

# ICT in education: its Utility, Advantages and Limitations

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## *ABSTRACT*

The multidimensional progress and development taking place in the technological field has a big hand behind the very convenient and progressive way we are living in our daily life and business world today. There is no area and corner of our life where the use of technical knowledge and skills is not enjoyed by us. In the techno world of education, we are living in a knowledge based society and knowledge world where knowledge is a huge energy capital and strength for the individual and immense wealth for the nation. It is also true that there is a tremendous explosion in the amount and dissemination of knowledge. Today we need the knowledge and use of advance technology to assimilate this rapidly growing knowledge store like security. Today, we need to learn not only to acquire knowledge but also to learn the way of acquiring knowledge. This is a matter of information and communication It is possible only with helping hands in this present study. This paper discloses the study of nature and utilities of information and communication technologies. As a matter of fact that this study attempts to highlight the experience gained from the right use and usage of different technologies because it is rightly said that experience in itself as a great teacher. Really this study gives rise to disseminate and to in enrich the knowledge and develop communication decision making as well as problem solving abilities of uses.

**Keywords:** Informatation and communication technology, Great teacher, telecommunication, Satellite, Equipments, Teaching Machines.

## **Introduction:**

Experience is itself a great teacher. The truth of this statement can not be turned away. The learner can have this experience is both direct and indirect ways, but this path of direct experience or knowledge is sometimes very difficult and sometimes quite impossible. We can take knowledge, experience and information in directly in many ways such as by asking a person, reading form books or magazine, watching pictures photographs and movies or radio. On the basis of information received from these sources, listening to tapes. We try to know or understand about any person, place, thing or idea and thus try to adjust ourselves and live life by getting acquainted with our environment. Getting information properly from all the sources of information that we have just mentioned, keeping them properly safe in our memory or somewhere else and using it properly on time.

In short, in this way information and communication technology means a technology consisting of tools, equipments and application base that helps in reliable and accurate editing of information storage, reproduction, use, transfer, synthesis and analysis and assimilation. It proves to be very helpful in enhancing its knowledge and communication to the user and there by enhancing his/her decision and problem solving ability.

## **Origin, Growth of information and communication technology.**

The story regarding the collection and use of facts and data related to communication and information is as old as our civilization and culture communication was the gathering, collection and transfer of information even when these where no mechanical means. Information was collected orally.

These were stored as memory in the brain and were transferred and used orally. The art of writing made the first effort in this direction and thus the invention of paper, ink and stylus can be considered as the first milestone in the field of communication and information technology. After this, the invention of the printing machine can be considered by "Guten Berg" of Germany in the year 1438 as the second advanced invention. Undoubtedly, the print media has made an invaluable contribution in the development of communication and information technology. Some further developed efforts in this direction can be counted as follows.

- In 1849, French resident H.L.M. Degure and England resident W.H.F. Talbot the inventor of photography.
- Prof. Ab. Rene. Grafin Griffin in 1900 invention of Photostat Technique by Graphene.
- In 1938, American Prof. Xerography was invented by Karlson.
- In 1940, J.B. Desser a resident of England and Rene Degrane France whereby any printed material can be copied in a small space. The invention of such a Micrography technique can be copied in a small space. The invention of such a Micrography technique can be copied in a small space. The invention of the laser technology used in printing by U.S resident Theodore Memon in 1960. Development of state of video disk and computer in the 20th century.

#### **Apart from the above inventions the development of Telecommunications:**

Technique has also given invaluable support in developing information and technology in this form from our level of transmission of messages through pigeons. Today we have reached the satellite communications service. The following is the story of the progress of some important inventions in the field of communication technology.

- In 1837, American resident S.P.B. Morse who invented the Telegraph.

