THE IMPLEMENTATION OF EDUCATIONAL TECHNOLOGY IN LEARNING PROCESS

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Abstract

Science is a human endeavor to understand the symptoms and the facts of nature, and preserves such knowledge conceptually and systematically. While the technology is man's attempt to take advantage of that knowledge for the benefit and well-being. Educational technology is designed to solve the problems of education, as well as to provide the benefit in improving the quality of learning process. Various forms of learning experience, both of which can be accomplished either in the classroom or outside the classroom, and messages can be packaged by observing the rules and principles of educational technology. The new paradigm of education favor of the election of the quality of education with emphasis on the principles and practice of autonomy, accountability, accreditation and evaluation to achieve such quality with no other implements appropriate educational technology. Educational technology as a form of software (software technology) in the form of systematic ways is used to solve the problem of increasingly sophisticated learning process and get a place widely in education. Thus, the practical implementation of educational technology in problem solving learning process that has a concrete form with the learning resources that facilitate learners to learn.

Keywords: Educational Technology, Learning Process

1.   Introduction

Entering the 21st century, the national education system faces complex challenges in preparing the quality of Human Resources (HR) which is able to compete in the global era. Appropriate measures to prepare the human resources (HR) quality and the only container that can be seen and should serve as a tool for building high-quality human resources is education. To achieve the goal of national education, the government has organized improvement of education quality improvement at the various types and levels. And along with the development of the following educational technology in supporting infrastructure, improving the quality of

education can be done through the implementation and use of educational technology in the learning activities. Educational technology is a system that can facilitate educators and learners to learn a broader, more numerous and too varied. Through the facilities provided by the system, students can learn independently, anytime and anywhere without being confined by space and time.

Technology, as a structure, process, and artifact, is an imperative feature of future development of society. Given that the technology has been developed and it is integral in all areas of life, then the technology in the field of education must also be developed, controlled, and utilized in order to help the realization of the mandate of the 1945 national life. The development of educational technology study produces a wide range of concepts and practice of education that many use the media as a learning resource. Therefore, there is a perception that education technology together with the media, even though the position of the media serves as a means to facilitate the delivery of information or learning materials.

In terms of the education system, the position of education technology serves to strengthen the development of the curriculum, especially in the design and development, and its implementation, even there is an assumption that the curriculum deals with "what", while educational technology examines "how". In relation to learning, strengthen education technology in manipulating various ways and techniques ranging from the design stage, developing, exploiting a variety of learning resources, implementation, and evaluation of programs and learning outcomes.

2.   Theoretical and Background

A.   Concept Technology

Educational technology as arable fields involved in the preparation of human learning facilities via search, development, organization and systematic use of all the resources of learning; and management of this whole process. In general, technology is defined as, " technology is, simply, the of knowledge to solve

problems or invent useful tools'. The concept of technology has certainly played a major role towards the concept of educational technology. In this case, technology is specifically defined, i.e not just a hardware or gadgets as we meet today, but also the role of the technology itself to humans.

Technological concepts formulated by Finn, Saettler, and Henich, et al., Finn (1960 cited by Gentry) said, 'apart is defined as the machine, the technology could include a process, system, management, and monitoring mechanisms; either the man himself or not, as well as extensively, perspectives on the following issues in scope, level of difficulty, feasibility studies, as well as how to solve the problem technically and economically. 'The concept of technology can be concluded that (1) the technology related to the nature of rational and scientific, (2) technology refers to a science, expertise, be it art or craft, (3) technology can be translated as techniques or practices, (4) an activity, or as a process, (5) refers to the use of machine technology machinery and hardware.

B. Development of Educational Technology Concepts

Understanding educational technology is inseparable from the notion of technology in general. Definition of the main technologies are processes that increase added value. The process of using and or produce a particular product. The products are used or produced inseparable from other products that already exist, and therefore an integral part of a system. So in general terms of technology, equipment or new facilities specifically are required not an absolute requirement should exist, because the means that have been there before.

In the field of learning, technology must also meet these three conditions: processes, products, and systems. Unless qualified general technology, educational technology must also prove itself as a field of study or a scientific discipline of its own. A formal object of educational technology is " learning " in humans as a person and who are members of the organization. Educational technology has a characteristic in determining the logic. In addition to concentrating on learners,

how to think systemically is a framework of educational technology. The result of systemic thinking can touch all aspects of teaching and learning. Adapting the educational technology concept system approach as a frame of mind. Work order system approach is used to examine the problems of education or learning from different angles until last alternative. There are so many factors that can inhibit and support the learning process. Efforts are concrete educational technology which is the creation or design of learning environments, or often referred to as external factors studied. The design of learning activities and teachers are commonly encountered environmental everyday and is considered to have greatly affected the learning process.

C. Role of Technology Education in problem solving solution

Educational technology consists of theories and the study results, the educational technology can be assumed as a frame of mind that underlie aspects of the application. The theory and the results of the study determine the limits of educational technology movement. Humans in order to meet their needs very well need to learn. Meanwhile, in order to learn effectively and efficiently needs to utilize various learning resources. Educational technology seeks to design, develop, and utilize a variety of learning resources that enable and facilitate a person to learn. In turn opens an opportunity to learn throughout life, anywhere, anytime and by anyone. With the tools and resources to learn what is in accordance with the conditions and needs. Therefore, educational technology is needed to be able to reach learners wherever they are.

