

ISSN NO. 0972-9445

Emerging Trends in Development Research

Vol. 30, No. 1, 2023, 33-51

www.grefiglobal.org/journals

Education and Communication Technology in Era of Globalization

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Abstract

The present paper is an attempt to understand the notion of globalization which has emerged as one of the most important phenomenon of the contemporary societies. However, the different authors have used it in different manners and have defined it in their own ways which resulted into a kind of camouflage in academic circles. Thus it requires a proper understanding of the concept of globalization in terms of its meaning and definition, characteristic features, dimensions, approaches, perspectives and debates regarding it. The paper is based on the review of existing literature of the theme.

Key words: globalization, hyperglobalizers, anti-globalization, transformationalists

Globalization and technological change processes that have accelerated in tandem over the past years have created a new global economy – Powered by technology, fueled by information and driven by knowledge. The emergence of this new global economy has serious implications for the nature and purpose of educational institutions. As you know the half life of information continues to shrink and access to information continues to grow exponentially, schools can not remain mere venues for transmission of a prescribed set of information from teacher to student over a fixed period of time. Rather Schools must promote – Learning to Lear i.e., the acquisition of knowledge and skill that make possible continuous learning over the lifetime. – The illiterate of the 21st century, according to futurist Alvin Toffler (1970) - Will not be those who can not read and write, but those who cannot learn, Unlearn & relearn, Concerns over educational relevance and quality co-exist with the imperative of expending educational opportunities to those made most vulnerable by globalization -developing countries in general, low-income groups, girls and women

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and low skilled workers in particulars. Global changes also put pressure on all groups to constantly acquire and apply new skills. The international Labour organization defines the requirements for education and training in the new global economy simply as a – Basic education for all, —Core work skills for all and – Lifelong learning for all. In this connection, information and communication technologies (ICTS) which include radio and television, and the Internet – have been touted as potentially and powerful enabling tools for educational change and reform. When used appropriately, different ICTS are said to help expand access to education, Strengthen the relevance of education to the increasingly digital workplace, and raise education quality by, among others, helping make teaching and learning into an engaging, active process connected to real-life. However, the effective integration of ICTS into the educational system is a complex and multifaceted process that involves not just technology, indeed, given enough initial capital, getting the technology is the easiest part – but also curriculum and pedagogy, Institutional readiness, teacher competencies and long-term financing, among others.

Today's world is a world of information explosion. This information explosion is taking place in such a fast speed that even a literate person is feeling as if he or she is illiterate being not able to cope up with such an information explosion. Here the question arises how is one to cope up with it? The answer is, information technology (IT) that can help in coping with the information explosion of Information. Information technology (IT) is the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by micro-electronics – based combination of computing and telecommunication, The term in its modern sense first appeared in a 1958 article published in the Harvard Business Review, in which authors Leavitt and Whisler (1958) commented that – the new technology does not yet have a single established name. We shall call it information technology. It spans a wide variety of areas that include but are not limited to things such as processes, computer software, computer hardware, Programming Languages and data constructs. In short, anything that renders data, information or perceived knowledge in any visual format whatsoever, via any multimedia distribution mechanism, is considered part of the domains space known as Information Technology.

Meaning of Information Technology (IT)

Information Technology consists of two words Information and technology. If you know the two words you can understand the word information technology together. The term – Informational 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 is any equipment or interconnected system or sub system of equipment's that is used in the acquisition, storage manipulation, management transmission or reception of data or information.

Definition of Information Technology: — Information Technology is a scientific, technological and engineering discipline and management technique used in handling the information, its application and association with social, economical and cultural matters. UNSECO – Information technology is a systemic study of artifacts that can be used to give form to facts in order to provide meaning for decision making and artifacts that can be used for organization, processing, communication and application of information – Darnton and Giacoletto (2018). From the above discussion we can conclude that information technology refers to the information processing of the software application on operating systems or hardware applications that includes computers, video, telephones and related equipment's of telecommunications, tapes, CDs etc.

Characteristics of Information Technology

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.

Concept of Communication Technology

Communication is an integral part of human existence. it is communication that decides the very identity of human beings Modern Society is turning into an information society and communication is the exchange of information. It is the process & transferring information from a Sender to a Receiver with the use of a medium in which the communication information is understood by the sender and receiver. Communication Technology implies the knowledge, skills and understanding needed to exchange information verbally or non-verbally. It is processing of information in the terms of accessing information, decoding information and sending it via a medium and changer of the receivers. Medium or channel can be written or oral or gesture form of information through speech, action or any electronic machine.

Communication Technology is the electronic systems used for communication between individuals or groups. It facilitates communication between individuals or groups. Who are not physically present at the same location? Systems such as telephone, telex, Fax, radio, T.V. and Video are included, as well as more recent computer base technologies, including electronic data interchange and e-mail. In short, communication technology is the activity of designing and constructing and maintaining communication systems.

Concept of Instructional Technology

J. K. Galbriath (1985) in his book *The New Industrial State* has given two main characteristics of every technology. They are: Systematic application of scientific knowledge to the practical tasks and the division to the practical tasks into sections and Subsections.