- In 1876, the invention of Telephone by Scotland Alexander Graham Bell.
- In 1895, Italy resident G Marconi who invented Radio.
- In 1925, A resident of Scotland J.L. Baird who invented Television.
- Sputnik satellite which was put into space by Soviet Russia on October 4, 1957.
- This is the development of satellite communication
- The invention of only cable and Fax technology in the 20th century.
- In 1950, for the first time in the world information and communication science began to be used in the world of information and communication. At this time it was used by scientists of American and other countries for the mutual exchange of scientific knowledge and information.

Whatever facts, theories and research related information collected from everywhere in the field of science, the matter of storing and organising them and putting them to use came under the ambit of information and communication science.

#### **Traditional and Modern ICT's :**

The existence of information and communication technologies as just mentioned dates back to ancient times. In this, these techniques can be understood by dividing them into ancient or traditional and modern techniques. In both these types of techniques the type of instrument equipments and medium and application material are used, their nature is as under.

1. Traditional information and communication Techniques - In these techniques, the following types of tools, equipments and materials can be seen usual.

I. Printed resources such as text books, reference books, other literature and books, Magazines in school and other reading material available from public libraries.

II. Verbal information and knowledge that is shared by teachers, classmates, other students in larger classes, friends, parents and family members

and other members of society in formal and informal ways can be obtained.

III. In pictorial aids like pictures, chart, maps, diagrams posters and cartoons.

IV. 3D aids like models, puppets mock-ups in

V. Audio-visual hardware equipment such as radio, television, slide-projector, overhead projector, motion picture or cinema, tape-recorder, audio- video -recording equipment and teaching machine.

2. Modern information and communication Technologies: Modern information and communication technologies are note as one sided as traditional technologies. It is itself a combination of various hardware and software media and communication systems. The main of these can be maintained as under:-

- i. Digital video camera.
- ii. Multimedia personal computer (Pc), Laptop and note book.
- iii. Application software like word processing, spread sheet, power point, simulation, and speech recognition.
- iv. A multimedia projector (LCD or DLP) used to communicate effectively with a large group.
- v. Local Area Network (LAN), Metropolitan Area Network (MAN) and Wide Area Network(WAN)
- vi. Multimedia PC or Laptop equipped with video sound cord and web camera or digital video camera
- vii. computer databases and data processing possesses such as CD ROM and DVD.
- viii. Digital Libraries.
- ix. Email, internet and world wide website (www)
- x. Hypermedia and hyper text resources.
- xi. Computer mediated conferencing video and audio-conferencing.
- xii. Video text, teletext, interactive video text,(IVD) and interactive remote instructions (IR)
- xiii. Virtual classroom e-learning, m-learning and virtual reality.

### Uses of advantages of ICT :

Information and communication technologies can play their role in making information and communication work as easy and effective as it is played by other technologies in editing other activities of our life. If seen ,ICT have brought a strange revolution in various field of our lives such as industry, trade banking, agriculture medicine, transport, telecommunication service, establishments and many. things affecting our day to day life. It has completely changed the way we think, talk, interact and communicate with each other. There is no such area or any activity of our life which has remained untouched by the influence of these technologies. The field of education is no exception, so, here too the use of ICT is being used vigorously. This type of use can be discussed in different ways under two different headings which is what we are going to do below.

1.Its benefits and usefulness to the people associated with education. From this point of view, the benefits and utility of information and communication technology can be described as follows -

#### (i) Useful for Students :

By using ICT, students should be able to get acquainted with the sources of information, collect information from them , store them properly and organise them and use them as needed in the future. These is proper opportunity and training to bring whatever they need to gain, knowledge, desired behaviour change and personality development

#### (ii) Useful for the teachers:

ICT can help teachers in different ways to fulfill there teaching responsibilities. Different types of information to them for appropriate teaching information and communication technology can provide valuable assistance in providing. Knowledge and data properly ICT can help them well in the task of introducing them to different types of information sources, obtaining necessary information from them and using them for their teaching work. They can also lighter workload a lot by introducing their students to the available sources of knowledge and information,

because all the things, they may have to tell the students again and again.

