

ICT- concept & importance in education

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Concept of ICT

- ICT is technology that supports activities involving information. Such activities include gathering, processing, storing and presenting data.
- Increasingly these activities also involve collaboration and communication.
- Hence IT has become ICT: information and communication technology.
- ICT covers any product that will store, retrieve, manipulate, transmit or receive information electronically in a digital form. For example, personal computers, digital television, email, robots.

Information and communication technology, or ICT, is defined as the combination of informatics technology with other, related technologies, specifically communication technology.

Use of computers

- This is the age of INFORMATION dominated by the Digital Technology.
- The Digital Technology has influenced 'education'
- At present majority of devices are based on Digital Technology. One such device is Computer.
- *The Computer is an electronic device that has the capacity to store, retrieve & process both qualitative & quantitative information fast and accurately.*
- The computers were never developed for improving quality of teaching – learning process. But researchers started using Computers for teaching purpose.

Information technology

- Networking of computers gave birth to Information Technology (IT).
- It is a term – used to cover technologies used in the collection, processing and transmission of information.
- It covers inter alias computers, electronic office equipment, telecommunication, industrial robot and computer controlled machine, electronic components and software products.
- The Information Technology leads to development of Websites.
- Uploading the information on their websites.
- Decreased the limitation of access to information.

- The term 'Information' refers to any communication or representation of knowledge such as facts, data or opinions in any medium or for, including textual, numerical, graphic Cartographic, narrative or audiovisual forms.
- 'Technology' is the practical form of scientific knowledge or the science of application of knowledge to practical.

Information Technology has the following Characteristics :

- Acquisition, Storage, manipulation, management, transmission or reception of data or information.
- Real time access to information.
- Easy availability of updated data
- Connecting Geographically dispersed regions
- Wider range of communication media.

Information and Communication Technology

- IT was limited only to the textual mode of transmission of information with ease and speed.
- Information in audio, video or any other media is also to be transmitted to the users.
- It has opened new avenues, like, Online learning, e-learning, Virtual University, e-coaching, e-education, e-journal, etc.
- Third Generation Mobiles are also part of ICT.
- It is being used in imparting information fast and cost effective.

Importance of ICT in Education

- The ICT brings more rich material in the classrooms and libraries for the teachers and students.
- It has provided opportunity for the learner to use maximum senses to get the information.
- It has broken the monotony and provided variety in the teaching – learning situation.

The ICT can be used both at school and higher education levels in the following areas:

- Teaching
- Diagnostic Testing
- Remedial Teaching
- Evaluation
- Psychological Testing
- Development of Virtual Laboratory
- Online Tutoring
- Development of Reasoning & Thinking
- Instructional Material Development
- Online Exam
- Personality Development

Along with giving information, the other objectives of EDUCATION are:

- developing understanding and application of the concepts
- developing expression power
- developing reasoning and thinking power
- development of judgment and decision making ability
- improving comprehension, speed and vocabulary
- developing self-concept and value clarification
- developing proper study habits
- developing tolerance and ambiguity, risk taking capacity, scientific temper, etc.

- With the present infrastructure, class size, availability of teachers, quality of teachers, training of teachers, etc., it is difficult to achieve all the objectives.
- Lecture Method does not have potentiality of achieving majority of objectives.
- The objectives are multi-dimensional in nature, so for their achievement multiple methods should be used in an integrated fashion.
- a single teacher is not capable of giving up to date and complete information in his own subject.
- ICT can provide access to different sources of information.
- correct information as comprehensive as possible in different formats with different examples.

- Online interaction facility.
- Students and teachers can exchange their ideas and views, and get clarification on any topic from different experts, practitioners, etc.
- broadens the information base of learners.
- ICT provides variety in the presentation of content which helps learners in concentration, better understanding, and long retention of information.
- opportunity to work on any live project with learners and experts from other countries.
- qualitative improvement of Teaching – Learning Process.
- ICT provides flexibility to learners

- ICT enhancing teaching and learning process
- ICT enhancing the quality and accessibility of education
- ICT enhancing learning Environment
- ICT enhancing learning motivation
- ICT enhancing the scholastic performance

Scope of ICT in Education

- Teaching Learning Process,
- Publication,
- Evaluation,
- Research and
- Administration