Any Subject who meets these two norms of the characteristics is called Instructional Technology. Instructional Technology, today is widely accepted as the application of systems approach in the systemic design of a learning system and as a method or approach combined with the appropriate and necessary media and material to bring about improvement in teaching – learning – evaluation process. Instructional Technology is neither's technology in education nor technology of education but both and all pervasive which pervades the whole teaching learning or engineering put it should be taken as a sum total of all such aspects, which go a long way in shaping the personality of the learner in a meaningful context.

Definition of Instructional Technology

Instructional Technology is just what it sound lie, using computer, CD Rom, interactive media, modems, satellites, teleconferencing and other technological means to support learning. Instructional Technology has several different aspects. It includes the following:

- the process of designing instruction.
- the application of learning theories and
- styles to designing instruction
- the selection of materials and tools to design and implement a design.
- the evaluation of design
- the effective use of team work and
- the use of technology in support of the development and delivery of instruction.

According to the Association of Educational Communications and Technology (AECT) – Instructional Technology id often referred to as a part of educational technology but the use of these terms has changed over the years. While Instructional Technology covers the processes and system of learning and instruction, educational technology includes other systems used in the process of developing human capabilities.

Nature of Instructional Technology

- Its basis is science
- It studies the effect of science and technology upon education.
- It is a continuous, dynamic, progressive & effect producing method.
- It develops new concepts like programmed learning, microteaching, Simulated teaching, video tape, projector and computer etc.
- It accepts school as a system.
- It cannot solve each an every problem of education. It can be used successfully in teaching and instructional system only.
- It cannot replace the teacher

Characteristics of Instructional Technology

- It is helpful in achieving cognitive objectives.
- It can meet the shortage of effective teachers

- With its help, the purpose can learn according to his needs and speed.
- It can control the individual differences.
- Analysis of contents in depth is carried out in this technology.

Meaning of “Educational Technology”

Words are of little interest in themselves but they do indicate change in thinking. Once the climate of opinion is right, one may arrive at the word “Educational Technology” by different routes. One route starts from audio-visual aids! At first sight, it would appear that teaching machines could go under this heading; but those who work with teaching machines emphasize the importance of programs rather than machinery. Hence the heading has to become audio-visual aids and programmed instruction, an odd pairing since some forms of programmed instructions use only the printed page. The new term “educational technology” suggests itself and it may be used to refer to a little beyond the use of equipment’s and techniques that are associated with equipment’s. On the other route, starting from programmed instruction, a wider conception of educational technology tends to be reached. It is difficult to keep programmed instruction within narrow bounds. Programmed instruction begins to look as though it is a part of something larger and this is educational or instructional technology. Programmed instruction emphasizes that the aims of teaching should be analyzed, the methods of accomplishing them made explicit and the effects assessed as precisely as possible. These basic ideas are applicable to the systems of instruction that do not necessarily include the use of teaching machines.

The term “technology”, as Ofiesh (1964) observes, implies the application of science to art. When we apply the science of learning and communication to teaching, we evolve a technology, i.e., the technology of instruction. In modern education, we can witness the impact of two forces; one, of physical science and electronics and the other, of behavioural sciences, operating on the process of instruction. Both these forces have contributed to the evolution and growth of educational technology. Fig. 1.1, 1.2 and 1.3 makes the concept clear. The interaction of physical sciences with education provides us with traditional aids, tools and hardware’s such as paper, ink, books, radios, lin-guaphones, films, etc. and more sophisticated modern hardware like electronic computers, space satellites, language laboratories etc. The interaction of behavioural sciences with education has generated a new concept and new technique of programmed learning or automated instruction.

Programmed Learning and Education Technology

Educational technology can be regarded, as the application of systematic knowledge about learning and instruction to teaching and training with the aim of improving their quality and efficiency. For this reason, a wide range of presentation, control and feedback devices may be employed such as teaching machines, stimulators and computers. It should, however, be emphasized that techniques such as critical path analysis, curriculum development methods and task analysis are essential components as well as the hardware system. In fact, as long as

programmed learning co-ordinates these techniques, it is woven into the fabric of educational technology. The point is that it is not merely a system of presentation, a particular technique or a set of principles; it is a methodology for discovering an efficient means of organizing learning situations to attain specified objectives. Looked at from another point of view, the job of the programmer can be regarded as that of providing appropriate opportunities for the pupils to learn. It is his task to discover what these may be and to arrange the environment of learning, as far as he is able to optimize these opportunities. He will, for example, have to determine in some cases whether simulation is as useful as the real thing in some learning situations. Programmed learning, though wide in scope, is only a part of the broader concept of educational technology which must include many areas such as the problem of innovation, resources of learning, standardization and compatibility of system components, the training of personnel, education productivity and the design of educational plant. If educational technology possesses any value at all, it is vital that the teachers in training shall be introduced to its philosophy and techniques. In fact, there are two meanings attached to the definition of the term “educational technology.” One meaning refers to the detailed application of psychology of learning to practical teaching problems. The second meaning refers to the application of engineering principles in the development of electromechanical equipment's of such devices – pictures, tape-recorders, computers etc. These two meanings of educational technology interact in the design and use of equipment to provide control over the learning situation, a rich array of stimulus materials (e.g., films) and interaction between responses of the learner and the presentation of instructional material. However, the correct meaning of the term “educational technology” had been differentiated by Lumsdaine by using two different symbols: ET-1, ET-2, ‘ET-1’ refers to the application of technology to instrumentation useful to the process of teaching. This meaning in its essence is a hardware approach. It stresses the need to develop and use audio-visual aids for teaching. Due to this concept, the process of teaching is mechanized through production and use of teaching aids. ET-2 means the application of scientific principles to instruction and hence the emphasis is on objectives and performance. It is the software aspect. All programmed learning materials and teaching machines come under this. Educational Technology is thus the application of scientific knowledge about learning and conditions of learning to improve the effectiveness of teaching and learning.

