THE ROLE OF DIGITAL CLASSROOM FACILITIES TO ACCOMMODATE LEARNING PROCESS OF THE Z AND ALPHA GENERATIONS

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Abstract

Facilities that are relevant to the environment and characteristics of the students are expected to support the learning process of students and to make the interesting learning. In the digital era, the use of digital technology in the learning process is regarded as a need to help the learning process in the classroom. However, the learning process that happens in some schools in Indonesia does not optimally use the digital technology yet while in Indonesia now is currently faced with the emerging of the Z and Alpha generations that live in the environment of digital technology. This study aims to describe the role of digital classroom facilities in accommodating the learning process of the Z and Alpha generations through the digital classroom facilities. The research method used in this study is literature review. The results of this study show that theoretically the classroom digital facility can accommodate the learning process of the Z and Alpha generations because they are in line with the habits and characteristics of the Z and Alpha generations who are familiar in using the digital technology, more attractive and more flexible, and it can teach the children to use the digital technology positively (for learning purpose) at home. Digital classroom facilities are one of the facilities that can accommodate the Z and Alpha generations to support students learning process.

Key words: *facilities*, *digital classroom, the z and alpha generations*

INTRODUCTION

Learning outcomes are one of the benchmarks in the success of learning process. Learning outcomes are always informed to students and their parents as children's achievement in each semester. Of course, this activity has a goal as the evaluation material of the learning activity in order the children are able to improve the learning outcomes. Therefore, the learning outcomes become the important things to be noticed by the schools as formal education institutions. Commonly, schools in Indonesia determine the learning achievement in the form of numbers that should be achieved by the students as the measurement whether the students will go to the next grades or not. A good learning outcome becomes the dream of every school, teacher, student, and students 'parents. Thus, several efforts has been done in order the students have a good learning outcome. The learning outcomes are of course influenced by the learning process, in which the learning process can be used more effectively by increasing students' participation and motivation (Yurdugül and Çetin, 2015). In order to

has a good learning process, it is needed the learning facilities that can support the learning. Learning facilities can improve the students' achievement (Mcgowen, 2007). Therefore, it is important to be aware of the learning facility. The right learning facilities for students are also necessary to be noticed because the students' characteristics determine the form of those learning facility.

The rapid development of the era is accompanied by the birth of various generations. Every generation is grouped by the year of their birth and the development of civilization at that time. Those generations is begun since the Second World War. There are kinds of generations that exist until present to date which is starting from the Baby Boomer generation, X generation, Y generation, Z generation, and Alpha generation. Baby Boomer generation is a generation that was born in 1946 to 1965, X Generation was born between 1965 and 1976, and Y generation was born in 1977 to 1994 (Ting et al, 2017). Generation Z is a generation born in 1990 to middle of 2010 (Carter, 2018). While the Alpha generation is a

generation born after the Z generation which means born in 2010 to the present (Tootell et al, 2014). Those generations have their own distinctive features as dissimilar from others. Many of the explanations about their traits such as Baby Boomers generation are the generation born after the Second World War ended; this generation is an optimistic, idealistic, and competitive generation that witnessed social change. Next, X Generation or often referred to as the generation of Latchkey Kids. It is a generation raised by Early Baby Boomers, this generation is characterized by individualists and skeptical of authority. At this Generation the popularity of disco and hip-hop as well as cable TV and video games is a trend. Furthermore, Y Generation or often called Millennial generation is the generation raised by Late Baby Boomers. This generation witnessed the emergence of digital technologies such as email and text messages (sms). Millennials are also optimistic, techcomfortable, styleconscious, and brand loyal (Grail Research, 2011). Baby Boomers Generations, X, and Y are adults so that this generation in Indonesia is no longer attending primary and junior high school. Basically, the grouping of years and naming of the different generations has a classification.

This happens because of the studies done by the different experts. For more details see Table 1. Generation Grouping.

Table 1. Generation Grouping

Source	Lable				
Tapscott (1998)		Baby Boom Generation (1946-1964)	Generation X (1965-1975)	Digital Generation (1976-2000)	
Howe & Strauss (2000)	Silent Generation (1925-1943)	Boom Generation (1943-1960)	13th Generation (1961-1981)	Millenial Generation (1982-2000)	
Zemke et al (2000)	Veterans (1922-1943)	Baby Boomers (1943-1960)	Gen-Xers (1960-1980)	Nexters (1980-1999)	
Lancaster & Stillman (2002)	Traditionalist (1900-1945)	Baby Boomers (1946-1964)	Generation Xers (1965-1980)	Generation Y (1981-1999)	
Martin & Tulgan (2002)	Silent Generation (1925-1942)	Baby Boomers (1946-1964)	Generation X (1965-1977)	Millenials (1978-2000)	
Oblinger & Oblinger (2005)	Matures (<1946)	Baby Boomers (1947-1964)	Generation Xers (1965-1980)	Gen-Y/Net Gen (1981-1995)	Post Millnials (1995-present)

Source: (Putra, 2017)

