The Role of Technology in Education in The Era of Globalization

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Abstract

The government's goal in regulating education is to educate the nation's life. Intelligence is needed by everyone to face the times that have entered the era of globalization. Education in the global era can be interpreted as the integration of national education into world education. In the era of globalization, the progress of the nation is largely determined by the use of science and technology. Emerging technology has now entered the digital era, where all fields have used technology to facilitate work, including in the field of education. Educational technology is a system used to support learning so that the desired results are achieved. The role of technology in education is implemented in the use of learning media, administrative tools, and learning resources. The positive impact of technology implementation in education is more efficient in terms of time, cost, logistics and other institutional issues, while the negative impact is that technology can change social life.

Keywords: technology, education, globalization

INTRODUCTION

Science is growing from time to time. The development of this science supports the creation of new technologies that mark the progress of the times. Until now, the developing technology has entered the digital stage. Including in Indonesia, every field has begun to utilize technology to facilitate work, including in the field of education.

As an entity related to human culture and civilization, education in various parts of the world has undergone fundamental changes in the era of globalization. There are many scientific and technological advances that can be enjoyed by mankind. But on the other hand, this progress Subscribe to DeepL Pro to edit this document. Visit www.DeepL.com/pro for more information. also goes hand in hand with the misery of many human children, especially in the current era of globalization.

Technology is the result of the development of science, which occurs in the world of education. Therefore, it is appropriate for education itself to also utilize technology to assist the implementation of learning. This is in accordance with the opinion of Tondeur et al (in Selwyn, 2011) which states that digital technology has now begun to be used in educational institutions as a means to support

learning, either as an information tool (i.e. as a means of accessing information) or as a learning tool (i.e. as a means of supporting learning activities and assignments).

Technology is a human invention. Therefore, it is natural that it has shortcomings or negative impacts. In the field of education, besides having a positive side, technology also has a negative side.

RESULTS AND DISCUSSION

Education in the Age of Globalization

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, selfcontrol, personality, intelligence, noble character, and skills needed by themselves, society, nation and state (Law no.20 of 2003 article 1: 1). The government organizes education to educate the nation. Intelligence is needed by everyone to face the times that have entered the era of globalization.

According to Grew (in Nikolopoulou 2010: 28) globalization is broadly understood as stretching social, political and economic activities across borders so that events, decisions and activities that take place in a place or region have significance for society as a whole. Then the broad understanding of globalization is the growth process of developed countries (America, Europe and Japan) carrying out massive expansion, then trying to dominate the world with technological, scientific, political, cultural, military and economic power.

In the economic field, economic globalization means the integration of the national economy into the world or global economy. In the field of education, education globalization means the integration of national education into world education

When studied further, globalization has an influence on developing countries that have just been released from the shackles of colonialism, both positive and negative. The positive influence of globalization is that it helps/encourages newly developing countries to advance technically, and become more materially prosperous. Meanwhile, the negative influence is the emergence of a powerful technocracy, supported by modern technical tools and sophisticated weaponry.

A systems approach needs to be used in explaining education, because in today's global era the world of education has developed in such a way that it has become a matter of course. Toffler (1992:4) states that schools or educational institutions of the future must direct their students to learn how to learn. Blindness in the global era is the inability to learn. The main characteristics of future Indonesian people are people who educate themselves throughout life and an open learning society but have a steady view of life. So learners must be provided with background information that has a multiplier effect on their learning so that it can provide great motivation to read and study information from various sources.

Education Challenges in the Era of Globalization

Today, globalization has started to become an actual problem in education. Some of the first challenges of education in the era of globalization is the quality of education. The problems of globalization in the field of education mainly concern educational output. As is known, in the era of globalization today there has been a paradigm shift about the advantages of a country, from comparative advantage (comperative adventage) to competitive advantage (competitive advantage). Comparative advantage rests on the wealth of natural resources, while competitive advantage rests on the ownership of quality human resources (HR), meaning that in the context of the paradigm shift of excellence, national education will face a very high competitive situation, because it must deal with the power of global education.

Second, the professionalism of education personnel. One important component in educational activities and the learning process is the educator or teacher. Even though technological advances have provided a variety of tools to improve the effectiveness of the learning process, the position of the teacher cannot be completely replaced. That means teachers are an important variable for the success of education.

Third, culture or acculturation. A cultural development in today's modern century is inevitable from the influence of other nations' cultures. Such conditions cause the emergence of the process of acculturation, namely the exchange and intermingling of one culture with another. From here there are challenges for education education, namely with the alkulturation, it will be easy to enter negative influences on culture, morals and morals of children. Therefore, this is a challenge for education to filter incoming cultures so as not to be negatively affected by the entry of foreign cultures.

