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The Influence of Information Technology in the Learning Process during the Covid-19 Pandemic

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Abstract

This study discusses the Covid-19 virus outbreak throughout the world which paralyzes all levels of society, including the world of education. Therefore, educational institutions need to find solutions so that teaching and learning activities can continue. The purpose of writing this article is to describe the role of education management information systems and information technology in the learning process during the Covid-19 pandemic. The method of writing this article is a literacy study. The results of the literacy study show that management information systems and information technology play a very important role in distance learning. Information technology acts as a container or learning tool, while information systems act as the brain in distance learning. However, before implementing distance learning, educational institutions need to provide several things such as distance learning infrastructure and ICT literacy for educators and students. These things are very important in achieving distance learning success.

Keywords— Covid 19, Information Technology, Distance Learning

PRELIMINARY

Information technology and the education system also need to keep pace with the increase in human resources, because human resources are a key component needed to produce a quality and efficient education management information system. In the world of education, educational activities cannot be separated from education management information systems, because both are interrelated and need each other. The relationship between these two aspects can be described as education is considered a driver of management information systems, while management information systems are a determinant of educational performance. This means that in carrying out education, the role of management information systems cannot be eliminated.

In general, a management information system is a system created as a data processing tool, which functions to support management tasks such as evaluation and decision making. Advances in information and communication technology play an important role in the development of management information systems. Initially, everything was done manually, but nowadays, everything can be supported by computer devices. Thus, data processing related to the management information system can be faster and more accurate. This shows that information and communication technology can improve the performance of management information systems.

However, the spread of the Covid-19 virus throughout the world has become an inhibiting factor in all lines of human life, including education itself. Educational institutions are forced to implement learning using E-Learning. This is where the role of technology can no longer be

underestimated. As a result, educational institutions are competing to develop internet-based and electronic learning facilities for the continuity of the teaching and learning process.

Based on the background above, it can be concluded that in this article, the author will discuss the role of information systems and information technology in the learning process during the Covid-19 pandemic. The purpose of writing this article is to provide information related to the function of information systems and information technology in the electronic-based teaching and learning process during the Covid-19 pandemic. Therefore, the authors hope that in the future the discussion of information systems and information technology will not only be limited to their role, but also on ways that can be used to maximize the performance of both.

RESEARCH METHODS

This study uses a qualitative research type, where the data obtained will be described in the research results. By using relevant data, the results of this study will be interpreted through valid results. This research model is a literature review, where the findings and research materials obtained will be used as the basis for this research activity.

In solving existing problems, researchers use secondary data types obtained from various sources, such as: books, articles, journals, proceedings and accurate information from trusted and relevant websites, so that in the end they are able to answer the existing problems.

RESULTS AND DISCUSSION

An education management information system is a set of components that work together to store, process, and share educational information, which will then be used as the basis for decision making in an educational institution. The objectives of the education management information system include; Provide information that can be used to plan, control, evaluate, and improve a program; Provide information needed for the benefit of student data, student grades, and the goals to be achieved by school management; As a material consideration in making organizational decisions. So it can be concluded that the purpose of the management information system is to provide valid data to be used as a reference in determining a policy. During this pandemic, the role of education management information systems is very significant, namely; MIS can improve the accessibility of available data in a timely and accurate manner to users, without the need for intermediaries from existing information systems; MIS helps develop more effective and efficient planning processes; MIS can anticipate and understand the economic consequences of emerging information systems and technologies; Schools can use information systems to process transaction data, reduce costs and provide revenue as a service product; SIM can analyze the necessary information needs; MIS as management control is to measure work, decide on control actions, formulate rules about new decisions to be applied to operating personnel, and allocate available resources. This means that the role of education management information systems in this pandemic period is very important.