**(iii) Useful for the counsellor:-**

In the conduct of guidance and counseling services, whether run in the school premises or run by other organisations in community. The cooperation of ICT can prove to be beneficial in various ways, various types of information data and communication are constantly needed for guidance and counseling services. Counselors needs to be fully aware of information and data that is accurate and reliable that can be easily, retrieved and properly stored and used in a timely manner, whether for personal, professional or educational guidance and counseling. Needless to say all these things are well possible only with the help of ICT.

**(iv) Useful for the educational planners and Administrations:-**

For the planning of educational programs and proper management of educational activities, the cooperation of information and communication technology can prove to be valuable in various ways. The cooperation of information and communication technology prove to be a boon for the administrators here similarly any kind of planning work cannot processed at all without proper information, data and communication. Heather examination have to be conducted in the school or students have to be admitted to any course, proper information communication and data for the planning of all can be obtained with the help of ICT.

**(v) Useful for the education researchers:-**

Whoever wants to do research in the field of education needs different types of information and necessary communication data related to the particular subjects. These information, data and communication should be received accurately and researcher according to their convenience. In this way, the use of ICT is full of useful possibilities in the field of education. Therefore, it is necessary that such serious efforts should be made from all sides that no stone unturned should be left by the persons associated with education to take advantage of the use of this

technology to make instructions, teaching, learning and education system effective.

**Limitations in the use of ICT:**

In the context of using ICT in their schools users may face a lot of difficulties therefore it is also necessary to be aware of the limitations of its use and the defects inherent in it. They are as under:-

(i) Facilities related to the use of ICT are not yet available in our schools. There are many schools for which it is neither possible to buy the related equipment and technical equipment nor to repair and maintain them. In such a situation, these can not be a possibility of using this technology in such schools.

(ii) The schools , officials, headmasters, teachers, other school personnel associated with the work business of our schools do not have the knowledge that both circular and co-curricular activities can be done in effectively by making information and communication technology apart of the regular routine of the school can be made an active participants in the conduct of such activities. This activities ignorance of them remains the biggest obstacles in the use of ICT.

(iii) Teachers have a deep oppression that with the use of this technology everything can go out of their hands. What will happen to the students when the treasures of self knowledge will be lost by the use of their technology.

(iv) Students also do not seem ready to use it. He does not want to give up his old role in which he gets to it cooked kheer. Knowledge is showered by the teachers, they do not have to go through the process of acquiring knowledge by their own efforts. Due to the trained of using ICT, all the responsibilities of creating learning experience will fall on their shoulders, they do not see this as beneficial for themselves.

(iv) One of the main obstacles regarding the use of this technology in our school is that the teachers do not want to give up their old methods and teaching learning methods. They prefer to use discourse, lecture and demonstration methods and them abandoned their teaching centred role and do not adopted a student

centred or collaborative interaction method. In doing so where things like their conservation, inertia and fear towards the new come to the fore ignorance about the use of ICT also prevents them from changing their role.

(vi) The main reason behind the unnecessary fear, apprehension and ignorance seen among the teachers in context of the use of ICT is that today is any kind of pre-service or in-service teachers training programme information and communication technology is not included in the school.

Teachers are not prepared to use it in education. In the teacher training programme, which is being tried to keep some activities or curriculum parts in the name of computer literacy now-a-days.

### Conclusion:

In the way, it can be said in conclusion that the facilities obtained from ICT can help in various forms to all parties related to the efforts and results of education, information recipient in the true sense. It is the ladder of knowledge this further helps in all types of learning acquisition. From this point of view, the task of properly regulating the receipt of information through ICT by becoming helpful in various tasks of

education. It can pave the way for proper attainment of educational objectives. As a matter of fact that the use of ICT is closely related to development. Proper development of education is the biggest need of today's global world and the biggest asset of the nation.

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