

INNOVATIVE PRACTICES: USE OF ICT IN EDUCATION

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Introduction

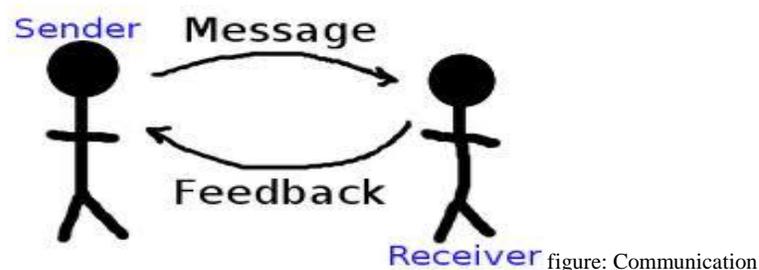
Something new is often described as an innovation, in economics, management, science and other fields of practice and analysis it is generally considered a *process* that brings together various novel ideas in a way that they have an impact on society. As an Education is the means of social transformation, in 21st century ICT entered into all the aspects of educational system as per the needs of society and changed the scenario of teaching learning process all over the world. 21st century opened the doors of informal or distance education to all those who are unable to seek admission for formal education and ICT made it easy to become a part and parcel of educational system. Before turning to ICT, let us see what are the key terms in ICT.

What is Information?

Information is knowledge obtained from reading, investigation, and study or obtained through process of data. As data is a raw material, for information we must process the text, numbers, sounds, videos, images etc. We need information to predict and to make decision. E.g. For making aware the people about cyclone, the scientists warn the people using latest technology, the tools used for transmission of information are telephone, television, radio etc.

Communication

Communication is the exchange of feelings, experiences, thoughts, ideas and opinions among two or more persons using symbols, signs or verbal interaction. “Communication is the composite of information given and received of a learning experience in which certain attitudes, knowledge and skills carving alterations of behavior, of listening efforts by all involved, of a sympathetic fresh examination of issues by the communicator himself, of a sensitive interacting points of views, leading to the higher level of shared understanding and communication intention”.- Ordway Tead.





Technology

Technology is the making modification, usage, and knowledge of tools, machines, techniques, crafts, systems, and methods of organization, in order to solve a problem, improve a pre-existing solution to a problem, achieve a goal, handle an applied input/output relation or perform a specific function. It also refers to the collection of such tools, including machinery, modifications, arrangements and procedures.

Information Technology

Information technology (IT) is the application of computers and telecommunication equipments to store, retrieve, transmit and manipulate data. “Information Technology may be said to be that technology which is used for information management which involves acquisition, processing, storage, retrieval and dissemination of information. Reprography, printing and publishing are all activities involved in information management. Hence, the corresponding technologies also become part of I.T.”

Communication technology

Communication technology is the activity of designing, constructing and maintaining communication systems. This is information and communication technology, and it includes any communication devices or applications such as radio and television.

I.C.T=Information Technology +Communication Technology

Information and Communication Technology

Information communication technologies are diverse set of technological tools and resources to create, disseminate, store and manage information for communication.

New digital technology applied for communication is called information and communication technology or the technology required for information processing. Information and communication technology is nothing but the use of electronic computers, communication devices , software application to convert, store, protect, process, transmit, retrieve information.

Elements of ICT:

1. People	2. Information
3. Hardware	4. Software
5. Procedure	6. Communication

USE OF ICT IN EDUCATION

1. Learning

The students use ICT for surfing, communicating with each other (chatting, e-mail).They can complete their home-work, tutorials, and assignments. For the execution of projects, reading material students rely on it.

Computer assisted Learning



Computer Aided Learning (CAL) or Computer Assisted learning can be defined as learning or teaching subjects like mathematics, Science, Geography etc., through computers with subject wise learning packages/materials. It is said to be: "Pedagogy empowered by digital technology". In broader sense, it may be considered as a part of E-Learning. Computer assisted learning, or CAL, is not a new phenomenon. Computer Assisted Learning can be defined as a computer program or file developed specifically for educational purposes.

E-learning

E-learning is the use of electronic media and ICT in education. E-learning is inclusive of, and is broadly synonymous with multimedia learning, technology-enhanced learning (TEL), computer-based instruction(CBI), computer-based training (CBT), computer-assisted instruction or computer-aided instruction (CAI), internet-based training (IBT), web-based training (WBT), online education, virtual education, virtual learning environments (VLE) which are also called learning platforms.

Teleconferencing and Video-conferencing

A teleconference is the live exchange and mass articulation of information among several persons and machines, remote from one another but linked by a telecommunication system. It is also termed as audio conferencing. Telephone conferencing and phone conferencing are also sometimes used to refer to teleconferencing. The telecommunication system supports the teleconference by providing telephone, computer, radio, and television etc. Videoconferencing is also termed as a video conference or video teleconference, by a set of telecommunication technologies which allow two or more locations to communicate by simultaneous two-way video and audio transmissions. In case of distance education, open universities use such teleconferencing and video-conferencing.

Effective teaching

To make teaching effective and meaningful as well as to avoid monotony in teaching, teachers can use ICT. With content enrichment, teacher can teach with power point presentation. For the teaching of subjects like science, animation is used for showing the movements of moon while moving around the Earth.