Nature of Educational Technology

So far no one is universally agreed upon the definition of the term “educational technology.” For most people the term brings to mind such electronic gadgetry as film projectors, tape recorder, television sets and micro-computers used as teaching tools. Other people add such nonelectrical instructional materials as books, photographs and charts. Still others subscribe to a definition that includes not only items used in teaching but also equipment's used in educational administration – keeping student's records on the micro film, communicating between schools by radio, correcting entrance examination papers with the aid of a computer and the like. In effect, educational

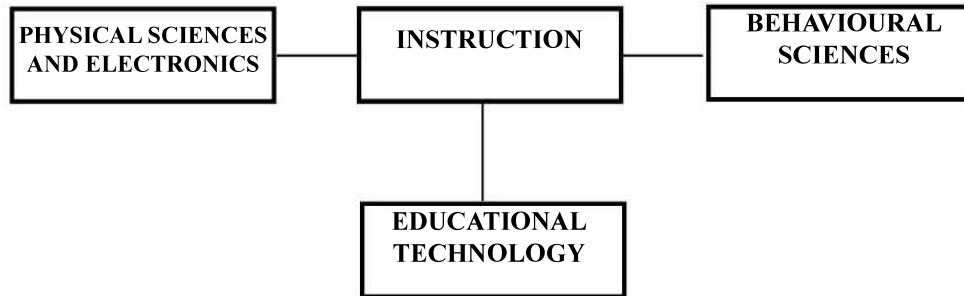


Fig. 1.1

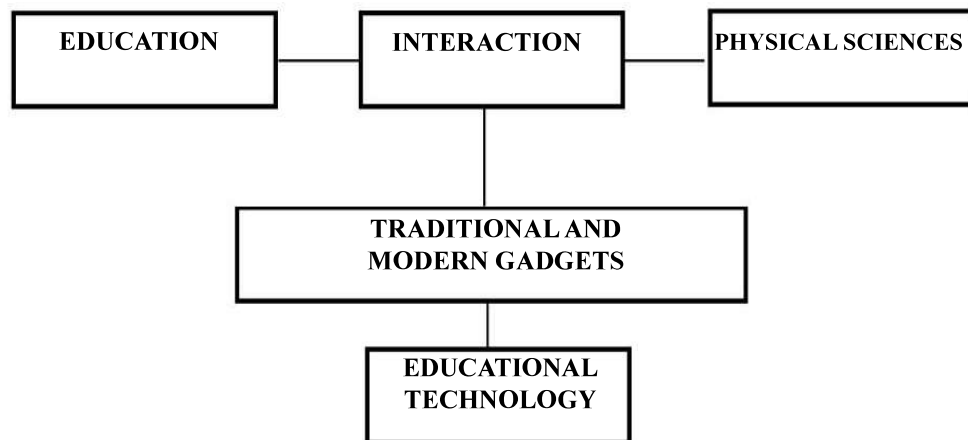


Fig. 1.2

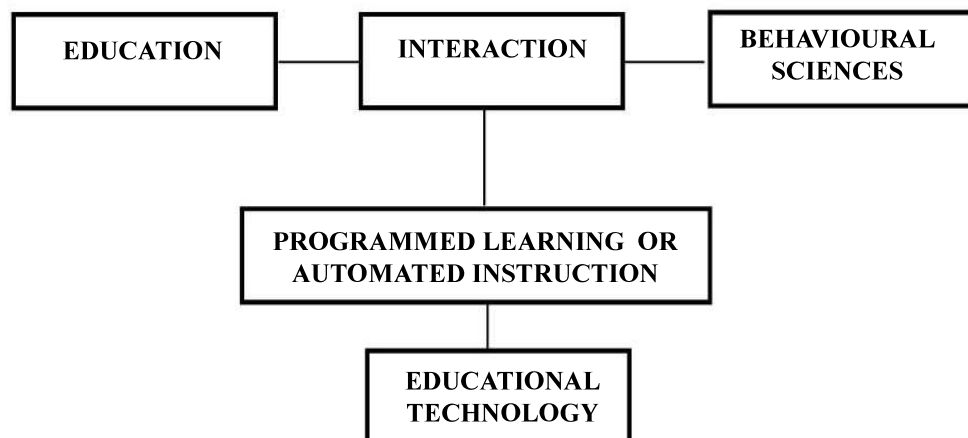


Fig. 1.3

technology can mean different things to different people. Even those who have specialized in this field have failed to arrive at a proper definition. However, in an attempt to satisfy everyone, the Association for Educational Communications and Technology in the United States have come to the following definition: "Educational Technology in the United States have come to the following definition: "Educational technology is a complex integrated process involving people, procedures, ideas, devices and organization for analyzing problems and devising, implementing, evaluating and managing solutions to those problems involved in all aspects of learning."