Those generations have different age ranges. If you look at the age limit, then the Z generation and Alpha generation is a generation that is still categorized as children. Children attending school are persons who are in the ages of 6 and 13, while for ages 14 to 17 enter the youth category (Guglielmo et al, 2018). Z Generation has the characteristics of having good multitasking capabilities where this generation is one of the generation that experienced a change from the traditional era to the digital era. The Z Generation basically has similarities with Y generation , but the difference is the Z generation is very superior in applying all activities such as using social media, using mobile phones, browsing using a PC where everything they do is strongly related to the virtual world (Son, 2017) . Children at this time can be grouped in two generations namely the end of the Z generation and the beginning of the Alpha generation whose age ranged from 6-13 years with the birth year in 2005-2012. The Z Generation are those aged ranging from 9-28 years. Z Generation is also known as digital natives that are people who are very familiar with the digital technology since their birth (Grail Research, 2011). Z-generation students have their own attributes as their characteristics. The characteristics of Z Generation are (1) Convenient and highly dependent on technology, it is because Z Generation grows surrounded by technology, (2) Multitasking with various online products, advanced technological tools, respect for simplicity, and interactive design, (3) Having higher social responsibility with amount of information which can be accessed on line, (4) Always connected, communicating through social networks, recognizing cross-cultures country environments that indirectly affect their thinking and decision-making processes (Hariadi et al, 2016). Almost the same as the Z generation, Alpha Generation is the next generation that was raised by generation X and Y. This generation is

predicted to be a great generation that can adapt to the technology quickly. However, this generation has high rates of disease, starts school faster but completes it for a long time, highly focused on technology, and has greater career opportunities (Grail Research, 2011). Z Generation and Alpha Generation have similarities in the technology. Based on the current facts, basically Alpha Generation is just the successor of the Z generation 1.0 that is generation "Z 2.0", which is not much different from its predecessor, just continue their "legacy". Alpha Generation was born where Instagram introduced. This generation encountered constant internet usage and always use smartphone and touch screen in everyday life. So these two generations both have good digital capabilities. Almost of them use smart devices at a very young age and also YouTube and Instagram have more influence on them than television. Students' learning habits of Z generation and Alpha generation also change. They also need new teaching methods because they can collect information rapidly, and multitasking which is their basic skill (Nagy and Kölcsey, 2017).

In Indonesia there are eight education standards administered by the government directly. One of those standards is the standard of the infrastructure. Learning facilities are the part of the standard of infrastructure and those are the things that must be possessed by the educational institutions to achieve the education goals. Basically, the form of facilities that the school should have is the same with only a slight difference. This is due to the differences in levels and types of education such as the education starting from Elementary School, Junior High School and High School or Vocational High School. For example, junior high school schools do not require service shop facilities such as Vocational Schools. However, every school needs a complete room theory facility with its furniture for the sustainability of learning process. In the learning process in Indonesia, the learning facilities in schools are still very traditional where not all schools have met the standards established by the Indonesian government. Facilities that meet the standards are also very less up to date. If the world is confronted with elementary school students who are the Z generation and Alpha generations, then a facility that is appropriate to their daily habits is needed. The closed-relationship of these students with technology are predicted will influence their learning styles. The fact that Z generation or Alpha generation students are relying heavily on technology is not impossible that learning with traditional facilities will not appeal to them. Therefore, it is needed a learning facility that can accommodate the learning process of Z generation and Alpha generation students that are digitally based. One of the facilities that are expected to be an alternative is the digital classroom facility.

RESEARCH METHOD

This study is a literacy study from various sources of knowledge. The study was done by analyzing the results of other studies and it is linking theoretically to obtain a concept of digital classroom facilities for Z generation and Alpha generation.

RESULT AND DISCUSSION

Globalization has happened so quickly that it is difficult to be prevented at this point. One of globalization form is digital technology. Technologies such as the Internet, smartphones, personal computers, tablets / iPads, laptops, projectors, and software are forms of digital technology. Those technologies are commonly used every day by the society, which among others occur in education. Primary school is one of the educational institutions with the students who come from Z generation and Alpha generation. Exceptionally these generations are those who are very familiar with digital technologies. Even their proximity to the technology makes them have characteristics that are very close to the technology (Nagy and Kölcsey, 2017). This thing has not escaped from their growth in the technological environment that emerges rapidly.

Digital facilities are indispensable in the present, as well as facilities to accommodate students of Z generation and Alpha generation and it is also the demands of the times. A study says that learning with WEB technology proves to be a good teaching tool in the classroom. In addition, WEB technology does not have to always use a PC but it can use a tablet / iPad and smartphone. Technology also gives teachers a large option of digital media forms in learning (Akyuz and Yavuz, 2015). Another study about digital storytelling in an elementary classroom said that using digital storytelling students become more involved in the completion of the task than with non-digital writing in addition to student self-confidence also increased. Besides that, students produce written quality that increases over time (Campbell, 2012). In addition, digital learning can provide real experiences to students by providing concrete

examples through 3D animation with the help of Augmented Reality (AR). AR is a form of technology that can project digital materials to the real-world objects. Now, this technology is popular in education (Cuendet et al., 2013). So AR can be a good learning media for student experience. E-learning as one of the forms in digital classroom has a very significant relationship to students' learning motivation (Harandi, 2015). A study in India about digital classroom solution is stated to be an effective learning support system for teachers. The use of digital classroom solution is due to the demands of the collaborative and digital world of work (R Sugant, 2014). Based on those studies, it can be said that the digital facilities in the classroom can improve the quality of students.

