EDUCATIONAL TECHNOLOGY PROCESS IN EARLY CHILDHOOD EDUCATION INSTITUTIONS

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Abstract

The purpose of this study is to describe a number of media in the form of websites, applications, and information systems that are used as the use of technology in learning in early childhood education institutions. Descriptive-analytical literature becomes the method in this research. The results of the study show that technology is an integral part of education. All activities use technology even in a simple way. In accordance, its essence is to facilitate the activities of educational actors. Educational technology can be defined as theory and practice in designing, developing, utilizing, managing, and assessing processes and resources for learning. The internet is one of the relevant media if it is used to support the quality of early childhood education. Because it can provide convenience and speed in conveying information so that the learning process can run effectively and efficiently. The internet can provide several facilities and services/applications such as e-learning, LMS, Internet Applications, Youtube, and others to be used in the learning process at early childhood education institutions.

Keywords: *Educational Technology Processes; Early Childhood Education Institute.*

INTRODUCTION

The era of globalization has become a necessity in the increasingly rapid development of technology, and education cannot avoid all its effects. Global demands force the world of education to always adapt and change in renewal and learning technology (Riza, 2020). At this time the progress of information technology is running very fast. Along with the development of technology, data storage, and transmission are getting cheaper and better quality. Individuals, institutions, educational institutions, and the government participate in various efforts to take advantage of technological developments. It is time for the world of Islamic education to take advantage of this technology. In the world of technology, education will provide added value to the learning process (Ali, 2020).

This is related to the increasing need for science and technology, which are not all obtained in the school environment. Likewise, when exchanging data and information between schools, schools, and communities, schools with local and central governments, especially in Islamic education and others, everything will be more effective and efficient if you use technology in the advancement of education (Muhaimin, 2015).

Education in the era of technology is a necessity for educators to be more competent and innovative, qualified, and competitive. Educators not only play a role in providing learning facilities but also utilize technology and communication in learning (R. Purnamasari et al, 2020).

The biggest challenge in schools, madrasas, and higher education institutions, especially for educators who face anomalies, is the complexity and uncertainty due to technological developments. One of them is educators trying to change learning methods that are suitable for the younger generation, who are more open and critical and more ready to change compared to the previous generation (Y. Suchyadi et al., 2020).

Today, the younger generation masters technology faster, but the exponential speed of technological development also triggers changes that are too fast and unpredictable. So that educators as facilitators must provide flexibility to maximize learning according to conditions. Ideally, educators have the ability to innovate and be creative in teaching methods so that students can learn the substance of the field of science to be studied. The way educators teach will be easier for students to remember in the long term than the substance of the material being taught. The learning process must be able to lead students to take the initiative to find answers to their questions and curiosity (R. Pertiwi et al., 2019).

Students face the challenges of technological progress in a world of work that are full of uncertainty, but also new awareness in global life. However, the challenge that now has become a heavy burden for all Islamic Religious Educators is not finding the right learning strategy to interpret it in an actual way by balancing the worldly and the hereafter. Students' views of life are often divided because missionaries often direct Muslims to prioritize those related to the Islamic religion rather than world knowledge. So the consequence that will be faced is the weakening of the fighting power to learn even harder. Many verses of the Qur'an talk about science and technology, and to understand them requires world knowledge.

In the global world, there is a feeling of being marginalized (inferior) for the achievements of Muslims in mastering science and technology. The world of work is closely related to one's competence and people with low competence will find it difficult to reach a higher level of education and will also be difficult to accept in the world of work, regardless of religion. To make matters worse, the presence of ASN (state civil apparatus) educators is left like weeds, who have never been trained, stagnate, and there is no international-class employee orientation. This omission occurs with a random (moderate) system with no significant changes and it is difficult to become better (Harbowo, 2020).

In Educational Technology known as Learning Management System or what is often popularly known as LMS, it is possible to support the application of learning models, one of which is a collaborative learning model that focuses on student cooperation in building knowledge and changing the role of an educator from the main subject of learning in the classroom to being a teacher. which accommodates the curiosity of students, which in the end are expected to be more active and play a role in seeking knowledge independently.