Extensive use of educational technology requires a left of change on the part of the teacher. This is because some technologies are not accepted or only partly accepted because they require too many adjustments of traditional methods of instruction or administration. Frequently, teachers avoid attempting a new instructional technique because it requires too much from them' in energy, time, patience or skill to become adept in its Use. Altering old leaching habits in order to master new ones entails not only the expenditure of energy but also the risk of a teacher looking foolish by committing embarrassing errors when attempting new techniques in the classroom. In addition, teachers who have traditionally perceived themselves as classroom's chief performers – lecturing, conducting recitations, leading class discussion – can feel demoted to a less prestigious educational role when they are asked to have dreading materials, radio, television or computers to deliver the content of lessons. Thus the amount of change required in the existing habits and the fear of failure or of decreased prestige can affect the teacher's willingness to accept a new technology. Electronic equipment may frighten teachers with its apparent complexity. At least a part of this fear comes from the expectation that something may go wrong during the lesson, making the teacher appear inept or unable to control the teaching situation. To utilize educational television (ETV), many teachers think that much training equipment and general reevaluation of teaching goals and activities would be required. However, such fears are baseless. The evolution of technology has in fact ushered in a kind of revolution in our occupational, social and educational world. But it seems a little awkward to observe that whereas the contribution of some kind of technology is visibly felt in respect of the operation of our hospitals, factories, farms and offices, our classrooms have remained a unique example of backwardness by remaining insensitive to the technological inputs and their⁴ influences. The reasons for this are not far to seek. Our teacher and via him/her the processes of educational resource generation have not properly assimilated or understood the importance and relevance of technology for the classroom. Also, the overall ecology of the formal educational system is responsible to a considerable extent for this state of affairs. Earlier educators used to advocate the use of audio-visual aids in the process of teaching in addition to supplementary aids such as pictures, charts, maps models and various audio-aids. Gradually, the emphasis shifted to the employment of costly gadgets such as video and computers and now the multi-media approach. In brief, it may then be said that the entire principle of

educational technology lies in the: (1) Use of a broad range of resources; (2) Emphasis on individualized learning; and (3) Emphasis on systems approach to education,

Scope of Education Technology

By taking into consideration the usefulness of educational technology in all branches of education, one dare not deny the vastness of its scope. It modifies the learner's environment through the various techniques of presentation, arrangement of learning activities and organization of physical surroundings. The very purpose of educational technology is to facilitate and improve the quality of human learning. It is concerned with achieving the goals – of maintaining internal discipline, adapting to its environment etc. For solving the varied problems of education successfully, educational technology consisting of various media of mass communication, suitable child learning processes, and modern testing and evaluation techniques are essential. Especially in developing countries like India, it has to be mastered and utilized by educationists if they are to keep pace with each other and catch up with the developed nations. As such both quantitative expansion and qualitative improvement of education can be facilitated and accelerated with the help of educational technology. Today, technology of education is being developed with the aim not only of making education more widely available, but also of improving the quality of education which is already available. Educational technology is conceptualized audio-visual aids. What can it achieve most? Only to improve the quality of message and if it is taken in the form of problem-oriented technique, then its main concern will be the production of teaching-learning material. But both these meanings make the scope limited because educational technology is also concerned with the management and organization of man and material both, so that they achieve the specific objectives of planning and organization of man and material both, so that they achieve the specific objectives of planning and implementation. Educational technology is concerned with providing appropriately designed learning situations, which hold in view the objectives of teaching. It modifies the learner's environment through the varied techniques of presentation, arrangement of learning activities and organization of social and physical surroundings. The purpose of educational technology is to improve the quality of human learning. The uniqueness of educational technology is characterized as: (1) Use of a broad range of resources of learning; (2) Emphasis on individualized learning; and (3) Use of systems approach. The effectiveness of educational technology depends on; (1) Ability to achieve goals; (2) To maintain itself internally; and (3) To adapt to its environment.

Educational technology is concerned with the disciplined and systematic approach to education and training. It is a sort of investment in national development. employment structures can be neatly geared to make the best need of development. The entire educational system is educational technology has become very vast.

Technology includes: - (1) Preparing pupils for learning experience; (2) Reinforcing their values while pupils are sharing the experience; (3) Relating the experience with the lesson and thus

stimulating further learning. However, the factors responsible for the progress of educational technology are: (1) Student flood due to population explosion: (2) Acute resource scarcities: (3) Rising costs: (4) Unsuitability of output. Hence there must be a focus on relationship of things between the various levels and internal working parts between the educational system and the environment. There is a heavy stress on innovation to achieve the needed improvements and adjustments. This requires modernization in educational management, modernization of teachers, of learning processes, strengthening of educational finance and emphasis on non-formal education. If educational technology will not cater to individualized learning, then there will be no individual development and social progress.