Fourth, learning strategies. Today's globalization era has a very significant influence on learning patterns that can empower students. Global demands have changed the learning paradigm from the traditional learning paradigm to the modern learning paradigm, but the reality shows that learning practices apply more traditional learning strategies than new learning. This seems to be closely related to the low professionalism of teachers.

Fifth, management improvement. Improvements in education management and school management are directed at further empowering educational institutions and schools as the leading implementation unit in teaching and learning activities at school.

Sixth, access to education. One of the government's policies in the education sector is the implementation of compulsory 9-year basic education, which is now heading towards compulsory 12-year education. The successful implementation of

this policy has a strategic impact as an effort to improve the quality of Indonesia's human resources.

Seventh, advances in science and technology. As we have all realized, the positive impact of technological progress to date has been facilitative. Technology offers an increasingly diverse range of leisure and tranquility.

Definition of Education Technology

The use of technology is no longer a foreign thing in the era of globalization. Including in the world of education, as the birthplace of technology, it is only natural that education also utilizes technology to facilitate the implementation of learning. From here, the term educational technology emerged.

Educational technology is a systematic method for planning, using, and assessing all teaching and learning activities by paying attention, both technical and human resources and the interaction between the two, so as to get a more effective form of education (Kamus Besar Bahasa Indonesia). Meanwhile, according to Yusuf (2012) educational technology is a systemic process in helping to solve learning problems. This opinion is in line with Muffoletto's opinion (in Selwyn, 2011) which states that educational technology is not about devices, machines, computers or other artifacts, but rather it is about systems and processes that lead to the desired results. From some of the above opinions, it can be said that educational technology is a system that is used to support learning so that the desired results are achieved

Implementation of Technology in Education in the Era of Globalization

Based on the definition of educational technology above, it can be said that technology is utilized to support the success of learning. Here are some examples of technology implementation in education

1.   Learning media

The word media is the plural form of the word medium. Medium can be defined as an intermediary or an introduction to communication from the sender to the receiver (Heinich et.al, 2002). Meanwhile, learning media is something that can be used to channel messages (learning materials), so that it can stimulate students' attention, interest, thoughts, and feelings in learning activities to achieve learning goals (Santyasa, 2007). The use of technology as a learning medium is familiar, ranging from very simple technology to sophisticated technology. Technology can be utilized to attract students' interest in learning so that learning becomes more effective and efficient.

The development of science has brought technology into the digital world. According to Selwyn (2011), the use of digital technology has a role in supporting and improving learners' cognitive processes and thinking skills. One example of digital technology is the internet. The internet can enable teachers to present lessons to be more interesting for learners. Currently, internet-based learning, such

as web-learning, e-learning or online learning (distance learning) has been widely practiced. These lessons utilize the internet as a medium. In addition to learning being more flexible in terms of time, place and age, learners can also access the information needed in learning freely. Since learning becomes more individualized, it can improve learners' cognitive process and thinking skills

Other examples of the use of technology as learning media are radio, television, video that can be utilized to facilitate different learning styles of learners and also attract students to be more motivated in learning. The use of interactive presentation tools such as electronic whiteboards can make learning materials more interesting for students.

2.   Administrative tools

Technology can also be utilized as an administrative tool. As Selwyn (2011) says, one of the benefits of digital technology is to improve the effectiveness of organizing educational institutions. By using computers, as one of the products of digital technology, educational institutions can more easily manage administrative data, including student data, teacher data, and school data itself.

3.   Learning resources

Selwyn (2011) says digital technology can help teachers to produce learning materials and allow them to spend time with learners. With the availability of computers, teachers can develop lesson plans and materials needed by learners to learn. In addition, the availability of the internet also allows learners to access information easily from different sources. Nowadays, by using digital technology, learners get many conveniences in learning. the availability of e-books is one of these conveniences. Learners do not need to buy books in stores to get learning resources. Learners only need to download e-books that are widely available on the internet.

Issues in Educational Technology

Technology, in its development, certainly brings changes in everyday life, including changes in the field of education. There are several debates related to the use of technology in education. First, technology can improve learning. One of the uses of technology in learning is as learning media, such as interactive multimedia. According to Heinich et al (2002) interactive multimedia is a medium consisting of images, sounds, and video materials presented under computer control for learners, so that learners not only see images and hear sounds but also make active responses. The response affects the speed and order of presentation of learning materials. Some studies such as those conducted by Rahayuningrum (tt) and Izzudin (2013) state that the use of interactive multimedia can improve learning which is characterized by increased student learning outcomes. However, on the other hand, if the use of technology is not in accordance with what is

needed in learning, or there is no teacher control in the use of technology during learning, then the technology can backfire.

