Pedagogic Study Regarding the Role of Digital Learning Media in the Learning Process during Pandemic

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Abstract— **This study aims to analyze how digital learning media play a role in the development of early childhood education program (PAUD) students during a pandemic when teaching and learning conditions change. This type of research is qualitative, and the method used in this research is descriptive. The results of this study indicate that the role of digital learning media in PAUD helps daily learning activities while playing. In addition, school programs that are usually offline can be adapted to go online with various available digital learning media. The teacher's pedagogical competence, in this case the digital pedagogy approach, also has a major influence on whether the use of technology can provide optimal service for students. By providing good digital learning media and teachers with good pedagogic competence, distance learning during a pandemic is not a problem for continuing to provide meaningful learning for students so that the learning process while playing at the PAUD level is carried out in an interesting and fun way. This research can be used later as a guide if an institution providing educational services, especially PAUD, faces a condition where teaching and learning activities must be carried out online.**

Keywords— *Digital learning media; pandemic; learning process.*

INTRODUCTION

Changes The COVID-19 pandemic has had a tremendous impact on all sectors, one of which is the education sector, especially early childhood education programs. The COVID-19 pandemic does not allow all students to study face-to-face as usual. Students in the early childhood education stage who are accustomed to carrying out teaching and learning activities in schools with various activities, especially direct activities with teachers, inevitably have to carry out their activities boldly. This condition demands maximum cooperation between teachers and parents. Learning at home encourages teachers to be creative so that students at home are able to understand and enjoy the learning process. There are external constraint factors in the form of learning media and internal factors, namely child fatigue faced by parents during distance learning [6]. Teachers can maximize the use of learning media to accommodate distance learning so that it remains effective with the help of parents at home.

Learning media is anything that can be used to convey lesson information to students and stimulate the thoughts, feelings, attention, and willingness of the learner so that it can encourage the learning process. This is supported by the fact that, according to [2], learning media are everything that can be used to convey information in the teaching and learning process so that it can arouse students' attention and interest in learning. According to [1] [4], learning media is a device that connects the sender of the message with the recipient of the message; in this case, the message is in the form of learning materials to achieve a goal in matters relating to educational programs.

During the COVID-19 pandemic, not all learning media are suitable for use because not all schools are able to accommodate 100% of students in schools to prevent transmission from occurring. Some schools can only accommodate some students; even in certain areas with a high number of COVID-19 transmissions, all students must take distance learning. There are several learning media that are suitable for use during distance learning. One of them is digital learning media that can be used to accommodate students who study from home or online studying. Digital learning media are expected to help the development of students, especially early childhood education programs students, even though they have to learn from home with the guidance of teachers at school and the help of parents at home.

METHODOLOGY

In This type of research is qualitative and uses the descriptive method. This descriptive study was chosen because it aims to analyze how digital learning media have an impact on the development of early childhood education program students during a pandemic. The method of collecting data is by observing, interviewing, and distributing questionnaires to teachers and parents of students. Data analysis was carried out by means of a descriptive analysis of the two data collection methods.

FINDING AND DISCUSSION

Learning media include tools that are physically used to convey the contents of teaching materials, which include books, tape recorders, cassettes, video cameras, video recorders, films, slides (picture frames), photo pictures, graphics, television, and computers. Learning media are all tools (aids) or objects used in learning with the intention of conveying learning messages (information) from sources (educators and other sources) to recipients (students) [2]. In general, learning media have the following roles:

- Clarify the presentation of learning messages so that they are not too verbal.
- Overcome the limitations of space, time, and senses.
- The use of appropriate and varied learning media can overcome the passive attitude of students.
- Making human experience concrete by moving from the abstract
- Provide stimulus and stimulation to students so they can learn actively.
- Can improve learning achievement by increasing students' learning motivation [1].

Currently, the use of digital technology as a medium of learning is an alternative that is very suitable for the habits of students and the environment. Today's students are a generation that is accustomed to digital technology (digital natives). Today's students include Generation Z, who were born between 1995 and 2010, and Generation Alpha, born after 2010, who are the majority users of computers, gadgets, and the internet today. They are also skilled in developing various information systems according to the needs of the times [8]. Learning media using digital technology cannot be denied as a mature and useful medium for students. Based on research by [11], the use of digital technology-based learning media can increase learning independence; online learning is more student-centered, which causes them to be able to create responsibility and autonomy in learning and greatly affect the learning process between teachers and learners.

According to the Department of Communications at the University of Washington, digital media can be defined as any medium that uses digital interactive technology as an engine for communication, for example, video-on-demand services, interactive television, digital broadcasting systems, and Internet-based content distribution networks. Digital media are new forms of communication, emerging as a result of ongoing technological changes, which do not necessarily require a physical carrier [3].

Before the COVID-19 pandemic took place, learning could be carried out face-to-face, so all learning media could be used with many benefits. The benefits of learning media are, firstly, providing guidelines for teachers to achieve learning objectives so that they can explain learning material in a systematic order and assist in presenting interesting material to improve the quality of learning. Second, it can increase students' motivation and interest in learning so that students can think and analyze the subject matter provided by the teacher well in fun learning situations and understand the subject matter easily [8]. Furthermore, the media can improve student learning outcomes in the following ways: the teaching and learning process becomes easier and more interesting, so students can easily understand and understand lessons; student learning efficiency can increase because it is in accordance with learning objectives; it helps students concentrate on learning because learning media are interesting and appropriate to students' needs; and it increases student motivation.