Information and Communication Technology in Education

“Globalization and technological changes have created a new global economy powered by technology, fueled by information and driven by knowledge” (Boruah, N. 2022). The emergence of this new global economy has serious implications for the nature and purpose of educational institutions. As the access to information continues to grow rapidly, schools cannot be contented with the limited knowledge to be transmitted in a fixed period of time, They have to become compatible to the ever expanding knowledge and also be equipped with the technology do deal with this knowledge.

Information and communication technologies (ICTs) – Which include radio and television, as well as newer digital technologies such as computer and the Internet – have been proven as potentially powerful tools for educational change and reform. When used appropriately, different ICTs can help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by helping make teaching and learning into an active process connected to real life.

Definitions

“ICT stand for information and communication technologies and is defined, as a “diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information.” “ICT implies the technology which consists of electronic devices and associated human interactive materials that enable the user to employ them for a wide range of teaching – learning processes in addition to personal use.” These technologies include computers, the Internet, broadcasting technologies (radio and television), and telephony. “ICT is that technology which uses the information to meet human need or purposes including processing and exchanging.” “Information and communications technology (ICT) in education is the processing of information and its communications facilities and features that variously support teaching, learning and a range of activities in education.” All these definitions combine Communication technology and Information technology that have thin line between them but cannot do away without each other. When these technologies are applied in the field of education, it is termed as ICT in education.

The term too can be used as the connotation to the term Educational; technology because it also uses any hardware and software approaches that can enhance yield better learning outcomes. In the era of Computer technology, the term ICT mainly focuses on the infrastructure, devices and sources of computer technology and thus it is imperative to discuss about the use of ICT in education by focusing mainly on Computer based technology.

Characteristics of ICT in Education

ICT in education is any hardware and software technology that contribute in the educational information processing. In the context of present era, ICT mainly comprises of Computer technology with its hardware, like, Personal computer machine, infrastructure required for setting up Internet facility and also software like, CD ROM including various programme packages, e-learning strategies etc. ICT in education is any Information Technology that focuses on the acquisition, storage, manipulation, management, transmission or reception of data required for the educational purpose. For example, the information about student's records, their admissions, updates of their auricular and co-curricular activities. ICT in education is any technology that deals with the exchange of information or in other words communication in the teaching learning process. Uses of Electronic learning technology like, Teleconferencing, power point presentations, CD ROM are Communication Technology which is the part of ICT. ICT in education is any educational technology that is applied in the educational process. It encompasses Hardware approach like use of machine and materials, Software approach like use of methodologies and strategies of teaching learning and Systems approach that uses the management technology that deals with the systematic organization of the hardware and the software. Different software package for the use in different department of education; e.g., library software, administration software, software related to managing the entire teaching learning process. ICT in education is the support material in the hand of the human resource involved in the educational process in order to enhance the quality of education. ICT in education comprises of the application of science of On-line, Offline learning with the help of the computer technology.

Uses of Education

ICT is being utilized in every part of life. Due to the increasing importance of the computer, students-the future citizen cannot afford to keep themselves aloof from this potential medium. In education, use of ICT has become imperative to improve the efficiency and effectiveness at all levels and both formal and non-formal settings. Education even at school stage has to provide computer instruction. Profound technical knowledge and positive attitude towards this technology are the essential prerequisites for the successful citizens of the coming decades. It can be used for the following purposes: -

- To broadcast material, online facility or CD-ROM can be used as sources of information in different subjects;
- To facilitate communication for pupils with special needs;

- To use electronic toys to develop spatial awareness and psycho-motor control:
- To use the Online resource like, email, Chat, discussion forum to support collaborative writing and sharing of information.
- To facilitate video-conferencing or other form of Tele conferencing to involve wide range of students from distant Geographic areas.
- For Blended learning by combining conventional classroom learning with E-learning learning systems
- To process administrative and assessment data.
- To exchange and share ideas-among teachers for the professional growth.
- To carry out internet-based research to enhance, educational process

