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Level : Second Year Master

Module : ICC

Course : One /ICT and Learning Theories

**Introduction**

The role of ICT for education is undenyble in the case of learners and educator's behavioral and educational psychology’s perspectives. ICT based education is essential as a new source of emerging information, first and then build knowledgeable modern societies, facilitating large-scale learning needs for social and economic development. In reality, ICT’s applications and roles in education and the ICT’s based learning process is increasingly used to strengthen competency through efficient use of as a limitless resource for developing innovative and novel ideas. These are necessary to have a change and advance in the learning environment and teaching practices.

**ICT in Global Economy**

Information Communication Technology (ICT) could be termed as educational technology in the era of industry. Semantically, it is the study and also ethical practice of facilitating, learning and improving performance by creating, using and managing appropriate technological processes and resources. It is the reason why ICT for behavioral and educational psychology is simply referred to as the use of modern technology, such as computers, digital technology, networked digital devices and associated software and courseware in learning scenarios and worksheets, interactive exercises that facilitate the learning process for modern society in global economy.

The use of ICT can cause a profound change in teaching and learning practices, among educational researchers. The distribution, use, and practices, as well as individuals’ ICT skills change rapidly as new applications replace old ones, and new tools and applications come on the market every time. This has increased the use of ICT dramatically. Similarly, the access to ICT is improving among students and teachers both at home and at school and even on means of transport.

**ICT and Collaborative Learning Facilities**

ICT is a fundamental technology to educational and behavioral change and e-learning. It has been supporting education in the era of industry to empower learners' skills and capabilities in various interests using the information technology via internet, For example, Web 2.0 tools and teaching students' facility to use them in the school is vitally important to give access to various ways of educational access that they can make choices and create an online presence through content creation. Such technological facilities play immemense roles on students educational and behavioral matters that allow them create and publish content and also respond to the content creation of others. Not only are students developing their learning, but they are also learning how to be independent learners.

**ICT and Learning Psychological Phenomenon**

ICT has become the corner stone in learning facilities, which bring an enthusiastic behavioural and psychological phenomenon. It is a tool to optimize learning performance and access, a means of communication that addresses educational factors. It is useful in any aspect that depends on both human and non-human actors, which provide a scientific framework. It offers a socio-technical approach in which neither social nor technical positions are privileged, denying purely social or technical relations is possible. This technology is involved in learning facilities, means of communications, strategic development, and future prediction for better ways of education.

**ICT in Behavioural and Educational Psychology**

ICT for education is a key component for its success, learning competency, creativity, support to create and meet complex demands in a particular context skill development in general. The technology implies the mobilization of knowledge, cognitive and practical skills, and social and behavioral components, including attitudes, emotions, values, and motivations. For example, it plays a role of key competence and interactivity in school, which learners are capable to use education technology interactively that requires an awareness of new ways for individual’s creativities and life prosperity. ICT based educational systems are vitally important to different degreesto optimize educational opportunities and roles for students and learners in developing countries.

**ICT as the Influence of Behaviorism and Cognitive Psychology**

ICT is the basic for educational learning process and human behavior or cognitive psychology in Global economy. IT is fundamental in the modern education system as instructional design and communication tools, which clearly visualize what learning is with the belief that learners can enable their improvement in this process. Since learning exhibits itself as a change in behavior and the inference of learning is made by comparing what behavior is possible before the individual is placed in a “learning situation” and what behavior can be exhibited after such a treatment. ICT for behavioral psychology plays its role in information-processing principles and technics as the basis of instructional design. It is the methods that describe educational pedagogy as behavioral changes to develop a human cognitive aspect which linked internal structures to external design of instructional environments.

The appearance and advancement of ICT based, educational technology or learning methodology has had an impact as it improved the cumulative process of different actors that brought significant impacts on human behavior and cognitive aspect of a modern society. New more valuable methodologies built upon the rock of science are extracted from the existing massive matters to fit new teaching and learning situations. ICT is vocabulary consistent since educational technology facilitates the study and ethical practice of facilitating, learning and improving performance by creating, using and managing appropriate technological processes and resources based on the existing facts. Educational technology thus refers to the use of ICT (both physical hardware and educational theoretic vis software), which encompasses various domains, including learning theory, computer-based learning process, and other technologies.

Several aspects describe the technical development of educational technology, including, the theory and practice of educational approaches to learning process, technological tools and media that assist in the communication of knowledge and its development, learning system management, educational subjects, and others. Based on these facts, instructional design can be categorized as behaviorism, cognitivism, and constructivism.

**Behaviorism:** it is theoretical framework based on experience or animal learning experiments, which leads to learn the human behavior. However, in the modern education system, ICT is a holistic aspect to synthesis the learning process. Mean that the technology of teaching is an attempt to dispel the myths' underlying contemporary education as well as promote the education system based on behavior analysis

**Cognitivism:** it is the science underwent significant change based on the empirical framework of behaviorism; cognitive psychology theories look beyond behavior to explain brain-based learning by considering how human memory works to promote learning that is the foundation of a working memory model established as theoretical frameworks. Therefore, ICT has had a major influence on Cognitive Science theory. The Cognitive concepts of

working memory and long-term memory have been facilitated by research and technology from the field of Computer Science.

**Constructivism:** it is a focus on how learners construct their own meaning from new information, as they interact with reality and with other learners who bring different perspectives. ICT as the aspects of constructivism is the process or learning environments requires students to use their prior knowledge and experiences to formulate new, related, and/or adaptive concepts in learning. Under this framework the role of the teacher becomes that of a facilitator, providing guidance so that learners can construct their own knowledge. In such approaches, educators must make sure that the prior learning experiences are appropriate and related

to the concepts being taught in which they are utilizing a constructivist perspective may emphasize an active learning environment that incorporates learner centered problem-based, inquiry-based, and project-based learning processes. The novelty of the method is ideally involving real-world scenarios, in which students are actively engaged in critical-thinking activities.

ICTs’ potential development offers a powerful dimension to transform the way the young generations prepare for further learning. A huge difference of learning process lies between the traditional and modern systems. ICT based constructivism that provides learners with support would help them in critical thinking about new situations, make wide for their educational behavior and cognitive and so on. Those major differences are in the learning of students and teaching approach's shifts. There is a more constructivist learning and an increase in activity and greater responsibility of students. Their ability and thinking is graduall in constant progress from using computers in learning about computers, to learning computers, and finally to learning with computers. Therefore, ICT based or modern education system is dynamic and analytic learning process based on scientific methods, which leads to moral judgments of pedagogic strategies.

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| Traditional Systems | Modern / Constructivist Educational Systems |
| Curriculum is presented from part to whole with emphasis on basic skills | Curriculum is presented from whole to part with emphasis on big concepts |
| Strict adherence to fixed curriculum is highly valued | Pursuit of learner’s questions is highly valued |
| Ccurricula activities rely heavily on textbook and wordbook | Curricula activities rely heavily on primary sources of data and manipulative materials |
| Students are viwed as ‘ Blank slates’onto which information is etched by teacher | Students are viwed as thinkers with emerging theories about the world |
| Teachers behave in didactic manner disseminating information to students | Teachers behave in an interactive manner, mediating the environment with students |
| Teachers seek to correct answer to validate student learning | Teachers seek students’ point of view to understand learners’ present conceptions for use in subsequent lessons |
| Assessment of students’ learning is viewed as separate from teaching and occurs entirely through testing | Assessment of learning is interwoven with teaching and occurs through teachers observations of learners, learners observations of learner at work and through learner exhibition and portfolios |

Table : Comparison of Traditional and Modern Educational Systems