When the COVID-19 pandemic hit, unexpected events forced schools to carry out online learning. Schools are not allowed to carry out face-to-face learning. The use of learning media is limited, so not all learning media can be used directly. Nevertheless, learning media have also changed positions to become the backbone of online learning, especially digital learning media. Digital learning media is the answer to the limitations of face-to-face access since the COVID-19 pandemic hit and provides enormous benefits.

Digital media is an important component that can support the online learning process [8]. This medium functions as an interaction medium for transmitting information and distance learning. In addition, the media helps teachers as a learning control and assessment mechanism, improves teaching skills, and eliminates the problem of distance learning. Digital media can be used as a bridge between teacher-student interactions during a pandemic [9]. This is done to ensure that learning is carried out optimally without reducing some of the learning elements. In addition, according to [7], digital media is very useful for online learning. [5] revealed the benefits of digital learning media during a pandemic as follows: 1. to serve as a medium for more communicative interaction between students and between students and learning

resources. 2. To help educators convey teaching material even when they are not in person, 3. as a means of information transfer and interaction during distance education 4. encouraging learning innovation during the COVID-19 pandemic. 5. make work more effective and efficient, both as a product and process, to solve learning problems. 6. not only as a tool but also as a learning process, including learning strategies and methods that are appropriate to apply during the COVID-19 pandemic.

In early childhood education (PAUD), digital learning media are the key to the continuity of the learning process where face-to-face meetings are not possible. Students at the early childhood education level who are accustomed to carrying out teaching and learning activities at school with various activities, especially hands-on activities with teachers, inevitably have to carry out their activities online. This condition demands maximum cooperation between teachers and parents. Learning at home encourages teachers to be creative so that students at home are able to understand and enjoy the online learning process. This is where digital learning media are needed.

One of the private schools in Bandung uses digital learning media as a medium to support distance learning. Teaching materials that are on hand are still distributed by sending them via expeditions, but classes are delivered online via Zoom meetings. Teaching and learning activities are held as follows: 1. The teacher opens the Zoom class meeting. 2. Parents help students enter the classroom and prepare teaching materials. 3. The teacher guides the class by starting the prayer and continuing with the morning routine (greeting, singing, and others). 4. Classes are continued by carrying out activities that have been prepared by the teacher, such as science, art, or language activities with material that has been distributed. Apart from being guided by the teacher, several digital learning materials, such as videos and online quizzes with applications, are displayed during class. 5. The class is closed with a prayer and a message to maintain health protocols even at home.

The learning-while-playing activities referred to above contain a variety of materials such as phonics, mathematics, Montessori, language, physical health, the arts, environmental education programs, and others, which are carried out boldly with Zoom meeting media guided by the teacher. Even though it is courageous, the entire material is still presented in order to maintain students' competency. The school also has a responsibility to parents to continue to provide comprehensive services without reducing quality, even though learning is carried out boldly during a pandemic. With good cooperation between teachers and parents, the school's main program implemented during distance learning has achieved good results. Competency achievements are as expected, and older students are satisfied with the services provided by the school because they can take part in learning well.

In addition to the daily routine of learning while playing, special programs are also being implemented. Special programs at early childhood education, such as cooking classes, study tours, cultural visits by foreigners, and others, are carried out online. Cooking classes are held at each student's home, with parental supervision and teacher guidance via video shows. Study tours are carried out online and guided by these educational tourist attractions; for example, the Geology Museum guides visits online and directly from the museum. Cultural visits by foreigners are guided by the foreigner from their country of origin, and the presentation is carried out by the party concerned. Several other special programs are carried out using the same online method. This is very well done because even though the pandemic hit and all teaching and learning activities were carried out online, all programs and activities were still carried out despite some adjustments. Main programs and school-specific programs, which are the main school services in the student learning process, can still be implemented and remain effective. Teachers can still provide meaningful learning by collaborating with parents in the presence of supporting digital learning media.

From the description above, it can be said that digital learning media play a very important role in the learning process during a pandemic. Teacher pedagogic competence, in this case the digital pedagogy approach, has a significant impact on the use of technology to provide students with a meaningful learning process. Digital pedagogy is an approach that is not only based on the teacher's skills in using technology but also on how the teacher as a facilitator uses technology to build thinking skills while developing the affective aspects of students. Learning is centered on students, and the use of technology is used to foster a dynamic, inquiry-based learning atmosphere in which students observe and then construct existing realities [10].

Even though teaching and learning activities can still be carried out properly with the existence of digital learning media, obstacles can still be faced during teaching and learning activities. Based on a survey given to parents, online learning is constrained by several things, such as internet network constraints, student concentration, student motivation, and a lack of student development in the motor area. Network constraints are very common. Network constraints make learning truncated or choked up. Schools have increased network capacity to accommodate smooth internet, but sometimes problems arise due to internet operators. Distractions, unfavorable teaching materials, and excessive duration can all disrupt student concentration and motivation. In this case, the teacher's creativity is required to ensure that learning is carried out in a fun way so that students are able to concentrate and be motivated. Learning is carried out with various existing digital media, like playing with interesting educational content. On-hand activities need to be carried

out so that they continue to train the motor skills of early childhood education students even though learning is done online.

CONCLUSION AND RECOMMENDATION

Based The role of digital learning media in early childhood education helps daily learning activities while playing. In addition, school programs that are usually offline can be adapted to go online with a variety of available digital learning media. The teacher's pedagogical competence, in this case the digital pedagogy approach, also has a major influence on whether the use of technology can provide optimal service for students. By providing good digital learning media and teachers with good pedagogic competence, distance learning during a pandemic is not a problem for continuing to provide meaningful learning for students so that the learning process while playing at the early childhood education level is carried out in an interesting and fun way.

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