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INFORMATION AND COMMUNICATION TECHNOLOGY THEORIES IN EDUCATION

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ABSTRACT :

Information and communications technologies (ICT) in different media to create the framework and propaganda, and the capacity of the inspection and control system based on all the information transfers, broadcast media, wide governance framework for building innovative voice used to handle. ICT more as of late and very few progress to merge the various types of information and communications and the use of a common format for the transmission lines used to depict. Information and communications technologies (ICTs), in particular, are reshaping the world economy, the government and a number of social order. ICT is seen as the equivalent of the word and a reverse data innovation (IT) on a regular basis, despite its title is more comprehensive. Advanced techniques-economic development, the main thrust behind the creation of jobs is a significant residential and commitment. The present paper highlights the few theories of Information and Communication Technology in the field of Education.

KEYWORD: Information and communications technologies (ICT) , control system , techniques-economic development.

INTRODUCTION:

INFORMATION TECHNOLOGY

Information technology is used as part of a safe type of gear, control, administration or transmission of information or data required to be collected easily from any hardware store is not available in the local market or raw material or sub-system should be the framework. -Technology Research is investigating the use of education or the type of useful information handy. The term includes any medium or printed -Information, statistical, realistic Cartographic, for example, the size of the story or the various media, realities, for information or correspondence education assessment or representation, - any law. The term information technology includes two data technology. If you know the two words, one word data together innovative vehicle break off.

COMMUNICATION TECHNOLOGY

This is the correspondence data is trading in a splash of personality is transforming modern culture and society correspondence data. This is the process of exchanging data sender and recipient of the sender and the collector of a medium size, which is covered by the use of data communications. Communication technology is the use of electronic correspondence between the framework or together. Interpreting that data, by means of a medium changer and to the data they are handling data in terms of sending and beneficiaries. Verbal or non-verbal communication technologies indicate the expected trade data, education, ability and comprehension. He decided to keep, planning and development and innovation correspondence is the framework of the movement to keep correspondence. It promotes the exchange of letters between people or together. Composed of medium or channel or discourse, can be oral or activities of any electronic or machine speed data type. So we realized that the data suggests any correspondence or representation of any structure of education. Correspondence and communication technology, the technology is additionally involved in two words.

In a knowledge-based economy, the work that is ahead of many business and government leaders to educate them on the agenda. Training is considered by many to be the global competitiveness of the US economy and a key worker success.

Support the use of information and communication technology in education theory Behaviorism, the hypothetical framework, and gives guidance on how each structure he had imagined hypothetical, use, data or information and will make a significant impact on innovation in this segment inspection correspondence. Some educated guess is the premise for the learning process and the results of innovation research data and correspondence, CBL and CBI policy framework and can be used to connect to a majority of these hypotheses.

Behaviorism as a premise for the early use of the agency and also outline the process of looking at the motivation behind a number of related, for example, is showing the machine and use a customized writing Thorndike's connectionism, Novgorod established bank, and the direction of the bank, including operant Skinner steps designer CBI counsel. Notice the use of PC based hypotheses is Behaviorism, behaviorism verifiably have the best results. Three different models of instructional development engineer to submit additional instructional system which is composed of some of the agency's ability to take

The framework provides a hypothetical master plan attractive to expats PC lessons, and they do

not belong to all around, despite the fact that weather is of course available to separate between those responsible for the coach to be ready and more effective policies and inadequate materials. The hypothesis, the framework approach, and instructional development models for planning or assessment agency (Dick and Carey 1990 pre planning, and evaluation, criticism, frame components (understudy as the framework for questioning the coach significant way to collect lesson cooperation) and implementation based on the goals of the agency on a regular basis there are methods that are used to create the framework that have been obtained from hypothetical.

THEORIES IN EDUCATION

i. Behaviorism

Of the theories supporting computer use in education, behaviorism has historically had the greatest influence. Behaviorism was used as the basis for designing early CBI and was also the impetus behind many related teaching strategies, such as the use of teaching machines and programmed texts, Thorndike's connectionism, Pavlov's classical conditioning, and Skinner's operant conditioning steps that guide the developer of instruction including CBI. The three parted instructional development model has some functions, which provide the instructional developer with additional procedures co follow when CBI is designed.

Systems theory, the systems approach, and the instructional development model give considerable guidance to educators interested in designing or evaluating CBI (Dick & Carey, 1990). Preplanning, audience assessment, feedback, interaction between elements of the system (student and lesson) and use of performance-based objectives are techniques that have been derived from systems theory that are routinely used to develop CBI. Systems theory gives educators a proscription for designing effective computer lessons, and although not universally applicable, it does provide considerable direction to educators interested in differentiating between ineffective materials and techniques and those likely to be more successful.

ii. Cognitive Theory

Educational psychologists and learning theorists are moving away from the behaviorist approach and have advocated a closer look at the internal processes that occur in learners during instruction. Behavioral psychologists generally ignore the cognitive changes that mentally occur during teaching and maintain that it is impossible to design instruction on changes in a learner's brain because these changes are not observable, not measurable, and arc impossible to predict, On the other hand, cognitive psychologists, a common name for advocates of cognitive theory, attribute a greater degree of autonomy and initiative to the learner (Burner, 1960; Carey, 1986; Hilgard & Bovver, 1975).

