

IMPACT OF INFORMATION TECHNOLOGY (IT) ON EDUCATION

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Email: caksifa.sifa@gmail.com**Abstract:**

Since mid-March 2020, information and communication technology has played an important role in the world of education. After the emergence of a circular letter (SE) regarding the implementation of education during the Covid-19 emergency, the learning system at all levels of education switched to an online learning model. Online is the translation of the term online which means connected to the internet network. While online learning is learning that is carried out online using learning applications and social networks, so that information and communication technology, especially laptops and cellphones (HP) are the main facilities to support the ongoing teaching and learning process. This study tries to present an overview of the role, impact and problems of using information technology in the world of education along with solutions to these problems. This study uses a descriptive qualitative approach whose purpose is to reveal facts, phenomena, variables contained in the research object. The source of the data for this study was from the author's observations at several schools and interviews with several teachers and took data from journals or literature from the internet related to the above theme. The results of this study are: 1) The role of information technology in the world of education, 2) The impact of information technology in the world of education, 3) The problems of using information technology in the world of education and their solutions.

Keywords: Information Technology, Education.

1. INTRODUCTION

Education plays an important role in improving the welfare of society. According to Rousseau (in Mardapi, 2008) the main purpose of education is to give humans the ability to live in society. This ability is in the form of knowledge or skills and behavior that is accepted by society [1]. A person's ability will be able to develop optimally if he gets a good and appropriate learning experience.

The educational process is an activity of mobilizing all components of education by educators that are directed at achieving educational goals. How the educational process is carried out greatly determines the quality of the results of achieving educational goals. The quality of the educational process can be determined from two aspects, namely the quality of the components and the quality of their management. The two aspects are mutually dependent on each other. Even though the education components are adequate, if the management is not appropriate, it will result in sub-

optimal results. Therefore, components and management in an educational institution must go hand in hand and take place in a balanced manner.

One of the components needed in the world of education is the existence of effective and efficient information technology (IT). Why is that? Because the world of education today has openly competed to produce new discoveries and knowledge related to technology. Information technology (IT) has made many contributions to the world of education, in this case the education sector has had a considerable impact with advances in information technology (IT). Basically Education is a process of communication and information from educators to students which contains educational information. The elements contained in it are educators as sources of information, media as a means of presenting ideas, ideas and educational material and students as recipients of information. Some of these elements get a touch from information technology media [2, p. 3].

In the world of education, the role of information technology (IT) is used as an absolute value that must be mastered to welcome the era of globalization with rapid technological progress competition. In the past, one had to wander or walk to meet experts to discuss a problem. Currently, this can be done from home by using a communication device such as a telephone or by sending an email. Even at this time assignments at the elementary school level to tertiary institutions also use technology, for example making articles by searching for news or literature on the internet and typing them using a computer (laptop). to complete a research can also be done by exchanging data via the internet, via email, or with a file sharing mechanism. Information sharing is also very much needed in the field of research so that research is not repeated (reinvent the wheel). The results of research in universities and research institutions can be used together so as to accelerate the process of developing science and technology.

For Indonesia, the benefits mentioned above have become a strong reason to make technology and the internet as infrastructure in the field of education. Some of the benefits of the internet for education in Indonesia are: as a means to access the national library, access to experts, providing collaboration facilities and others [3, p. 15]. The development of information technology (IT), especially in the field of the internet, spurred the need for reliable human resources. To produce quality human resources (HR), collaboration between formal educational institutions (universities, schools) and informal education is needed. The use of the Internet, currently has changed the use of Information Technology. In various places in the world, access to information has become easier and cheaper with the existence of internet media. Even in Indonesia, it is no different from other countries, the Internet and information technology are starting to become something very important. In this era of increasing globalization, like it or not we have to keep up with the development of Information Technology which is growing rapidly. Besides that, we also have to have goals to be achieved from efforts to develop information technology (IT).

The development and progress of information technology as described above, is one of the innovations that have been created by humans. Every innovation is created to provide positive benefits for human life. Technology

This information (IT) also provides many conveniences, as well as a new way of carrying out human activities and also as a solution to solving problems experienced by humans. However, even though it was originally created to produce positive benefits, on the other hand it is also possible to use it for negative things. Therefore, in this paper the author will raise several issues related to the role of information technology in the world of education, as well as the impact of the use of IT, both positive and negative impacts. Likewise, examples of problems experienced by some students in using information technology.