Research that focuses on e-learning learning, one of which is the use of social networks, such as Facebook, Instagram, WhatsApp, YouTube, TikTok, and other applications, has been widely carried out. By using the concept of e-learning as a content-based learning infrastructure, it is possible that the material presented can be adapted (flexibility) to the needs of users, while the term e-learning is the same as communication in an environment where communication is one of the most important things. With the rapid development of information technology, communication can be done in various ways. The purpose of this study is to describe a number of media in the form of websites, applications, and information systems that are used as the use of technology in learning for early childhood.

METHODOLOGY

Descriptive-analytical literature becomes the method in this study. Descriptive-analytical is a method that describes or describes an object under study through data or samples that have been collected as is without analyzing and making conclusions that apply to the public (Sugiono, 2010). According to Burhan in his book, the literature method is one of the data collection methods used in social research methodologies to track event record data. The literature used in this study comes from articles, books, and online journals related to the title of the study. The steps taken in this literature review include defining the scope of the topic to be reviewed, identifying relevant sources, reviewing the literature, writing literature, and applying literature to the study to be carried out (Burhan, 2008).

RESULTS AND DISCUSSION

Educational Technology Concept

Technology today is inseparable from the scope of everyday life. Technology has become a tool to facilitate all activities, so that previously what was difficult to reach, now with the presence of technology, is easier to reach those that were previously difficult. The current education system does not escape the combination of technology with the application of existing education. Therefore, it is not foreign to academics and educational practitioners at this time the term educational technology. Educational technology is a system used to support the learning process until the expected goals are achieved (Lestari, 2018).

Educational technology provides convenience in achieving the objectives of applied learning. Educational technology as a complex and integrated thing is in accordance with what was conveyed by Ariani (2017) that educational technology is an integrated and complex process, the linkage includes people, communities, organizations, or institutions by designing technology-based learning processes in an effort to achieve results and goals. of education and learning.

The development of an increasingly globalized era makes educational technology in South Korea a competency that must be included in the practical arts curriculum, every student and teacher in South Korea is required to develop technology-based science with the competence of the curriculum and it has been implemented at the level Elementary schools and teacher demands to be able to perfect the implementation of the practical arts curriculum (Go, 2021; Ahmad et al, 2018).

In the study, educational technology was understood as an approach that became an alternative to the problem-solving method, known as the problem-solving method in teaching and learning activities (Nurdin, 2016). In addition, educational technology when viewed in terms of pedagogical practice is interpreted as a process of teaching and learning activities that use technology (Subkhan, 2016). Thus educational technology is a learning tool in integrating technology with complex learning targets, to facilitate the teaching and learning process so that efforts to achieve educational outcomes and goals can be carried out properly as well as optimize educational and teaching processes for students.

Educational technology has its own development from time to time as an effort to advance the learning process. Subkhan (2016) in his book reveals that current educational technology has

developments at all times, where the purpose of the development process is to facilitate teachers and academics in delivering the learning process so that it can be understood by students.

Initially, the technology was not intended for education but to meet military needs, it is also said that educational technology originally came from the development of electronic products as a means of entertainment and communication. At that time educational technology was developed with two main studies, namely learning media and teaching design (Subkhan, 2016; Nurdin, 2016).

Educational technology has a very broad understanding, there are many experts who define educational technology. Anglin (1995) explains that educational technology is a combination of learning, learning, management, development, and other technologies that are applied to overcome educational problems. Then Hackbarth (1996) argues that educational technology is a multidimensional concept that includes: (1) a systematic process that involves the application of knowledge in an effort to find solutions that can be used in solving a problem in every learning, (2) products such as audio programs, television programs, textbooks, computer software, as well as others, (3) a profession consisting of various categories of work, and (4) a special part of education.

The use of educational technology is an attempt to provide learning media, therefore technology-based learning media needs to be done well and can attract students to like it. Learning media itself is a place to convey messages and information in teaching and learning activities. This needs to be arranged properly because it will be very useful for students to catch and understand the subject matter.

The use of learning media is not only as a teaching aid for educators but also a means to convey messages in teaching and learning activities. Each learning medium has characteristics, advantages, and disadvantages. Therefore, it is necessary to carry out systematic planning to apply media in learning (Muhson, 2010; Tambak et al, 2021).