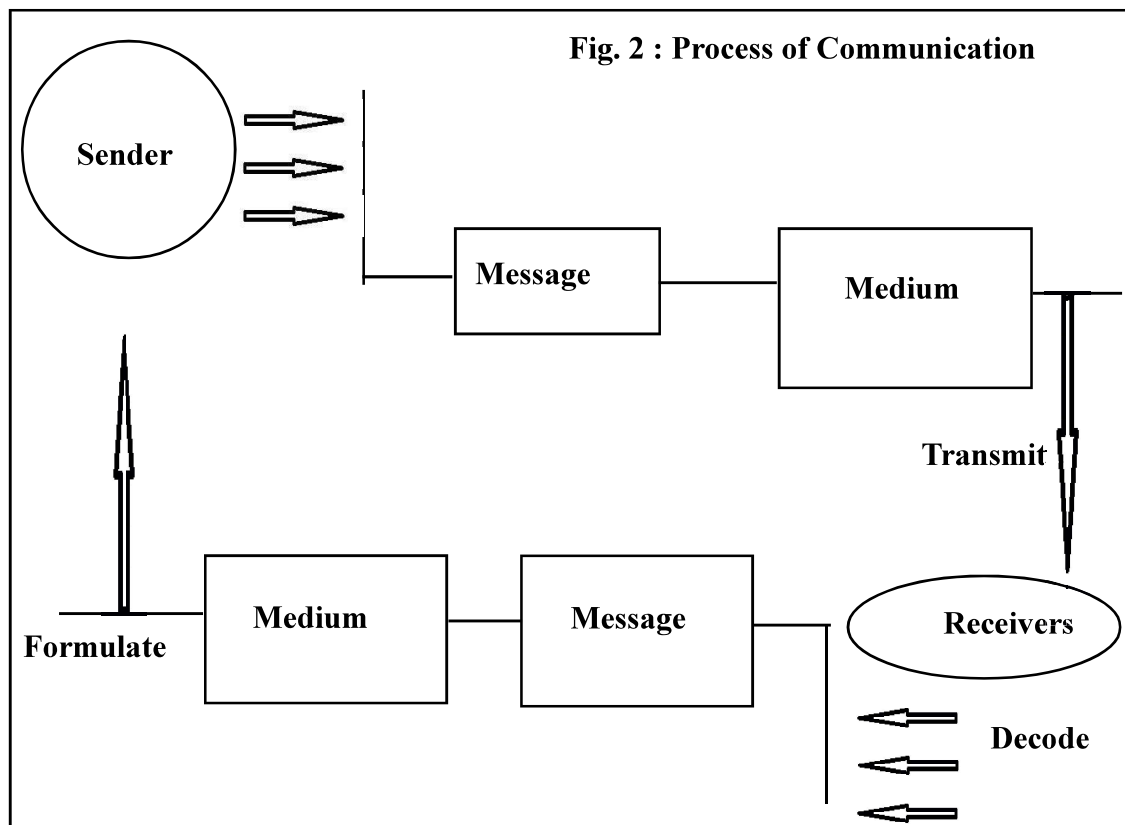
Advantages of the Use of ICT in Education

ICT encompasses all those gadgets that deal with the processing of information for better and effective communication. In education, communication process takes place between teachers, students, management and administrative personnel which requires plenty of data to be stored for retrieval as and when required, to be disseminated or transmitted in the desired format. The hardware and software like OHP, Television, Radio, Computers and related software are used in the educational process. However, ICT today is mostly focused on the use of Computer technology for processing the data. In this context, advantages of ICT in education can be listed down as follows:

- **Quick access to information:** - Information can be accessed in seconds by connecting to internet and surfing through Web pages.
- **Easy availability of updated data:** - Sitting at home or at any comfortable place the desired information can be accessed easily. This helps the students to learn the updated content. Teachers too can keep themselves abreast of the latest teaching learning strategies and related technologies.
- **Connecting Geographically dispersed regions:** - With the advancement of ICT, education does not remain restricted within four walls of the educational institutions. Students from different parts of the world can learn together by using online, offline resources. This would result in the enriching learning experience. Such collaborative learning can result in developing... * divergent thinking ability in students, * Global perspectives * respect for varied nature of human life and acculturation, * Facilitation of learning

ICT has contributed in shifting the focus on learning than teaching. ICT helps students to explore knowledge to learn the content through self-study. Teacher can help the student by ensuring the right direction towards effective learning. Situational learning, programmed learning, many Online learning courses are some of the example of self-learning strategies that are being utilized with the help of ICT.

- **Catering to the Individual differences:** -- ICT can contribute in catering to individual needs of the students as per their capabilities and interest. Crowded class rooms have always been a challenge for the teacher to consider the needs of every student in the class.
- **Wider range of communication media:** -- With the advent of ICT, different means of communication are being introduced in the teaching learning process. Offline learning, on line learning, blended learning is some of the resource that can be used in educational institutions. Collaborative learning, with the real society. This can ensure the applicability of knowledge.
- **Wider learning opportunities for pupils:** - Application of latest ICT in education has provided many options to the learners to opt for the course of their choices. Many Online courses are available for them to select any as per their aptitude and interest. Students can evaluate their own progress through different quizzes, ready to use Online tests. This can ensure fulfillment of the employment required in the job market thus minimizing the problem of unemployment. It can also provide more efficient and effective citizens to the society as per the changing needs.