Moreover, to serve the large number of those who have the opportunity to learn, meet the learning needs to be able to keep abreast of, and improve the efficiency, effectiveness in learning, the learning process itself cored learning activities, in the sense that the learning process should be able to seek how students learn. Since the core of the learning process is student learning, then its effectiveness depends heavily on the effectiveness of student learning. Thus the

importance of learning activities, so Muhibbin Shah argued that without learning without learning there not be education because the biggest part of the education process is geared towards the achievement of the process of change in human beings.

The effectiveness of the learning process emphasizes on an undertaking which will bear an effective learning activities. Effective learning is basically an activity optimum learning on students. Application of teaching and learning strategies that emphasize the effectiveness of student learning, will lead the students can use the whole basis of its ability to perform a variety of learning activities required. To support effective learning process then technology education is necessary for the practice of educational technology have major stakes in the world of modern learning, with regard to the above principle underlying educational technology in the learning process are at least 5, namely (1) educational technology as a business obtaining behavior, (2) learning is characterized by a change in behavior as a whole, (3) learning is a process, (4) the learning process occurs because of an impulse and objectives to be achieved, (5) learning is a form of experience.

From the description above, in a good learning in the context of educational technology, media or learning tools have value for teachers and students as it is quite effective and efficient in achieving the expected competencies. Media or learning tools such as radio, television, laptop, internet, LCD and others both simple and modern are very helpful effectiveness of the learning process. Educational technology-based learning will be very effective if teachers use student-centered learning model. In the process/concept of educational technology, work media or tool is not just a communicating connection between the source (teacher) and the receiver (the students), but rather it is an integral part and each have a linkage between the components with each other, each other interact and influence each other.

D. Implementation of Educational Technology in Education

Educational technology is a discipline of applied meaning that it develops for their needs in the field, namely the need to learn more effectively, more efficiently, more comprehensive, faster and so on. The development of the application of educational technology may be said to come from the United States. In the early development of about a hundred years ago known educational technology as a way to teach using homemade props result by teachers at school. In Indonesia, educational technology implementation is not much different with the development as well as in the United States, within a long time. The most fundamental implementation of educational technology is to provide and implement solutions to provide the possibility of learning. Solving this form of learning resources, the resource is either purposely designed or chosen and then used.

Educational technology applications will directly influence the decisions about the specific learning process. The most important key education issues in Indonesia are about: improving the quality, equal access, and relevance of education to national development. So broad and far range to be achieved by the development of our educational program, whereas on the other hand the resources available are limited and rare increases. The application of learning technologies in the educational system, techniques and tools to facilitate the learning process so that students are expected to understand the educational material with the help of learning technology.

The facts presented above show that solving educational problems needs other alternatives besides ways conventional settlement is known so far. Various potential of educational technology then allows it proposed as an alternative to solve these problems. In general, the implementation of technology in education will be able to:

1. Spread the information widely, uniformly and quickly.

2. Assist, equip and (in some cases) replace the task of the teacher.

3. Conduct instructional activities, either directly or as a byproduct.

4. Support community learning and invites public participation.

5. Add to the diversity of resources and learning opportunities.

6. Add to the appeal for learning.

7. Help change the attitude of the wearer.

8. Influence user view towards materials and processes.

9. get the advantage of cost-effectiveness ratio, compared to traditional systems. (Miarso, 1981).

Educational technology (in a very limited sense) is seen only act at the level of implementation of the curriculum in the classroom, a new conception of educational technology requires as input even at the planning stage of the curriculum. Thus the planning of curriculum should also be assessed and determined as forms of educational technology to be applied. Selection of educational technology will open the possibility for the birth of various alternative forms of new institutional providing learning facilities, in addition to serve any form of educational institutions that already exist, for example the possibility for some form of open school facilities and planning study different from conventional school, but the results (output) are the same. A series of criteria for the use of technology in education, such as: to be kept for compliance (compatibility) with the tools and technologies that already exist, can stimulate the development of technology and science, and to spur efforts to improve the quality of education itself.

Thus, the implementation of educational technology will very likely happen massive change in the interaction between the learning resources with the actors. One possibility is the application of these changes and changes in information technology in education. According to Miarso there are some general guidelines for the application of educational technology and the implementation:

1. Integrating various approaches from the fields of psychology, communication, management, engineering and others.

2. Solving problems thoroughly studied in humans, by observing and reviewing all of the conditions and the mutual relation between them.

3. Used as process and product technology to help solve the problem of learning.

4. The growing power folding or synergistic effect, where mergers and approaches or elements have values more than just a sum. Similarly, solving comprehensively and simultaneously will have more value than solve the problem separately (Miarso: 2007, 78).

3. Conclusion and Remark

Educational technology is the study and practice to assist the process of learning and improve performance by creating, using, and managing processes and adequate technology. Educational technology experts found a major part of educational technology is to help improve overall efficiency in the learning process. Prospects of educational technology in the learning process is very broad, given the nature of education as a science technology that shade their field. The implementation of educational technology in the functioning of the learning process is that the application to help solving problems in the learning process. The presence of educational technology in problem-solving efforts include education and learning to integrate various approaches to solve the problem of learning and use of technology.

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