THE ROLE OF EDUCATION TECHNOLOGY IN THE DEVELOPMENT OF HUMAN RESOURCES AND EDUCATION TRANSFORMATION

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Abstract: The progress of globalizing technology has influenced all aspects of life both in the economic, political, cultural arts and even in the world of education. The development of science and technology is one of the productivity results of humans who have the knowledge gained from education. Where the development of science and technology has broad implications in human life, it is expected that these humans need to explore to take advantage of its benefits optimally and reduce the existing negative implications. Educational technology is only possible to be developed and put to good use when there are workers who handle it. They are skilled or experts in carrying out activities. The world of education, like it or not, must carry out a comprehensive innovation, means that all devices in the education system have a role and become a factor that is so influential in realizing reliable human resources and the success of the education system.

Keyword: Education Technology, Education Transformation, Human Resources

INTRODUCTION

The development of technology is something that can not be avoided in this life, because technological progress will go according to the progress of science. Every innovation is created to provide positive benefits for human life. Provides many conveniences, as well as a new way of doing human activities. Specifically in the field of technology, people have enjoyed the many benefits brought about by the innovations that have been produced in the last decade. However, although it was originally created to produce positive benefits, on the other hand it is also possible to be used for negative things.

Global technological advances have influenced all aspects of life in the economic, political, cultural arts and even in the world of education. The world of education must be willing to carry out a comprehensive innovation meaning that all devices in the education system have a role and become a very influential factor in the success of the education system. From policy makers, teachers, students, curriculum, all have an important role. All of them are put together in a system that is educational technology.

Educational technology can change the way of conventional learning into non-conventional. Educational technology is often assumed in the perception that leads solely to the problem of electronics or technical equipment, even though educational technology

contains a very broad understanding, for that in this paper will be discussed further about Educational Technology, especially in terms of its development amid rapid advancement of science and technology and community culture.

The development of science and technology is one of the productivity results of humans who have the knowledge gained from education. Where the development of science and technology has broad implications in human life, it is expected that these humans need to explore to take advantage of its benefits optimally and reduce the existing negative implications. Educational technology is only possible to be developed and put to good use when there are workers who handle it. They are skilled, skilled and or experts in carrying out activities.

With the availability of educated and trained personnel in the field of Educational Technology, conceptually the business of implementing educational technology will be guaranteed in institutions that conduct learning and learning activities, the education system in Indonesia may only be carried out in accordance with expectations if understood the importance of Educational Technology, so its role and potential can be realized optimally.

THE ROLE OF TECHNOLOGY IN HUMAN RESOURCE DEVELOPMENT

Referring to the current definition issued by the Association for Educational Communication and Technology related to educational technology as follows: Educational Technology is the study and ethical practice in an effort to facilitate learning and improve performance by creating, using/utilizing, and managing processes and appropriate technology resources.[1]   From this definition it can be seen that the main objective of educational technology is still to facilitate learning (to be effective, efficient and interesting/joyful) and to improve performance.

 From the definition above it can be seen that "educational technology is known as a systematic and systematic way of solving learning problems effectively and efficiently, in this definition there are several meanings: a). Educational technology offers a variety of ways, not one. b). Educational technology offers a systemic way not partial, but comprehensive and integrative by involving all components of learning. As explained by Suparman that a system is more than a combination of parts; it must have a specific

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[1]Januszewski, A. dan Molenda, M. *Educational Technology: A Definition with Commentary*. (New York: Lawrence Erlbaum Associates, 2008), p. 1.

purpose which cannot be achieved by the function of one or several parts of it.[2] c). Educational technology offers a coherent or systematic way, not messy. d). Educational technology offers a proven and effective way, through trials on a limited scale before being used on a national scale. e). The methods are focused on a series of interactions between students and learning resources on a broad scale, including teachers and various media so that the predetermined learning objectives are achieved. The definition promises a solution in solving the problem of learning through the five basic concepts earlier. So that this Education Technology emerged as the Revolutionary to change the level of education itself towards a better direction.

That definition promises a solution in solving learning problems through five basic concepts that are very beautiful. So that the emergence of this educational technology as the revolutionary to change the level of education itself towards a better direction which leads to the development of human resources.