Information and Communication Technology (or ICT) has come a long way since its inception which is parallel to the evolution of human kind. The need to communicate or share own viewpoints, feelings gave birth to this technology in the form of script, gestures and body movement. As man started his journey towards modernization ICT too became enriched with the newer technologies ranging from print media, simple audio, video gadgets to the latest one, that is computer technology. This advanced Technology is fast becoming an integral and inevitable part of every aspect of life. A very important and core element of Computer technology is Internet. There are many uses of Internet in Education which can be as follows:

- Instructional materials can be made available to students online. E.G. Written material, Various presentations, assignments can be given to students. even the instruction too can convey to students via internet.
- The learner gets the scope of learning desired course anywhere anytime thereby making learning more flexible, interesting and meaningful.
- Internet also helps in removing the age restrictions. The learner ranging from young lots to the adults can enhance their learning as per their needs.
- Online conferences can be organized online for the learners form distant places having common interest. The learning that requires prior preparation also can be provided through internet with the loads of instructional material available online.
- Research work also can be carried out by both the learners as well as teachers with the help of e-library, topical data bases on World Wide Web.
- Individualized as well as group methods can be applied online with the help of varied internet tools like e-mail, discussion forum, Chat rooms, WWW etc.
- The Internet is a revolution in the field of technology that has changed the entire pattern of education and has provided a storehouse of knowledge for the learners to explore for enriching learning experience.

The computer technology is fast being adapted widely in the educational institutions. E-learning is the concept used in education related to the computer technology, according to Brandon Hall Group ([www. brandonhall.com](http://www.brandonhall.com)) E-Learning is the instruction that is delivered electronically, in part or wholly via a Web browser, through the Internet or an intranet, or through multimedia platforms such as CD-ROM or DVD. There are two forms of e-learning, that is online e-learning and offline e-learning. These two forms are categorized on the basis of the Internet. In this context, online learning can be facilitated when the computer is connected to Internet. On the other hand, when the learner studies with the help of computer technology in the absence of Internet connection, then it is offline learning.

Education as a Process of Communication

Communication is the process of transmission of information of an originator to a receiver by means of the use of a message that it goes from one to another across a channel. The function of communication is to ensure that every member involved in communication knows what is expected. Good communication is critical in ensuring coordination and control of individuals and groups. Good communication ensures a person to know what is expected of him, that the appropriate person receives the correct information and that there is coordination within the group.

Process of Communication: - There are five elements involved in the process of communication as follows:

The source (encoder or sender) prepares and sends a message to the receiver that can be accurately decoded. **This message is** the actual product of the source or encoder. **The Channel** is the medium that conveys the message. **The receiver (decoder)**, upon receiving the message, translates it into meaning. **Feedback** is verbal and nonverbal evidence that the message has been received. **In education it can be explained as follows:** The teacher (the source) Prepares the educational information by encoding it and converting it into the message (treated content matter) and sends it via a medium (Verbal words or non-verbal means like pictures etc.) to the receivers (Students). Students after receiving the message decode it or translate it into meaning which is sent back to the teacher as feedback. (Answering the question or nodding etc.)

(<http://www.stfrancis.edu/ba/ghkickul/stuwebs/btopics/works/comproc.htm>).

Symbolic representation of Process of communication is shown in Fig. 2. Internet if considered as a channel of educational communication, other four elements of the communication process have to be molded to suit the channel. Sender has to be the facilitator of learning than the teacher. Message can be in the form of digital language or the multimedia audio, video clips, software etc. The receivers are learners not restricted to only one place bound by four walls but from all over the world. The feedback again would be digital language, software etc. Let us discuss each mode in detail.

Synchronous e-Learning

Synchronous is defined as “occurring at the same time”. Synchronous e-Learning infers that the instructor and the learner interact with each other and the course content simultaneously even if both are at geographically dispersed locations. Such virtual presence is the major feature of synchronous online mode of Communication. Virtual presence stands for the presence through images or through hearing or through texting but not physical presence in the face-to-face situation. In this digital mode, learners and instructor make comments and ask/answer questions. Comment or discuss that can be viewed by all participants virtually present at geographically different places. Just as in the face-to-face situation, the use of different instructional materials, techniques like Broadcast of learning with slide show, audio, and video capabilities is possible online.

Asynchronous Learning

Asynchronous means not occurring at the same time. Asynchronous e-learning is the learning in distance in time where trainers and trainees never meet. For example, courses are distributed via the internet and communication via e-mail only, taking a self-paced course, exchanging e-mail message with a mentor and posting message about a topic to a discussion group. It is a type of two ways communication that occurs with a time delay. It allows both originator and recipient of communication to respond at his own convenience. Electronic bulletin boards like newgroups; forums etc. are good example of asynchronous communication.

Earlier distance education course delivered through post were the only form of Asynchronous learning. With the advent of the internet, asynchronous learning has developed into a new form. Now it combines online coursework or coursework delivered via CD-ROM with classroom instructions which gives students a hybrid learning (blended learning) form. From elementary schools to post-secondary colleges and universities are incorporating asynchronous learning. Through Asynchronous learning, classroom learning can be supplemented with additional information like online lecture notes, multi-media presentation of course material, links to the websites related to the course material, anytime query to teachers or feedback from teachers, ease to access information at once convenience, online group discussions with other students or faculty members etc. Biggest advantage of Asynchronous learning is that, students don't need to gather at some place, at some particular time to acquire education. They can choose their own instructional time frame and place and acquire learning materials according to their schedule and learning ability.

