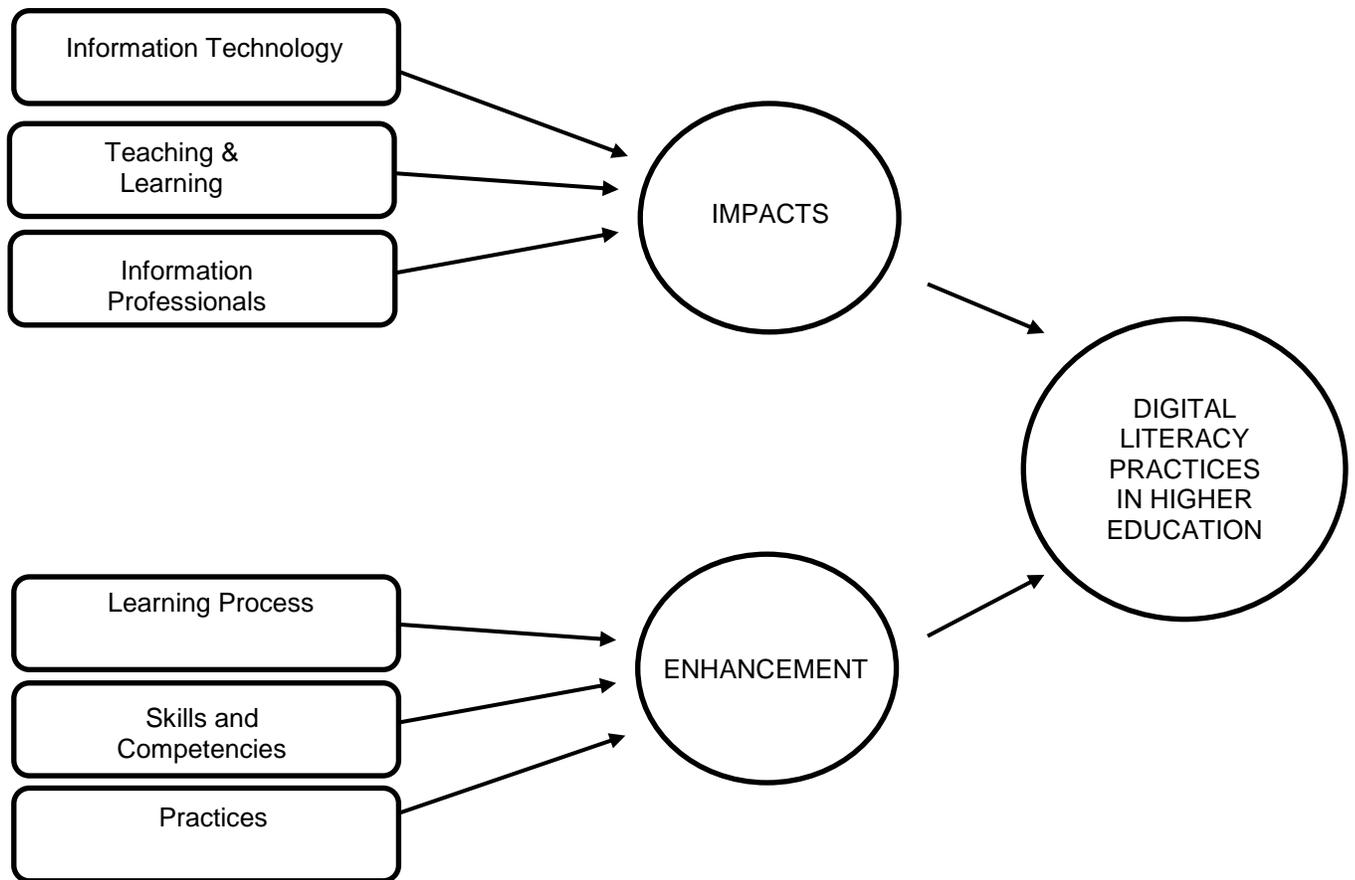


Figure 1. Proposed research framework

4. Conclusions

In conclusion, this paper summaries on the impact of digital literacy and the enhancement of digital literacy. Through the discussion, we were know Digital literacy is a technological teaching has many influences on teaching, learning, and curriculum. This inquiry has considered both negative and positive perspectives of having digital technology in the classroom and the influences that it has on students. Nowadays, knowledge and information can be improve in digital literacy. The media learning can give impacts to the students and also can helps students improved their skill. Based on this research, we highly hope that the depth understanding on the digital literacy among the students in higher education will be increased. Besides that, we expect to have the application of digital literacy among the students in their environment. This conducted research will help us to clarify and answers the enhancement and impact in digital

literacy practices. We also are able to find the solution to any problems occurs as the data and information has been collected from the respondents. For the next research, we highly expected that the scope and discussion on digital literacy will be further and broad while more sub topic will be added into it.

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