



## From educational technology to information and communication technology

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### Abstract

Integrating technology in education means imparting education through digital media with technology as tools to bring about new learning goals. These innovations have reconfigured how teachers and learners gain access to knowledge and it is powerful enough to transform the teaching and learning processes. Information and Communication Technology provides a range of powerful tools that helps in transforming the present monotonous, isolated, teacher-focused and text book bound classrooms into rich, student-centred, activity centred interactive knowledge environments. The information revolution offers alternative approaches to access and share knowledge, significantly reducing the importance of memory and the retention. Education has become a shared effort in which the learner is capable of re-constructing new knowledge, guided by the teacher with the help of technological tools.

**Keywords:** digital media, technology, information, communication

### Introduction

#### Technology in Education

Information and Communication Technology (ICT) is a comprehensive term referring to various technologies which are used for collecting, storing, editing and passing information in different forms. ICT enabled education involves delivering education purely through ICT or technology serving as the backbone. This form of education requires ICT access and requires that the learner use ICTs as a primary or basic medium of instruction. Integrating technology in education is a complex issue. This means imparting education through digital media with technology as tools to bring about new learning goals. Technological Innovations have put on stake, the traditional conceptions regarding teaching and learning.

#### Then and Now

In olden days, it was difficult for the teachers to incorporate technology in the classroom. The technology was also not developed to that extent. Then the spirited teachers used tape recorders, overhead projectors, slide projectors, pictures, words strips and the like to impart knowledge. Fortunately or unfortunately, all these are outdated or even used no more by anybody.

The present views regarding learning have drifted from knowledge transmission models of simply imparting information or knowledge to constructive knowledge models where knowledge is constructed. In the process of making out meaning, technology helps in supporting the communication and construction of new knowledge resulting in new learning. The right role of teacher has changed through the years from a sage on the stage to a guide by the side.

#### Changing role of teacher and learner

But, it is not at all possible without changing the current

traditional practices and roles that teachers and students are playing. Learners in a traditional classroom are passive. They listen and react to the teacher's direct instruction and expect the teacher explain everything in the class and they are contented with what they get from the 'Gurumugham'.

But ICT has changed their attitudes and the way students learn and their styles of learning. Apart from the teacher, the learner today has multiple resources available to them. They are less dependent on teachers and prescribed text books. They are now able to build upon their existing knowledge and derive their own meanings and to arrive at their own conclusions.

#### Student in a smart classroom

Today, in this digital age the learners have an active, reflective role. They are expert technicians and they are far ahead of their teachers in using the technology and accessing information in various fields. Today's children are "growing up digital". They view the world in another way different way from that of adults. They live in an era that provide them with exceptional access to information, people, and ideas across highly interactive media.

#### Teacher in a smart classroom

At this juncture we should be aware of the biggest problem in the teaching-learning process. In the present digital age, the children are not merely children or empty vessels. Most of them are masters in technology and new generation communication media or in simple words they know much more than the elderly teachers. A common scenario today is a classroom filled with digitally literate students being taught by the good old technologically illiterate teachers. The children are now born into a technologically rich world, the miniature form of which is his family itself. Students have been exposed to these technologies or similar ones early on during their formative years while their teachers have just been exposed to

it only recently.

### **Teacher education for the smart classroom**

The present system of Teacher Education also need to be restructured as teachers should themselves be learners and they also should be digitally educated capable of using these technological innovations. They should be equipped with all the latest digital knowledge and technical know-hows. In fact, curriculum of teacher education should also be changed. It should eventually be transformed into ICT based curriculum and exploratory pedagogical practices.

### **Advantages**

#### **▪ Freedom and ease**

Information and Communication Technology provides the freedom of information and the ease of access. It has taken the teaching and learning out of the four walls of a school to the street and even to the comfort of our homes.

#### **▪ Reaches far and wide**

Information and Communication Technology quickly reaches a larger numbers of people across a wide geographical area. The radio and television reach both urban and remote areas. The internet is matchless in communication for its power, speed and ability to reach a vast number of users world-wide.

#### **▪ A door to lifelong learning**

Information and Communication Technology makes information and knowledge gaining a continuous and life-long process. Apart from the traditional formal education system, it gives us a chance to learn nonstop. In earlier days things were not like that. Once a person was out of the school or an educational institution, his studied ended there. But today the situation is different. Anybody can learn to any extent – it is up to his will - only if the new technology is at his beck and call.

#### **▪ Self-paced learning**

Information and Communication Technology encourages self-paced learning through the on and off line mode. The learner can take his own time. He can learn partly or wholly. One can learn according to the individual differences. Nobody is there to question or compel.

#### **▪ Greater efficiency**

Information and Communication Technology will definitely contribute to the efficiency in teaching as well as learning. The teachers can save a lot of time and energy. The teachers can prepare the materials well in advance. He will be able to attract the learner's attention without much effort, if he uses ICT in his class room.

#### **▪ High motivation**

Regular use of Information and Communication Technology in different curriculum subjects can have a beneficial motivational influence on students. If the right amount of motivation is there, learning will become much easier.

### **Setbacks**

The main problem of Information and Communication

Technology in education is cost and adaptation. Moreover there is always new development in the ICT world, day by day. Updating and upgrading the ICT equipments and training is not so simple. Some Teacher in a Smart classroom teachers try to highlight only the vicious effects of technology and so do not encourage it. Lack of familiarity to hardware and software that can be used in imparting knowledge, is yet another hindrance.

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