2. METHOD

The method used by the authors in this study is more focused on using a content analysis approach model, where a discussion of in-depth data collection through print media such as books, journals, or other technological media, namely ebook media, and writings previously as an additional source as a theory of writing [4, p. 25]. The data is collected by means of Text Reading (reading), understanding, studying, and recording information related to the problem to be studied, thus facilitating the preparation of writing.

The type of research used in this study is a type of qualitative research, namely a research procedure that produces data in the form of writing or speech and behavior that can be observed from the people (subjects) themselves. This research uses case and field research types that aim to study intensively about the background of the current situation, and environmental interactions of a social unit, individual, group, institution or community [5, p. 46]. Meanwhile, descriptive research is research that explains and describes existing events, both natural events and man-made events.

Qualitative research is research that tries to understand phenomena in natural settings and contexts (not in a laboratory) where researchers do not try to manipulate the observed phenomena [6, p. 7]. Qualitative research is not rooted in objectivism which adheres to a positivism theoretical perspective such as quantitative research, but tries to explore and understand the meaning of different truths by different people, because qualitative research assumes that reality is a form of human thought and everything that involves humans will be complex and multi-dimensional making it difficult to maintain absolute objectivity.

3. RESEARCH RESULTS

The term information technology (IT) became popular in the late 70's. In the past, the term information technology was usually called computer technology or electronic data processing. Information technology is defined as technology for processing and disseminating data using hardware and software, computers, communications, and digital electronics [7, p. 10].

Information Technology is a technology that is used to process data, including processing, obtaining, compiling, storing, manipulating data in various ways to produce quality information, namely

relevant, accurate and timely information, which is used for personal, business and government purposes and is strategic information for decision making [8, p. 3].

This technology uses a set of computers to process data, a network system to connect one computer to another as needed. The definition of the word information itself has been agreed internationally as a result of data processing which in principle has more value than raw data. The computer is the first form of information technology (the forerunner) that can process data into information. In a short period of time, the progress of telecommunication technology seems so rapid, that it has been able to make the world feel smaller (reducing space and time). While telecommunications technology is a technology used so that data can be spread and accessed globally.

The existence of information technology for the world of education means the availability of channels or facilities used to broadcast educational programs. Utilization of information technology in the field of education, must be able to provide computers and networks that connect students with classrooms, teachers, and school administrators. All of these components are connected to the Internet, and teachers are trained to use personal computers to be able to find inspiration or creative and fun learning methods by utilizing technology and information.

Thus, in general, information technology can be interpreted as a broad subject that concerns technology and other aspects of how to manage and process data into information. This information technology is a subsystem of the information system (information system). Some authors of the concept of information technology reveal that information technology is composed of three main dimensions of technology, namely:

1. Computer technology (Computing), which is the main driver of the development of information technology.
2. Telecommunications technology (Communication), which is at the heart of the process of mass and global information dissemination.
3. Information content dimension (Content), which is the main driving factor for the implementation of technology in all fields of human activity [7, p. 11].

The fact that world history records that each dimension of information technology development initially developed separately from each other. Computer technology develops within the scope of mathematics and computers tend to be more theoretical at first. Meanwhile, telecommunications technology is developing widely in the world of business and economy, becoming a supporting pillar of transportation technology in the industrial revolution.

The role that can be given by this information technology application is to obtain information for personal life such as information about health, hobbies, recreation, and spirituality. Then for professions such as science, technology, trade, business news, and professional associations. Means of cooperation between one person or group and another person or group without knowing the boundaries of distance and time, country, race, economic class, ideology or other factors

others that can hinder the exchange of ideas The development of Information Technology spurred a new way of life, from the beginning to the end of life, this kind of life is known as e-life, meaning that this life has been influenced by various needs electronically.

4. CLOSING

The most recent thing in the world of information technology (IT)-based education is the "cyber teaching" program or virtual teaching, namely the teaching process that is carried out using the internet. Another term that is increasingly popular today is e-learning, which is a learning model using communication and information technology media, especially the internet. E-learning is a use of internet technology in the delivery of learning in a wider range. In addition, there is online learning, namely learning that is carried out without face-to-face meetings, but through platforms that are already available. All forms of study material are distributed online which can be assisted by several applications, such as Google Classroom, Google Meet, Zoom and others.

An example of a problem with the use of information technology (IT) in education is the large number of students who are addicted to cellphones (gadgets) and spend a lot of time playing games or playing applications on gadgets instead of doing assignments and adding to their scientific insights. There are many frauds among people who use internet applications, both transportation services, online markets, and other services whose main purpose is to make it easier for the community and save costs. From this problem educators need to provide special knowledge both in terms of technology or religion to prepare students for the future in facing technological advances and globalization.

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