New Definition of Educational Technology

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Abstract

Throughout the history of educational technology, a variety of accounts have been provided in this subject matter. In the beginning, it was introduced as use of instruments, and then as process of design, implementation, and evaluation of educational situations, and then as study and moral action on facilitation of learning and improvement of performance through creation (building), use and management of technology processes and appropriate resources. In the end, with regard to the accounts, a new account of educational technology is provided.

Keywords: Technology, Education, Educational Technology, Definitions

Introduction

Definitions of educational technology, to understand the term educational or instructional technology, we address each of the words namely technology and education.

Definition of technology

Paul Saettler, a famous educational technology historian, says the word technology (in Latin “texere” refers to finding or building), does not necessarily refer to the use of machineries as many believe it is the case, but instead it is referred to as any arts and scientific skill tapping scientific knowledge (Saettler 1968). James Finn defines technology as technology plus machineries including processes, systems, management, mechanisms for human and inhuman control, as well as a method for dealing with problems by considering their importance and attraction, applicative feature of technical solutions and economic values (Finn 1960).

To recognize technology thoroughly, we approach the words incorporating the term; the word is derived from technologia in Greek which means performing an art or career systematically. The first part of the word techno is a mix of art and technique consisting of related knowledge on principles and ability to achieve intended results. In other words, technique refers to practical skills such as knowing and performing. The root of the word logos also refers to argument, explanation, principle and reason. Therefore, technology refers to arguable or logical application of knowledge (Fardanesh 2015, P. 10).

Definition of education

The term education refers to process of interaction between learner and resources of his learning. In other words, conceptual learning consists of process of teaching someone, learning from someone and learning from something. Teaching someone occurs in teaching in the most obvious manner, so learning from someone refers to interaction of learner with human resources and learning from something consists of interaction with inhuman resources (materials, resources, environment, and media) in the process of learning. Once defined by this structure for situation of particular learning, the nature of education is achieved (Pakpur 2011, P 20). Dubois defined education as thorough arrangement of learner’s environment in the face of quite a general definition of education in definite circumstances (Fardanesh 2015, P. 12). The definition, though it is a very general definition of education and addresses a variety of points such as environment, results, and particular situations, has failed to pay attention to important points including learners’ needs, prior knowledge, and motivation.

Bruner believes that four important questions should be answered in education
1- what are learners’ assumptions and prior knowledge?
2- to learn more, what should structure and combination of learning topic like?

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3- how are learning materials arranged and ordered to facilitate learning?
4- in what way do encouragement, punishment, and feedback apply in achieving educational goals?

Bruner is among the first people who call on educational practitioners to pay attention to learners’ prior knowledge, structure of topic, order and sequence, time and circumstance, and highlighted the application of factors such as encouragement, punishment, feedback, and question (ibid).

Silverman came up with two concepts of educational technology; relative educational technology, which lays emphasis both on methods and instrument; structural educational technology, which lays emphasis on analysis of educational issues, production and choice of evaluation instruments and means of production with regard to reaching optimal educational returns (Silverman 1968). An account of educational technology has been issued by Association of Educational Communication and Technology. According to this, definition of educational technology includes theory and practice of design, production, application, management and evaluation of learning processes and resources (Seels and Richey 1994). This account was generally approved by educational technology experts until recent technologies changed once again the theory, practice and method, and duties of experts in this field in their workplace. In a more recent definition of educational technology, this was defined as follows;

Educational technology is the art and study of building a learning system as well as setting up a feedback mechanism for learning system. In such a method, the system is sensitive to every individual’s dynamics, in the sense that each individual should be active in the process of learning.

AECT also works to redefine the field of educational technology and offers more recent accounts so that it accounts for the latest changes of this field. In January 2008, ACET organization approved its results which allowed for amore updated definition of educational technology. It suggests that educational technology includes study and moral action on facilitation of learning, and improvement of performance through creation (building), use and management of technology processes and appropriate resources (Januszeski and Molenda 2008). Another definition of this field is as follows;

Educational technology: it involves analysis, design, production, evaluation, implementation, and management of educational systems and other learning environment which leads to learning and development of mind, body and spirit (Song and Kidd 2010). Spread of industry and influence of technology across societies and fundamental changes in living method and people’s attitude as well as the importance of time have brought about changes in human’s needs, as previous theories fail to account for these needs. Thus, change in requirements requires theories to induce change and development; one of the realms is education that people’s updated needs have brought about fundamental changes in its goal, audience, content, design, organization, presentation, management, evaluation and methods. Educational technology is required to provide easier and more effective learning in relation to audiences and their interests and characteristics in the convenient time in an effective manner, in accordance with audiences’ requirements and change and developments spurred in education system.

Conclusions

Given the definitions and explanations provided, this field can be defined as follows; educational technology includes a dynamic system of study and moral action with the aim of specifying and providing an interactive environment for learners’ activity for their fast, easy, durable education and learning in harmony with their interests and characteristics. This account includes concepts that entail other fields, which are briefly explained in what follows; above all, educational technology is a system. According to the definition, systems includes a set of interrelated components interacting together for a specific goal. According to this, educational technology can also be defined as interrelated components interacting together for a specific purpose. Another concept embedded in this definition of educational technology is dynamics that makes it get rid of stability. Passage of time and change of attitudes, technology and societies’ exclusive changes call for new techniques that require us to adjust our educational technology for the changes and utilize knowledge on the basis of technology. Study thus includes concepts, theories and design methods, production, application, management and evaluation as well as use of theories and findings of other sciences on educational technology. Action involves subcategories including design, production, management and evaluation of the whole process. As a matter of fact, this area is the application of study area. Moral: in any of stages of the process, the process of human morality and individual rights should be observed. Definitions of educational technology specify the areas of this filed.
References

Januszewski & Molenda. (2008). Definition of Instructional Technology; [link]