Human resource development is in line with the development of educational technology itself. The development of Educational Technology has been going on for a long time, many opinions and historical events that underlie the early development of Educational Technology, especially those related to human development.

According to Ibrahim dan Syaodih states that in fact since long time ago technology has existed or humans have used technology. If humans used to break candlenut with stones or pick fruit with poles, in fact they have used technology, which is simple technology.[3]

As a scientific discipline, educational technology is also oriented to change (development) ways of life and human needs. This is what enhances educational technology commensurate with other disciplines, namely the existence of the principle of relevance to development and change related to the development of human resources.

This change is generally marked by changing the concept of educational technology twice since 1977 (the definition of AECT). The concept can be explained as follows: Educational Technology is a complex and integrated process involving people, procedures, ideas, tools, and organizations to analyze problems, find ways to solve, implement, evaluate, and manage problem solving that involves all aspects of human learning.[4]

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[2]M. Atwi, Suparman, M. *Desain Instruksional Modern, Panduan Para Pengajar dan Inovator Pendidikan*, Jakarta: Erlangga, 2012), p. 147.

[3]Ibrahim, R. dan Sukmadinata, Nana Syaodih. *Perencanaan Pengajaran,* (Jakarta: Rineka Cipta, 1996), p. 91.

[4]AECT. *The Definition Of Educational Technology*. *Domains of The Field*, (Washington: Association for Educational Communications and Technology, 1977), p. 9.

Learning technology is a theory and practice in the design, development, utilization, management, and evaluation of learning processes and resources,this definition of AECT in 1994.[5] Educational technology is scientific theory and practice in facilitating or facilitating learning and improving results by creating, using, and managing appropriate technological processes and resources.

From the explanation above, it can be concluded that with the change in the concept of educational technology there has been a paradigm shift in the body of educational technology. The paradigm is the perspective of educational technology on the development of human resources.

THE ROLE OF EDUCATIONAL TECHNOLOGY IN TRANSFORMING EDUCATION

Educational technology as a discipline, initially developed as a field of study in the United States. When referring to the concept of technology as a way, the beginning of the development of educational technology can be said to have existed since the beginning of civilization.

Educational technology is an applied discipline, meaning that it develops due to the needs in the field, namely the need to learn. Learning more effectively, more efficiently, more, wider, faster and so on. For this reason, there are businesses and products that are intentionally made and some are found and utilized. But the development of educational technology is very rapid lately and offers a number of possibilities that were previously unimaginable, has reversed our way of thinking with "how to take advantage of these technologies to overcome the problem of learning.

Educational technology is a systematic way of designing, implementing and evaluating all teaching and learning activities in achieving better educational goals. Progress or development of educational technology today does not just happen.

Educational technology accommodates all disciplines that will be held in the context of education and learning. In other words, all educational and learning activities can integrate educational technology in the delivery process. Because of that educational technology has high flexibility in scientific development.

Along with changes in the concept of educational technology based on the definition proposed by AECT, it can be concluded that there has been a paradigm shift in the body of educational technology. The paradigm is the perspective of educational technology on human development. at the beginning of the birth of educational technology, this discipline

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[5] Yusufhadi Miarso. *Menyemai Benih Teknologi Pendidikan*, (Jakarta: Kencana Media Prenada Group, 2005), p. 351.

only focused on the use of tools (technology in terms of machines) for teaching and learning activities, for example such as radio and television. As human needs are increasingly complex, educational technology is not only a tool (machine) for learning, a systems approach is starting to enter this discipline. It is this system approach that gives enormous influence to the development of scientific technology in education. With this system approach, educational technology becomes a scientific discipline for the development of learning system design, of course, also supported by other disciplines (psychology, philosophy, communication, etc.). And in the last paradigm (21st century), educational technology has become a scientific discipline about designing learning activities and environments.

Competencies of educational technology graduates should be directed to this last paradigm and current trends, namely the paradigm of designing activities and learning environments as well as the "The Digital Era" trend. Competencies of educational technology graduates should not be directed at the level of "technician" resources, but will also be more perfect if directed at the level of resources of a "technologist". The competence of a "technologist" will identify that the competencies of these graduates are globally competitive, so they can compete with other fields in the same line.

With such paradigms and trends, it is appropriate for educational technology resources to be a priority in the development of learning in any institution or agency that conducts learning activities and educational technology resources will have unlimited creative potential, both in formal institutions (educational institutions) and at other institutions.