Cognitive theory concentrates on the conceptualization of students learning processes. It focuses on the exploration of the way information is received, organized, retained, and used by the brain. Proponents of cognitive theory believe instructional design should take into account the cognitive structure of the learner, and of groups of learners. Several people have been influential in advocating the cognitive approach, including Jerome Brunei, Jean Puget, and Seymour Paper.

Many consider Bruner (1960) the primary early advocate of cognitive theory. He has proposed that much of behavior depends on how we structure knowledge about ourselves and the world around us. Cognitive theorists believe instruction must be based on a student's existing state of mental organization, or schema. How knowledge is internally structured or organized by a student has considerable effect on whether new learning will occur. Some have hypothesized that students with a dominant left hemisphere of the brain process information more sequentially and logically than do

students who have a dominant right brain hemisphere (Carey, 1986). In other words, CBI needs to be organized and delivered in a way that complements the cognitive structure and level of sophistication of the learner. Where behaviorists were concerned with the outcomes of instruction, cognitive scientists are more interested in the content of instruction.

Hypermedia, a computer based instruction approach that is nonlinear and consequential, is a powerful tool being used by cognitive scientists to examine how students interact with instruction during the process of learning. The way students use hypermedia, gives insights into the structure of thinking and how learning occurs.

Burner and other cognitive theorists focus on several concepts (i) how knowledge is organized and structured, (ii) readiness for learning (iii) intuition, by intuitions, Bruner means the intellectual techniques used for arriving at plausible but tentative conclusions without going through a series of analytical steps. In other words, the value of the educated guess is recognized. Last, the importance of motivation, or desire to learn, is identified. Specifically, cognitive scientists accept the importance of students having positive attitudes towards learning.

Cognitive theory gives educators interested in designing or evaluating CBI several guidelines.

1.Predisposition to learning is important. Instruction needs something to get it started, something to keep it going and something to keep it front being random. Bruner (1960) would call this activation, maintenance, and direction.

2.The structure and form of knowledge must be considered. Specifically, the body of material to be learned should be organized in some optimal way. Cognitive theory is partially based on the concept that children are first able to understand concrete operations, then graphic representations, of reality, and finally abstract verbal and numerical symbols. Dale (1946) formalized this concept with bis Cone of Experience, which organized experiences in 12 levels of increasing abstraction. Dale stated that before learners can understand abstract experiences they required a sufficient depth and breadth of more realistic experiences they required a sufficient depth and breadth of more realistic experiences.

iii. Constructivism and Situated Cognition

Recently, constructivism and situated cognition have captured the attention of teachers and computer education specialists. Most consider these two models directly related to cognitive theory, but they have interesting implications for the design and use of computer-based instruction. Constructivism is founded on the belief that there is a real world that is experienced but that the person imposes meaning and understanding of the world. There are many ways to structure the world, and many perspectives of an event or concept. Learners construct their own meaning from instructional activities. Meaning is rooted in and indexed by experience. Each experience with an idea and the environment of the idea becomes part of the meaning of that idea. The experience in which an idea is embedded is critical to the individuals understanding of an ability to use the idea. Most constructivists believe the experience with concepts and ideas in school arc quite different from the experience with those concepts in the real world. Constructivism emphasize situating cognitive experiences in the authentic activities.

Situated cognition, or situated learning, occurs when students work on authentic tasks in a real world setting. It does not occur when students are taught de- contextualized knowledge and skills (Brown, ColHins & Duguid, 1989). This implies that effective instruction should be based on authentic

tasks that permit the student to construct a learning environment meaningful to them. Students do no? discover knowledge they construct it in authentic settings.

Constructivist and situated cognition principles are causing educators to rethink computer-based learning. First, learner control and use of authentic drawing of a "square" unless they have first experienced "square" shaped thing.

Sequencing of instructional material is important. Cognitive theory is based in part on the idea that there is an optimal sequence for presenting educational experiences. Sequencing must take into account the limited capabilities of learners to process information.

The form and pacing of reinforcement must be considered. Learning depends a great deal on knowledge of results at a time and place when that information can be used. For example, "quadratic equations" should not be taught before "linear equations" structure is learned. Feedback should be directed toward what is appropriate, not what is inappropriate.

Discovery learning is one important technique that incorporates much of cognitive theory. Discovery learning consists of inserting learners into educational situations without telling the student what is already known about that situation. The assumption is thai with minimal help from the teacher the student will learn more by discovering the lesson found in the situation. Papert's (1980) LOGO language is an excellent example of a computer based tool often used to teach problem solving by discovery learning. Hypermedia is an example of computer- based instruction that gives students the opportunity to explore a lesson in a way that is most appropriate for them.

Information are critical to effectiveness. The lesson must be flexible and rich in content, so students can draw on many stimuli to construct knowledge. Second, use of multimedia that includes sill visuals, graphics, motion segments, visual mnemonics, and sound is important. Computer based instruction should allow students to receive stimuli from a variety of sources and in many different ways,

Currently, there is more theorizing about constructivism and situated cognition by computer educators than actual application. This almost certainly will change as design models become more sophisticated and as powerful multimedia computers become more widely available.

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