Digital classroom is one of the digital facilities which only focused in the classroom. Technology used such as PC, Laptop, Tablet / iPad, Smartphone, proyector, LCD projector, and so forth as learning tools that are connected or not to the internet. Classroom digital technology can accommodate the learning process of the present elementary schools students. This is because elementary students who are in Z generation and Alpha generation very familiar with digital technology that is different from previous generations. If previous generations can learn with traditional facilities then the present elementary students are predicted to be less interested in learning with traditional facilities but prefer learning with digital facilities. This is because their habits which are highly dependent on digital technology. Digital classroom is recommended without have no reason. A study discusses some of the benefits in using iPad in the classroom as device portability, the ability to gather information, accessibility, increasing the students' engagement, enable collaborative learning, increased productivity and students' efficiency, and technological literacy (Macleod 2015). The use of digital classroom is basically superior toward the traditional class. First, the traditional class still uses printed books as a learning media while the digital class uses electronic books. Textbooks are heavy, expensive and fast out-of-date while eBooks are not heavy because they are digital and less expensive. Textbooks are not flexible in finding the required material whereas eBooks are so flexible that enables readers search material instantly and finds it in seconds. IPad and iBook technology can also be used easily. In the process of making the teaching materials can be done easily and it is easily also to make a revision through e-learning that can be accessed through computer, tablet / iPad, smartphone and with the condition where the teachers and students are not in one place with the help of video call (HLWIKI, 2017). Digital classroom has 4 characteristics namely (1) engaging because it provides an active learning environment and learning with the team; (2) intuitive because it can be practiced directly; (3) scalable because each activity can be measured and; (4) in action because it can accommodate students in groups and it can be constructed (www.pureav.co.uk). Another difference between traditional and digital classrooms is that "digital classroom" naturally provides the extra space for gifted learners to interact with individuals outside the classroom via chat room, e-mail, online conferencing or Web, video conferencing, and other digital communication methods than traditional class which provides limited space for learning, where students can only interact with their course-mates and the lecturer who teaches them. While students of Z generation and Alpha generation are required to absorb and manage information quickly which is very difficult to achieve through traditional class (Bakar, 2016). However, the use of digital classroom also has some shortcomings including digital classroom facilities that require large funds in the beginning. Traditional classrooms are usually enough to buy furniture such as whiteboards, tables and chairs, erasers, and markers as a classroom facility that is relatively cheaper when compared to a digital class that contains more expensive price facilities. This is because classroom digital facilities usually require a set of PC / Laptop, Tablet, Smartphone, Projector, LCD Proyetor, good lighting and high power consumption and internet. Besides that, a case study has found that many teachers are less aware in operating the digital classroom so they tend to prefer traditional classes with conventional learning (Garavaglia et al, 2012). Therefore teachers need further training. Based on the studies above, it can be drawn a concept of facilities that can accommodate elementary school students of Z generation and Alpha generation as it can be seen in Figure 1.
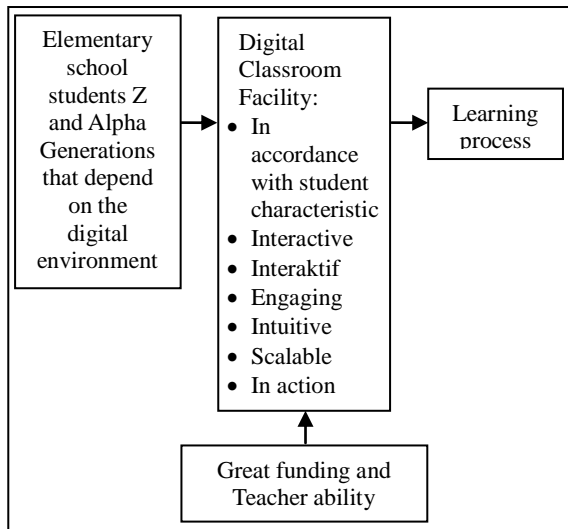
Figure 1. *Concept maps*

CONCLUSION AND SUGGESTION

The presence of Z generation and Alpha Generation who are accustomed to digital technology become a challenge for the world of education. In Indonesia, those generations are in primary education when it is viewed from their age limit in which they need a facility that can accommodate their learning. The digital classroom that has characteristics such as technology is commonly used by this generation in everyday life which appropriate with the characteristics of this generation becomes an alternative solution that is thought appropriate. The digital classroom is also more attractive and it also can grow the positive effect of using the internet by students at home. However, the application of digital classroom facilities requires a higher cost and good teacher ability to apply the digital technology. Of course this thing becomes an obstacle in applying the digital technology. Hopefully, in the future it can be made a technological innovation that can accommodate this generation at a low cost and applied easily by all generations of the teachers.

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