The second issue is that technology can make education better. As stated earlier, if technology can improve learning, then technology will also make education better. However, technology such as computers can also make social inequality more visible. For learners who already understand and are accustomed to operating computers, they can easily use them to support learning so that they get maximum learning results. Meanwhile, for students who are not familiar with computers and cannot operate them, their learning will focus on how to operate the computer, not on the material they should learn. This can reduce learning outcomes.

The third issue is that technology can replace teachers. With digital technology, learning can be done anywhere, anytime and at any age. The internet provides a lot of information from various sources that can be easily accessed by learners to expand their knowledge of learning materials. Some teachers who implement web-based learning also ask their students to search for information needed in learning on the internet independently. This opinion reinforces the statement that technology can replace teachers. It is true that the internet provides all the information needed by students about a material, but not all information presented on the internet can replace students' learning experience with teachers. There are some learning materials that involve the role of the teacher directly as a role model or as a guide, such as ethics and speech materials, which the internet cannot do.

The fourth issue is that technology can replace schools. Internet technology can be utilized for distance learning, which is learning through telecommunication (Heinich et al, 2002). In this distance learning, it does not require students to sit in a regular class. Learners can follow the learning anywhere and anytime, so the learning becomes more flexible. Distance learning is a solution when learners and teachers cannot meet face to face due to time and place constraints. However, on the other hand, distance learning can cause learners to become more individualistic. In addition, speaking and socializing skills will also not be obtained from distance learning. Therefore, the use of technology in education can indeed facilitate the course of an education, but technology is not necessarily able to solve all problems related to education such as social learning.

Impact of Technology in Education in Indonesia

The development of increasingly sophisticated technology is certainly followed by several impacts, both positive and negative impacts. There are many opinions related to the utilization of technology in education. Nicholas Gane (in Selwyn, 2011) argues that internet technology is directly related to changing patterns of daily life, including how to work, access and exchange information, shop, meet

people, and maintain and organize existing social relationships. The existence of the internet makes it easier for someone to communicate without being limited by space and time. With the internet, one can also study or pursue distance education easily. However, it cannot be denied that this can change the social order in society, such as changing a person to become more individualistic and apathetic to their surroundings.

Selwyn (2011) says that technology has done more than just 'augment' existing social arrangements; it has radically changed three key areas of social life, the spheres of production, consumption and communication. In education, one of the skills learned is speaking and communication skills. If learning is done through the internet or interactive media, then students' skills in communication will be reduced, because they only interact with machines

Clark (in Selwyn, 2011) says that technology is only a vehicle for delivering instruction and therefore no more likely to affect student learning or achievement than as a truck that brings everything needed to improve nutrition. Thus, technology in education is only in the position of media or intermediary to achieve the learning objectives expected by an educational institution. Learners who can utilize technology well to increase their knowledge and skills, then they will get a good achievement. Conversely, if learners do not know how to utilize technology to increase their knowledge and skills, then they will not get a good achievement and even technology can have a negative effect on these learners. On the other hand, Clark (in Selwyn, 2011) recognizes that there are significant economic benefits to be gained from using technology to deliver learning, namely the benefits of time, cost, logistics and other institutional issues. One example of the positive impact of technology in education is the possibility of distance education. Distance education overcomes the problems of time, geography and cost. So that students who have geographical limitations, such as living far from educational institutions so that it requires a large amount of money and a long time to come to them, still get education as education that is carried out regularly. Regulations regarding distance education are also regulated in article 31 of Law no.20 of 2003 concerning the national education system

CONCLUSIONS

Education in the era of globalization means the integration of national education into world education. Students must be equipped with adequate competencies so that students exist in a highly competitive global era. There are several issues and challenges facing the world of education in the era of globalization, including the quality of education, professionalism of education personnel, culture (acculturation), learning strategies, challenges to management improvement, and challenges to advances in science and technology.

Technology in education is a system that is used to support learning so that the desired results are achieved. The implementation of technology in education in Indonesia is that technology can be utilized as learning media, administrative tools, and learning resources.

The impact of technology in education in Indonesia, besides having a positive impact, also has a negative impact. The positive impact is that it is more efficient in terms of time, cost, logistics and other institutional issues. Meanwhile, the negative impact is that technology can change social life.

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