According to Suwastika (2018), learning media used in educational institutions, both formal and non-formal, can increase students' learning motivation. Therefore, schools in the 21st century need to apply technology learning media in order to motivate students to learn. The current technological sophistication should not be ignored but must be accompanied by the required availability.

LMS-Based E-learning Module

Studies conducted by America strongly support the development of e-learning, which states that computer-based learning is very effective, enabling 30% better education, 40% shorter time, and 30% lower costs. The World Bank (World Bank) 1997 announced the Global Distance Learning Network (GDLN) program which has partners in 80 countries around the world. Through this GDLN, the World Bank can provide 5 times more e-learning to students (from 30 to 150 students) at a cost of 31% cheaper (Arbain, 2016).

According to Fryer, there are two approaches that teachers can take in utilizing or implementing e-learning, namely: (1) Topic Approach (Theme-Centered Approach). The steps taken in this approach are: Determine the topic. Determine the learning objectives to be achieved. And determine learning activities by utilizing relevant information technology to achieve learning objectives; and (2) A Software-Centered Approach. In this approach, the first step begins with identifying information technology. Then the teacher plans relevant learning strategies for a particular learning topic (Bambang, 2008).

The advantage of the LMS-based e-learning module that was developed is as a tool in the teaching and learning process that can stimulate the thinking, attention, feelings, abilities, and skills of students so that it can encourage the learning process. One of the factors that really determine success in learning is the media, as the media is an intermediary between the recipient of the message and the sender of the message. in explaining the work steps and providing direct examples of the use of the material in real life, in accordance with existing developments, and also the E-learning module which is a current learning resource in accordance with the development of information technology, so that learning can be more fun and able to increase learning motivation, at finally learning outcomes also increase (Retnosari, 2019, Pernanda, 2018).

The advantage of using this LMS-based learning module for learning is that it fosters motivation for students because the language in the module is easier to understand and the material is in accordance with the demands of the syllabus, sequentially based on the Basic Competencies to be achieved (sequencing) and the module is designed referring to the teacher's efforts to present the material. in accordance with the facts in the field, concepts, and learning procedures as well as explaining the principles contained in the material in the teaching and learning process (synthesizing). The design of teaching materials must have five categories of capabilities that can be given to students, namely verbal information, paying attention to intellectual skills, student attitudes, how the cognitive strategies or knowledge of students, and how the motor skills of these students (Retnosari, 2019).

The learning system using this module has been developed nationally or internationally known as the Modular Learning System which is abbreviated as SBB, with various development models according to the planning of learning activities by the teacher but cannot be separated from the demands of the syllabus. The main purpose of module development is to be effective and efficient and feasible to use, meaning that with the learning module, it is easier to understand in achieving certain competencies and it is fun, time and cost-saving and can be used anytime and anywhere, not only when face to face in the learning schedule at school. school. Then it is appropriate to use this is determined by the systematics of writing modules, relevant material with measurable competencies, and using current or up-to-date references (Prananda, 2009).

The development model used is the development of a 4-D model (Four D Models) developed by Thiagarajan (Prananda, 2018). The 4-D development model consists of 4 main stages, namely: Define, Design, Develop and Disseminate.

Use of Mobile App Software

In order for learning to adapt to global demands, the learning process must apply the concept of electronic learning, or what became known as e-learning, which is learning that uses technology as its main tool (Rosyad, 2019). Arif (2011) explains that the use of information and communication technology in learning has a major impact on changing the mindset and habits of teachers in teaching. Learning can be meaningful and have accentual value for students. With technology in learning, teachers can easily teach by preparing quality learning media and students are more motivated and enthusiastic about learning.

Educators must be able to master every menu on the website because, during this pandemic, the assessment must also be done online or online (Ramdani et al., 2018; Nurdin, 2016; Ahmad, 2017). In addition to this convenience, another convenience obtained by using the website is that it can be accessed any where and everywhere as long as it is connected to the internet (Asiah, 2016). The use of applications that require an internet connection is a means of communication, multimedia, and the main media in delivering material and interaction (Asiah, 2016; Nu'man, 2014).