Educational Portal

The term Portal literary means Gateway or entrance. Educational portals by this meaning implies a channel to access education related different resource. This term is popularized mainly in Internet based education. Educational Portal is defined by a few key characteristics. It serves as search engines or that categories information into various meaningful groups as per the educational needs. It assists a user searching for a particular item sift through the endless sources of information, E.g., like Yahoo, Google initially started initially as Search engines. But as time progressed, they have included e-mail, chat functions, instant messaging, and even personalized service. Worldwide Web site too can be termed as a can be a major starting site or the gateway or the portal for user when they get connected to the Web to visit site of their choice. There are *general portals and specialized or niche portals*. Some major general portals include Yahoo, Excite, Netscape, Lycos, CNET, Microsoft Network, and America Online is AOL.com. Examples of niche portals include Garden.com (for gardeners), Fool.com (for investors), and SearchNetworking.com (for network administrators), Education.com (for Educationists and learners) A number of large access providers offer portals to the Web for their own user. Most portals have adopted the Yahoo style of content categories with a text-intensive, faster loading page that visitors will find easy to

use and to return to. Typical services offered by portal sites include a directory of Web sites, a facility to search for other sites, e-mail and sometimes a community forum.

This term as is obvious from this description, originated in commercial circles. An Educational Portal too has been developed to address the needs of the educational community and to foster the adoption of Information Society Technologies which is the need of the time. It provides various online community facilities and access to educational resources for supporting collaboration, assistive or self-learning and teaching practices or in short e-learning. Most of the users view WWW as the only portal. But it is not limited to WWW as viewed by most of the internet users as it can be expanded to include e-mail services, chat rooms and other Internet applications which are not dependent on the Web. The Objectives of Educational portals can be as follow:

Objectives

To bridge the gap among students, educators, parents and administration, in order to increase interactivity and communication and to facilitate collaborative work and research.

To enhance student's awareness and exploration of educational resources available in the Web, and thereby create opportunities for the students to increase their learning potential.

To increase the use of the Web by students and teacher and thereby foster further adoption of Information Society ideals within the educational community.

These objectives of educational portal can be achieved effectively with the help of its target groups.

Students and Teachers – Educational portals can be great help in Learning and teaching through the available educational to enhance cooperative, collaborative as well as individualized learning, Communication portal facilities can be used effectively for this purpose.

Parents – The Educational Portal provides parents scope to access information related to educational activities, school contact information, course curricula and schedules, etc. They also can communicate with other stakeholders within the local educational community.

Administrations of Schools and Educational Services – The portal provides facilities for the management and structured presentation of information regarding all schools and educational services.

Use of Educational Portals**Digital Library**

Through the Digital Library of the educational portal, users may gain access to various educational resources. The provided educational resources can include, but articles and publications, tests and exams, teaching instructions and guidelines, and in general useful and practical educational material. Every educational portal as per its set objective create, access provides information to its target users.

Special Interest Forums

A number of online educational communities of special interest can be established through the portal's forum facilities as a means for collaboration and communication among the portal users. Users can propose discussion topic and participate in evolving discussions via synchronous or Asynchronous modes of e-learning. BLOGS, Group Chat rooms, Tele conferencing etc. can be used for group activities. In this way, the portal provides the opportunity to specific groups of users to participate in private exchanges of ideas, opinions and experiences related to intended course content.

Announcement Board

This facility allows wide dissemination of latest news and information on educational topics, as well as access to the archives of all past announcements. The learners also can be informed about the coming educational activities. Time table for the course of action, Lecture announcements, assignments etc. can be conveyed to learners through such announcement Boards.

Advanced Search Facilities

Users can use various search facilities which can be keyword-based or parameter-based to retrieve information regarding all the available portal content like digital library resources, posted messages, announcements, etc. The learner can be directed to use these facilities in the form of assignments or some individual or group activities.

Administration Tools

The portal provides an integrated content management system for organizing and facilitating the collaborative creation and update of ever-changing content. Maintenance of each learner's study record, Generation of study material and managing testing and reporting procedure as per individual difference are some of the features provided by educational portals.

Learning Activity:

Find out the Some General Portals and Niche Portals and collect information about the typical characteristics of these two types of educational portals by identifying the common features. Connect to moodle.com, wiziq.com educational portals and find out what facilities they provide to Teachers as well as Learners.

Online Evaluation System. An Online Examination is one where in a student answers his/her exam on the computer and submits his answers. The submitted answers are evaluated by the examination software and the results are available immediately. This saves the evaluation time. Besides this a large number of details like examination trends can be made available immediately if required. Let us understand how it works. The Online examination Software has several modules in it. E.g., student's details module, student authorization module, subjects and questions management, question paper management, evaluation system and generation of results as well

as student answer books. All these modules are sub-programmes of the entire online evaluation system.

Conclusion

The Internet technology is here to stay and every stakeholder in the education field is expected to master it in order to sustain in the knowledge society and fast pace of the world of work. The teacher's role too has changed to that of a facilitator of learning. Self-learning is fast becoming inevitable. Educational institutions are equipping themselves to match the fast-changing pattern of education system. They are becoming technology savvy. Parents too need to provide all the technological support to their wards in order to enable them to learn by using online learning resources from the places of their convenience.

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Published by

Global Research and Educational Foundation India (GREFI)

C-28, Pallavpuram Phase I

Meerut-250110

2023

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