Computers and Information Technology as a Source of Learning Media for Elementary School Teachers

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Abstract

The increasingly rapid development of computers and information technology at this time provides benefits and conveniences for teachers and students. It is hoped that the development of computers and information technology can stimulate thoughts, provoke activity, feelings, and attention of students so that the learning process goes well and student and teacher communication runs smoothly. This study aims to determine the development of ICT as a source of learning media. This research is qualitative descriptive research. This type of research is literature review research reviewed from journals taken from e-journals and Google Scholar. The data collection technique used in this research is reading the journals obtained and noting the things needed in this journal. The data validation technique used in this journal is using data source triangulation techniques. Based on the study results, it can be concluded that learning to use computers and information technology has many benefits that can be taken. Make it easier for teachers and students to convey and receive the learning they want to convey. With this ICT, teachers can also do e-learning so that students are more independent with flexible time.

Keywords: Computer And Information, Learning Media, Elementary School

1. INTRODUCTION

The flow of globalization brings the impact of changes in almost all aspects of life. The most rapid development in the current era of globalization is the development of ICT (information and communication technology). ICT covers two aspects, namely information technology and communication technology. Information technology has a function in managing data, processing data, obtaining, compiling, storing, and changing data to obtain useful or quality information. In contrast, communication technology refers to all the tools used to send, receive, and process information. (Baroya, 2018; Rudi Sofyan, 2016). We can see that ICT has a broad meaning, all activities related to processing, manipulating, managing, and transferring information between media (Ahdan, Putri, & Sucipto, 2020;
Sitompul, Setiawan, & Purba, 2017). So in this modern era, both children and adults cannot avoid ICT development (Astini, Sari, 2020; Husaini, 2019). One of them is gadgets such as telephones, computers, tablets, etc., which almost everyone has and uses (Muyaroah & Fajartia, 2017; Noviar, 2016). Technological developments have a negative impact as well as a positive impact. The positive impact is that it provides an easy shortcut for each individual to communicate more easily over long distances (Harahap & Ely, 2018; Suryanda, Ernawati, & Maulana, 2016; Wulandari, Sudatha, & Simamora, 2020). In addition, technological developments can help simplify work and daily needs and provide a variety of entertainment for those who want it.

Through ICT, we can improve the quality of education, namely by opening wide access to knowledge and providing quality education. ICT use in education has caused fundamental changes in the way teachers teach, learner students, and school management from what existed before (Husaini, 2019; Kusumantara, Santyadiputra, & Sugihartini, 2017). The teacher plays a very important role in the teaching and learning process, namely helping students understand and improve learning outcomes. Therefore, teachers must create a more effective learning process by choosing methods and models (Febriana, 2017; Rediasih, Suwatra, & Putri, 2019). By utilizing ICT, the teacher does not only act as a source and provider of knowledge but makes him a facilitator and even a friend of students' learning. Therefore, teachers can give students great choices and responsibility to experience learning events. The existence of ICT developments can make it easier for teachers to have a big influence on students so that the learning process feels meaningful and fun. The development of the use of ICT has caused a shift in the learning process, namely: (1) from training to appearance, (2) from the classroom to anywhere and anytime, (3) from paper to "online" or channels, (4) physical facilities to network facilities, (5) from cycle time to real-time. The utilization of technology and information in education is used with the help of intermediaries such as telephone, computer, internet, e-mail, and so on (Abdulatif & Lestari, 2021; Suhana, 2018).

The existence of computer/laptop facilities and internet networks in elementary schools is now increasingly widespread, as is the presence of smartphones which more and more users are increasingly using. During a pandemic like now, the benefits of ICT are felt. The COVID-19 pandemic has caused online learning to be carried out (Pakpahan & Fitriani, 2020; Sukawati, 2021). Online learning can be carried out well by utilizing the internet network. We can find or search for any information we need through the internet, whether the information is text, images, audio-visual (video). Students also find it easier to explore various information of interest and make it easier for teachers to convey information. Learning using computers and information technology is not limited by classrooms. Learning has been able to transcend distance (distance learning), and learning can be done anywhere.