The role of MIS education during the pandemic is very clear in the curriculum/learning management. The change from face-to-face meetings in class, to meetings using electronic media cannot be taken lightly. If you take the wrong steps, learning may not go well. One of the educational SIM facilities during this pandemic is E-Learning. In E-Learning, there is interaction between teacher and students, just like learning in general. But what is slightly different is that all things related to learning must be uploaded to the E-learning system, such as

attendance lists, daily assignments, learning materials, and daily assessments. Thus, educational institutions require an educational SIM that is strong enough to meet all the needs of educators and students during the teaching and learning process.

The next discussion is about the role of information and communication technology in learning during a pandemic. Information and communication technology is electronic equipment consisting of hardware and software and all activities related to processing, manipulating, processing, and transferring or transferring information between media. Hardware is all tools or devices that we can touch physically such as computers, cellphones, radios, televisions, etc. While software is a system or application contained in hardware.

In its journey, information and communication technology is developing very rapidly. The hardware and software industry is competing to produce the latest technology to facilitate human work. So, in this era of globalization, it is not surprising that many human jobs are being replaced by technology. The role of ICT in learning in the midst of this pandemic is no less important. Face-to-face classes are not allowed, causing governments and educational institutions to rack their brains. Utilization of ICT is an alternative way that can be taken. However, there are 5 important criteria that must be met if educational institutions want to use ICT to support learning during a pandemic, namely: The application of information and communication technology must provide easy access to learning resources about learning resources; The application of information and communication technology must have similarities in virtual learning situations with traditional learning environments (face-to-face classrooms); The application of information and communication technology needs to present an effective learning system by utilizing and using a learning management system; information and communication technology applications must facilitate all users without being limited to the experience of using technology; the application of information and communication technology must be able to be a medium of interaction between teachers and students, especially when students face difficulties and want to ask the teacher.

Information and communication technology literacy in Distance learning during the outbreak was indirectly a determining factor. The ability to handle information and communication technology by both educators and students can determine the success or failure of learning. This has a huge impact on both educators and students. The effect for students is that students will find it easier to access learning materials, upload daily assignments, and even just fill in attendance. While the impact of ICT literacy for educators is to facilitate the delivery of learning materials, facilitate supervision and control of students during learning, and facilitate the acceptance of students' daily assignments.

In the context of the effectiveness of distance learning, knowledge of technology tools and basic skills in dealing with technology is the most basic technological literacy that drives the creation of a more effective distance learning environment. Basic technological literacy on how to use technology systems needs to be trained and improved for distance learning to be more effective. In other words, before implementing distance learning, educational institutions need to ensure that both educators and students have basic skills in using ICT. If the desired capacity has not been fully achieved, then educational institutions can conduct training. The exercise can be done in 2 steps. The first step is the introduction of hardware that is integrated with the distance learning system. The second stage is distance learning training with direct training methods, meaning that educators or students carry out learning under the guidance of expert technicians. Exercise can not only be done once or twice, but must be done many times. Thus, understanding of the devices and applications used for distance learning can be maximized.

CONCLUSION

An education management information system is a set of components that work together to store, process, and share educational information, which will then be used as the basis for decision making in an educational institution. Meanwhile, information and communication technology is a collection of instruments that includes hardware and software used in activities related to processing, manipulating, processing, and transferring or transferring information between media. These two things are interrelated and cannot be separated from each other in the world of education. In this time of pandemic, the role of both is very important. Information and communication technology acts as a forum or a means of distance learning, while the management information system acts as the core of delivering information related to learning. In the implementation of distance learning, information and communication technology literacy becomes a determinant because it is related to the ability of educators and students to operate ICT hardware and software. Therefore, before conducting distance learning, educational institutions need to pay attention to several things, namely the availability of infrastructure, the situation and geographical location of educators and students, as well as information and communication technology literacy.

SUGGESTION

The writer's suggestion to the next researcher is the researcher can then use more references in the preparation of scientific papers with the same theme. Meanwhile, the recommendation for educational institutions is that educational institutions must meet the requirements required to implement distance learning. So that distance learning can be implemented properly.

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