Computer Assisted Instruction

Computer-assisted instruction (CAI) is an interactive instructional technique whereby a computer is used to present the instructional material and monitor the learning that takes place. CAI uses a combination of text, graphics, sound and video in enhancing the learning process. The computer has many purposes in the classroom, which can be utilized to help a student in all areas of the curriculum. CAI refers to the use of the computer as a tool to facilitate and improve instruction. CAI programs use tutorials, drill and practice, simulation, and problem solving approaches to present topics, and they can test the student's understanding.

Drill and Practice



Drill and practice provide opportunities for students to repeatedly practice the skills that have previously been presented and that further practice is necessary for mastery. In the learning of topics such as dialogue or conversation or for the speaking exercises ICT is beneficial which gives the students, the opportunity of drill and practice. Such drill and practice keeps before us ideal model of pronunciation that helps for the development of speaking skill.

Simulation

Simulation provides an approximation of reality that does not require the expense of real life or its risks .e.g. In Medical education students use simulation in their training.

Tutorial

It includes both the presentation of information and its extension into different forms of work, including drill and practice, games and simulation.

Use as an Educational aid

For the sake of stimulus variation teacher can use ICT as an educational aid which affects the learning of students. For preparation of educational aids we must have skill and art of drawing and such pictures, models can be damaged after use but, the pictures saved in computer memory can be used year by year.

Good tool to maintain record

So many computer applications are now used to maintain records. These applications are capable of updating all the records only as we change one field of it. Eg. MS-Excel, MS Access. E.g. Students record, record of official documents, Teacher presenty (biometric), examination record etc. Ms-Excel is used for maintaining official financial records. For maintenance of dead stock too ICT is used. Maintaining written records need so much space and writing material. But if we use computers for same, it will reduce space and material.

Source of Information

Computer can retrieve any information in lightning fast speed that is saved in its memory. Internet can provide any information at anytime, anywhere we need. It has been proved to be very helpful tool in today's world of fast life.

Use in library

In 21st century there is digitalization of library, with the help of which the readers can find any book within a fraction of second. We don't need to find each and every book which we want to borrow. There is a bar code system for the books which avoids writing manually in registers.

e-books, e-journals, e-papers

As a student or a teacher if we are unable to get any book from library we can read e-book using internet facility. Now- a-days we have internet versions of books, magazines, journals etc. To avoid delay in getting newspapers in our village or to become paperless, we can read e-newspapers. It saves trees as well as money too.



ICT in evaluation

As the patterns of examinations are changing, the agencies like MPSC, UGC, and Universities are organizing objective type examinations. ICT helps in such work to provide computerized question papers and answer sheets. This technology is also used in continuous and comprehensive evaluation at secondary schools.

On-line examinations

Now-a-days universities or other state or national boards or institutes conduct the examinations for entrance or recruitment with the help of computer, are called as online examinations. Such institutes display the answer key on respective websites, which saves time in declaration of result. For the assessment of OMR answer sheets used for objective type examinations, and declaration of results computer technology is used.

ICT in correspondence

World has become so close now with the help of innovative communication techniques in 21st century. One can transfer his message to another person anywhere in the world in a fraction of second and can get reply also. We call it online chatting. E-mail and voice-mail are easy tools to make correspondence. In education field one can get mobile alerts and mails of necessary changes.

ICT and admission procedure

Now-a-days no one can think about taking admission following procedure like filling forms, waiting for lists on the notice boards and further admission procedure. It has made this tedious procedure easy with the help of softwares specially designed for the specific course posted on concerned website. Merit lists are displayed and the whole procedure can be completed through online way. For competitive exams hall tickets are displayed and students can get roll numbers as soon as they complete filling forms.

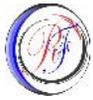
Use as a typewriter

There are numerous documents for the government offices which are supposed to be typed and then signed. For typing purpose use of computer is widely seen today. The mistakes after typing on typewriter could not be corrected but, use of computer has made it easy to type faster and correct it immediately, even we can save the document for further use.

Inclusion in syllabus

According to the need of society ICT is included in the course of secondary and higher secondary education in Maharashtra. There is at least theoretical study about IT in every course work, if not practical.

ICT and Research



From the selection of research topic to the writing of research report ICT plays a vital role. Researchers use ICT for preparation of research tool, collection of data, statistical calculations etc.

Use in Training Programme

In pre-service teacher education programme, there is inclusion of ICT in syllabus. e.g. In the last syllabus of B. Ed Course (Shivaji University, Kolhapur) I.T. was included as an optional subject but in current syllabus I.T. is a compulsory paper for B. Ed and D. Ed students.

Importance of ICT

- *ICT saves time, money and labour.
- *immediate feedback to the answers elicited
- *Opportunity for slow learner to learn
- * learn more and more rapidly
- * multimedia helps to understand difficult concepts through multi-sensory approach
- *great motivator
- *allow students to proceed at their own pace
- *Individual attention
- *students decide when, where, and what to learn

Drawbacks of ICT

- * Website hanging, corruption of data, lack of technical knowledge, lack of infrastructure.
- * over use of multimedia may divert the attention from the content.
- * learning becomes too mechanical.

Conclusion

As an innovative practice ICT made teaching learning process more effective and meaningful. Even though there are some drawbacks of ICT, we should decide upto how much extent we use ICT. Neglecting those drawbacks ICT made drastic changes in the realms of education system that played a vital role in the development of students.

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