According to Nurdin (2016), the development of a combination of various technology platforms in learning from various applications can trigger students to become more active learners in learning. This is because the variations made in learning and various skills can be achieved efficiently. Learning is more meaningful and competitive so that students actively participate in various tasks given by the teacher. Educational institutions (schools, colleges, and universities) must adapt and apply technology to learning methods. Changing traditional learning patterns, where they follow traditional face-to-face lectures in a classroom with the use of technology in the learning process. Technology-based learning can help teachers in teaching and accelerate students' learning (Dhawan, 2020; Wei, 2020).

Ruangguru App

The term multimedia originated from the theater, not the computer, performances that use more than one medium are often called multimedia performances. In the midst of the phenomenon of modernity of European society which is marked by the development of new technologies. Modern lifestyles that make people trapped in a routine of haste, indifference, and increasingly dense messages are produced in almost every corner of the place. Ambient media exists

to grab people's attention in unexpected places, without forcing them to devote special time to enjoying the media as conventional media such as television, radio, and other media (Bambang, 2008) (Murwonugroho et al, 2011).

Ruangguru is the largest and most comprehensive technology company in Indonesia that focuses on education-based services and has more than 6 million users and has managed more than 150,000 teachers who offer services in more than 100 subject areas. The company was founded in 2014 by Belva Devara and Iman Usman, both of whom made it into the ranks of successful entrepreneurs under 30 through the Forbes 30 under 30 for consumer technology in Asia. Ruangguru is an educational service provider company based on learning management system technology that allows various stakeholders in the education sector, namely teachers, students, central and local governments and parents of students to interact with each other in a comprehensive digital platform, which includes more than 2,000,000 management systems. students and teachers.

YouTube Based Blended Learning

The selection of YouTube media is one of the suitable media for implementing the teaching and learning process. The advantages of using YouTube media are YouTube is a good instructional source, a source of teaching motivational tools that can involve students and modern learning styles, is a free learning resource in consideration of the education budget, through YouTube online teaching and learning process is more practical only by using YouTube. inserts the URL of the video on the YouTube site to be selected. Users can account for display in front of the class (Burke et al. 2008).

In addition, the advantage of using YouTube media is that a teacher also needs to know the weaknesses or negative impacts of YouTube, among these negative impacts, is a lot of YouTube content that should be consumed by adults, which is also favored by minors. This impact if there is no supervision from parents or teachers will result in children growing up prematurely.

Of the negative impact of using YouTube on children, we feel the need to invite parents to be involved in the material taught by the teacher at school so that parents can know the material that is being studied by their child. Because besides students being able to learn to use YouTube in class, students can repeat the lesson at home. Another benefit of using YouTube media based on Blended Learning is that students can choose learning materials based on their own interests, so that learning becomes fun, not boring, full of motivation, and enthusiasm, and attracts attention (Husamah, 2014). However, the teacher in the classroom still has to guide and direct students in choosing content that is in accordance with the learning material.

From some of the benefits of using YouTube, it is found that there are weaknesses in implementing it, namely when teachers are less skilled in integrating computers with learning it will be monotonous and less developed. Then the media needed is very diverse so it is difficult to apply if the facilities and infrastructure are inadequate. The uneven distribution of computer facilities and internet access for students makes it difficult for students to do online learning. Lack of public knowledge of the use of technology (Rusman et al. 2013).

From the conclusions above, the strategy of taking material and using YouTube in the classroom at first glance does look easy, but as a teacher who chooses YouTube as a learning medium, you must really pay attention to the comfort of students when in class, so that there are no obstacles after the implementation of learning with using YouTube media. The use of teaching technology should be comfortable when used and have quick and fast access for educators. It's all on YouTube internet access which offers a very innovative form of teaching strategy to use (Burke, 2008).

CONCLUSION

Technology is an integral part of the world of education. All activities use technology even in a simple way. In accordance, its essence is to facilitate the activities of educational actors. Educational technology can be defined as theory and practice in designing, developing, utilizing, managing, and assessing processes and resources for learning. The internet is one of the relevant

media if it is used to support the quality of Islamic religious education. Because it can provide convenience and speed in conveying information so that the PAI learning process can run effectively and efficiently. The Internet can provide several facilities and services/applications such as e-learning, LMS, Internet Applications, Youtube, and others to be used in the PAI learning process in educational institutions.

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