However, what is happening in the field is that the use of ICT has not been maximized (Amelia, Filiani, & Herdi, 2017; Eugenia, Raymond, & Leung, 2013). It can be seen from the low utilization of computer/laptop/internet network facilities. There are still many teachers who have not taken advantage of information and communication technology development. Teachers still tend to use traditional ways of learning, or what is often referred to as teacher-centered learning. The teacher is active while the students are passive listeners in the classroom. Teacher-centered learning and only using books as a learning resource will lead to monotonous learning, and students are not motivated to learn (Estiani, Widiyatmoko, & Sarwi, 2015). Students are not just passive objects in learning who are "silent and sit" alone but can be subjects who interact directly in learning. So, traditional learning needs to be shifted to a learning model that leads to student activity (student-centered). The solution to this problem is to take advantage of ICT development as an effective learning media.
Learning media is a tool used as an intermediary for communication by teachers with students to help and encourage effective learning (Firdaus, Sugiyono, & Purnama, 2018; Susanto & Listianingsih, 2019). Learning media can improve the quality of education in the learning process. The media selection must be adjusted to the characteristics of students so that the material presented can be well received. So the use of ICT as a learning media is very appropriate because ICT can make it easier for teachers to make media that follows the characteristics of students, making it easier for students to obtain information that can be used as learning material, especially with online learning that is happening now ICT is very helpful for teachers and students in the learning process (Kawi, 2019; Wicaksana, 2017). Technology can effectively contribute to learning and help students reach their highest potential. These technological facilities can also assist teachers in facilitating learning, motivating, and accelerating student learning. The use of learning videos that are by the characteristics of students can improve learning outcomes and students' interest in learning because learning videos contain images and sound that foster students' motivation to actively learn (Maulana, Sekartaji, Arthur, & Dewi, 2019; Okta Priantini, 2021). So teachers need to be able to use learning media by utilizing ICT developments in the learning process. This study aimed to find out how teachers develop information and communication technology as a learning media.

2. METHOD

This research method uses descriptive qualitative research. Qualitative descriptive research describes existing phenomena, both natural and human-engineered, which pays more attention to the characteristics, quality, and interrelationships between activities. Qualitative descriptive research interprets and describes the existing data and the current situation. This type of research is a literature review from journals taken from e-journals and Google Cendakia. The data collection technique used in this research is reading the journals obtained and recording the things needed in this journal. The data validation technique used in this journal is using data source triangulation techniques. Triangulation of data sources explores the truth of certain information by using various data sources such as documents, archives, interview results from observations, or interviewing more than one subject, which is considered to have different points of view. Using qualitative methods can also make it easier for us to conclude or describe the data we have obtained from journals and describe how important computers and information technology are for elementary school teacher learning.

3. RESULT AND DISCUSSION

Result

Technology serves to provide convenience for humans. The development of computers and information technology is growing rapidly, so it is very influential on the importance of education development. In terms of information and communication, technology consists of two separate meanings: information technology and communication technology. Information technology includes everything related to the process, use as a tool, manipulation, and management of information (Rudi Sofyan, 2016). Information and communication technology can also be interpreted as a tool used to process data, including processing, obtaining, compiling, storing, and manipulating data to produce quality information, namely relevant, accurate, and precise information. (Ahdan et al., 2020; Sitompul et al., 2017).

Several development steps can be taken To utilize technology and information in the educational process, including the following: (1) Designing and creating database
applications that store and manage academic data and information, both lecture systems, assessment systems, curriculum information, education management, as well as learning materials (2) Design and create learning applications based on portals, webs, interactive multimedia, which consist of tutorial applications and learning tools; (3) Optimizing the use of educational TV as enrichment material to support the improvement of the quality of education; (4) implement the system in stages starting from a smaller scope of education administration. ICT as a learning medium can be through computer devices as innovative learning media. Other types of ICT-based learning resources and media that teachers in the learning process can utilize include (1) computers, (2) LCD projectors, (3) internet, (4) learning CDs, (5) e-mail, and (6) Powerpoint (Dewi & Hilman, 2018).