Of course the government and other parties have time to look at educational technology as a potential factor, where when they want to improve human quality through learning, education technology is the most appropriate solution.

Since humans are familiar with the education system, educational technology has been the foundation for the running of the existing education system, and it was several centuries before there was a systematic system like that in madrasas in the Islamic world, such as the Madrasah Nizamiyah in Baghdad in the middle ages when Islam experienced a golden period.

At the time of Aristotle, for example, through his Lyceum or Akademia, educational technology, although in a simple form, has begun to become an integral part of the existing learning system. Then, the Scolatic era in the West which was famous for schools for monks and their nuns also could not be separated from their educational technology.

While in Madrasah Nizamiyah itself, the systematization of teaching methods appears by the division of fiqh sciences taught by teaching the teachings of four Jurisprudence, supported by a variety of other sciences supported by for example adequate libraries, chemical laboratories and sky laboratories, as well as dormitories for students. All elements were arranged as an educational technology that succeeded in bringing Islam to the golden peak.[6]

Educational technology clearly has a very important meaning, especially for modern humans and postmodern humans today. With life's problems becoming increasingly complex and life's challenges so many, the world of education as one of the most effective places of personal formation and human maturity naturally increasingly requires a method or technique that is compatible with its time.

Educational technology as a whole in the education system is a miniature way of looking and responding to humans to be able to get involved in life as members of society. Through this in the human education system is forged to become a human being who can also adjust themselves well in their environment.

Then in particular the educational media also has an important meaning as well as educational technology in general. In the Abasiyyah era at Madrasah Nizamiyah, for example. We can see how the library as an educational medium had an important role in the progression of education at that time. It is undeniable that the reading material is a factor that makes students find scientific treasures that can fill the treasures of knowledge in themselves apart from what is conveyed by his teacher.

If in this day and age, the important role of educational media by using media technology such as computers, audio recordings, or films is certainly very, very important. Moreover, if the education system in question has an orientation on students to be printed as labor, it will be even more important the importance of such media in the discovery of the treasury of knowledge that students want to obtain. Nevertheless there must still be adjustments here and there so that the education media used are appropriate. And this is where educational technology software is needed, how to strive for educational media by using technology media to the maximum extent possible.

We can see the mechanism of educational technology by using sample patterns of educational media relations that use images with software in educational technology. Picture or photo is one of the media technology that is quite good to be used as a medium in educational practice. That is because images or photos have advantages such as concrete

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[6]Bambang Warsita, *Teknologi Pembelajaran: Landasan & Aplikasinya*, (Jakarta: Rineka Cipta, 2008), p. 86.

nature, images can overcome the limits of space and time, can clarify one problem, and are easy to obtain. But unfortunately the picture also has weaknesses, among them the picture only emphasizes the perception of the sense of sight, images that are too complex are not effective when used in the learning system, their size is very limited for large groups. For this reason there must be a filtering there, and of course the mechanism of educational technology software is needed to optimize the use of images or photos used. Software filters images or photos that will be used.

By setting the following conditions for example, software in educational technology plays a role; by classifying that images that can be used as educational media are authentic. A picture that tells the story of an event. Then also, the drawing must be simple, especially if the students being taught are still in the lower levels such as elementary school or kindergarten students. With a simple composition that quite clearly displays the points to be taught. Maybe it's a little of my discussion that illustrates the importance of educational media in educational technology.

CONCLUSSION

The development of science and technology is one of the productivity results of humans who have the knowledge gained from education. Where the development of science and technology has broad implications in human life, it is expected that these humans need to explore to take advantage of their benefits optimally and reduce the negative implications that exist. Educational technology is only possible to be developed and put to good use when there are workers who handle it.

As one of the scientific disciplines, educational technology is also oriented to changes (development) ways of life and human needs. This is what enhances educational technology commensurate with other disciplines, with changes in the concept of educational technology there has been a paradigm shift in the body of educational technology. The paradigm is the perspective of educational technology on human development.

Educational technology is an applied discipline, meaning that it develops due to the needs in the field, namely the need to learn. Learning more effectively, more efficiently, more, wider, faster and so on. For this reason, there are businesses and products that are intentionally made and some are found and utilized.

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