Discussion

The development of ICT has an impact on improving the quality of education. Using learning media by utilizing ICT developments will certainly have a major impact on the learning process. It is hoped that using this media can stimulate students' thoughts, feelings, interests, and attention so that the learning process goes well (Prabawa & Restami, 2020; Saputri & Purwadi, 2017). This ICT learning media has several developmental sources of learning media that elementary school teachers can utilize through computers and laptops, LCD (Liquid Crystal Display), Smart Television, Internet networks, E-mail (electronic mail), PowerPoint presentations, learning CDs, and Smartphone. The development of computers and information technology is advanced, but teachers must also have skills in using information technology so that the learning process runs smoothly and follows what is desired (Dewi & Hilman, 2018; Lestari, Suryadi, & Ismail, 2020).

The development of technology is very influential in the habits of every individual, which of course has a negative impact as well as a positive impact. The negative impacts of technological developments for elementary school students are: (1) students will forget traditional games because they will prefer games on their gadgets compared to traditional games; (2) lack of togetherness, because they tend to play alone compared to playing with their peers; (3) students will find out more about pornography faster, with increasingly sophisticated technology, many pornographic sites or content appear; (4) students will be lazy to study, such as studying, writing and reading; (5) Students will experience visual impairment at an early age because they often play computers and information technology (mobile phones) (Ariston & Frahasini, 2018; Syifa, Setianingsih, & Sulianto, 2019). Due to the Covid-19 pandemic, learning is carried out online. Therefore, a teacher must be able to sort and choose the learning media used and what material is good to convey to students. And no less important is the role of parents in supervising and paying attention to their children. Teachers and parents must work together in the learning process at home when the teacher provides e-learning. The role of parents at home is also very helpful for learning at school by paying attention to the development of computers and communication technology for students and paying attention to the development of students when doing e-learning and limiting students at certain hours so that they do not always use information technology (Ramdan & Fauziah, 2019; Yulianingsih, Suhanadji, Nugroho, & Mustakim, 2020).

The positive impact of technological developments is that it provides many solutions and easy shortcuts for each individual (Wulandari et al., 2020). ICT utilization during a pandemic is very important because it facilitates communication between teachers and students, making it easier for teachers to convey material, and students can easily obtain information. ICT can improve the quality of education (Husaini, 2019). Improving the quality of education begins with creating an effective and innovative learning atmosphere (Triwardhani, Trigartanti, Rachmawati, & Putra, 2020). For this reason, in the learning process, teachers must be able to use learning media by utilizing ICT developments.
Educational technology invites teachers to prepare problematically for the teaching and learning process and view each teaching method as a hypothesis that must be tested for its effectiveness. Thus educational technology encourages the teaching profession to develop into a "science," but the teacher's work will always contain an "art" aspect. Teachers can create effective learning by using learning media to instill concepts in students (Herliana & Anugraheni, 2020; Nomleni & Manu, 2018). To be able to use the right media, the teacher must recognize the characteristics and abilities of students so that the material presented is more meaningful. The development of technology has also created new and innovative forms of media. Learning media can increase students' concentration to learn because they are interested in what the teacher conveys. Research by (Maulana et al., 2019; Okta Priantini, 2021) shows that learning media can improve learning outcomes because learning videos can increase interest in learning. Booklet and video learning media development can strengthen students' clean and healthy living characters (Rehusisma, Indriwati, & Suarsini, 2017). The importance of using media in the learning process is that teachers are expected to take advantage of ICT developments to use and create appropriate media in delivering material to students.

4. CONCLUSION

Based on the study results, it can be concluded that learning to use computers and information technology has many benefits that can be taken. Make it easier for teachers and students to convey and receive the learning they want to convey. With this ICT, teachers can also do e-learning so that students are more independent with flexible time. Creativity and innovative teachers are required to be able to use ICT. It is hoped that using these sources and media can stimulate students' thoughts, feelings of interest, and attention so that the learning process goes well.

5. REFERENCES


