



NEED OF ICT IN TEACHER EDUCATION

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The most striking innovation in the field of education is the integration of information and communication technology in education. The educational institution should cope with the suddenly increasing demand for information and skills. One cannot depend on only the same big blackboards, an overhead projector and video-graphed concepts as either because the transaction of curriculum is poor or the tools used in its transaction lack application and skill.

Technology resources that are available for teaching and learning specially include computer hardware and software, in addition to the growing range of peripherals, which include video, CD-ROM and electronic communication media . The rapidly changing nature of computer technology continues to expand the range of resources available for any subject-specific learning. Educators must be imaginative, flexible and willing to renew their vision of teaching and learning if they are to fully realize the potential of educational technology.

According to Howland, communication is defined as, “a process by which an individual, the communicator transmits a message to modify the behavior of other individuals”. It is a process of affecting an interchange of understanding between two or more people. It is purposeful process, which involves sources, Messages, channels and receivers. The proliferation of information and communication technology has brought profound changes in the availability and accessibility of information .the concept of communication revolution, as well as the phase itself became popular in the early 19th century.

INFORMATION AND COMMUNICATION TECHNOLOGY

The functions of ICT involves developing, acquiring, testing, implementing and maintaining electronic systems .these systems include databases, applications and procedures to support the business needs of the organization in the capture , storage , transfer , communication, process and dissemination of information. Includes the evaluation, acquisition, tendering, leasing, licensing and disposal of software and hardware.

ICT as a field of computer science has progressed to the point that some of its innovative methods are practical use for information retrieval system design.ICT informs, educate, persuades and entertains with dazzling effects of colour, animation and sound.

It offers learners more complete and individual control over their learning. Learners may set their own pace through the material and review material as many times as needs for understanding. It will provide a private non-judgmental learning



environment to the learners. It provides clear and well-defined instructional objectives, through preparation of content and offers support for both learners and staff. Abstract concepts can be easily explained with the help of animation and graphics. It ensures self-paced learning. More information will be gathered in a short duration of time. So energy and time will be saved.

ICT IN EDUCATION

The major important representation of information and communication technology in education is the presentation and use of teaching aids. The quality of teaching aids in recent times improved. The variety of teaching aids ranges from a two-dimensional chart to a three-dimensional model. Further, the introduction of electronic media has brought a third dimension and movement in the use of teaching aids in education. Information and communication technology helps to develop simulated programmes in education, which are designed to depict the real-world happening without the danger, expense or time needed to experience the actual event.

Education has been benefited by computer technology in various ways and at various levels. From both the sociological and economic points of view, computer technology has made an impact on teaching and learning. A number of institutions in the developed countries are offering courses through computer technologies such as interactive Multimedia, computer conferencing and the internet. In order to cope with the technological revolution in the teaching-learning process of the developed countries it is indispensable to incorporate these technological advancements in the Indian classroom.

ICT IN TEACHING LEARNING PROCESS

The major important representation of information and communication technology in education is the presentation and use of teaching aids. The quality of teaching aids in recent times has improved. The variety of teaching aids ranges from a two-dimensional chart to a three-dimensional model. Further, the introduction of electronic media has brought a third dimension and movement in the use of teaching aids in education. Information and communication technology helps to develop simulated programmes in education, which are designed to depict the real-world happening without the danger, expense or time needed to experience the actual event. The learners are joyful consumers when the given materials are written at their instructional level.

The effect of multimedia computer changes the present teacher-oriented systems to a learner oriented one. Here, more emphasis is given on creating individualized learning environment. Multimedia is not a product but a combination of technologies. When a teacher is teaching a variety of information can be added with graphics, text, video etc. in this way, the teacher can help the learner to understand the difficult concept clearly. Multimedia encyclopedias can be used to give detailed information about subject. The use of sound, colour, video, rapid reference in the form of glossaries and background details can be used to enhance this



valuable teaching reference tool. In addition, multimedia computer has the special capacity of interactivity.

Computer has versatile use as a teaching aid. It can provide graphics along with texts and it also has got the facility for emitting sound. Thus, it provides stimulus variation. It can store questions for classroom use by the teacher. It can also enable the learners to evaluate their own answers in the absence of teachers.

ICT IN PUBLICATION

ICTs have come to occupy an important place in respect of information storage, retrieval and dissemination. The significance of this role has increased in recent times. Knowledge is likely to become the most valued asset of all future societies, since it can help in the generation of all other assets. The efficiency of social systems of this century will probably be decided by the efficiency with which it can take stock of fast expanding knowledge and provide services for locating and disseminating knowledge within a short span of time. In this age of information explosion, ICT alone can keep track of fast-moving development in different disciplines. The conventional systems of information storage and retrieval have already become obsolete since they are totally inadequate to meet the new demands.

PEDAGOGY

Introducing technology alone will not change the teaching and learning process. The existence of ICTs does not transform teacher practices in and of itself. However, ICTs can enable teachers to transform their teacher practices, given a set of enabling conditions. Teachers' pedagogical practices and reasoning influence their uses of ICT, and the nature of teacher ICT use impacts student achievement.

ICTS SEEN AS TOOLS TO HELP TEACHERS CREATE MORE 'LEARNER-CENTRIC' LEARNING

Research consensus holds that the most effective uses of ICT are those in which the teacher, aided by ICTs, can challenge pupils' understanding and thinking, either through whole-class discussions and individual/small group work using ICTs. ICTs are seen as important tools to enable and support the move from traditional 'teacher-centric' teaching styles to more 'learner-centric' methods.

ICT CAN BE USED TO CHANGE TEACHING PRACTICE

Pedagogical practices of teachers using ICT can range from only small enhancements of teaching practices using what are essentially traditional methods, to more fundamental changes in their approach to teaching. ICTs can be used to reinforce existing pedagogical practices as well as to change the way teachers and students interact.

USING ICTS AS TOOLS FOR INFORMATION PRESENTATION

The use of ICTs as presentation tools (through overhead and LCD projectors, television, electronic whiteboards, guided "web-tours", where students simultaneously view the same resources on computer screens) is seen to be of mixed



effectiveness. While it may promote class understanding of and discussion about difficult concepts (especially through the display of simulations), such uses of ICTs can re-enforce traditional pedagogical practices and divert focus from the content of what is being discussed or displayed to the tool being utilized.

STUDENTS ARE MORE SOPHISTICATED IN THEIR USE OF TECHNOLOGY THAN TEACHERS

There appears to be a great disconnect between student knowledge and usage of ICTs the knowledge and abilities of teacher to use ICTs. This suggests that teacher inexperience and skill deficiencies may often be an important factor inhibiting the effectiveness of ICT use in education by students.

ICT IN ADMINISTRATION

ICT for administrative purpose include the preparation of school announcements, reports, letters and student registration. In view schools computers are used as depositions of various documents of the teachers and those related to the school.

TEACHERS USE ICTS IS DEPENDENT ON THEIR GENERAL TEACHING STYLES

Types of usage of ICTs correlate with teacher pedagogical philosophies. Teachers who use ICTs the most -- and the most effectively -- are less likely to use traditional 'transmission-method' pedagogies. Teachers who use more types of software tend to practice more "constructivist" pedagogies

ICT IN EVALUATION

ICT enable the assessment of students learning, both or either for achievement or competitive purposes. A common sight of a competitive examination is to have an optical mark reader answer sheet for quick/computerized scoring procedures. The other extreme of using computers for online examinations is also gaining momentum.

CONCLUSION

Teachers who teach specific subject skills begin to change their pedagogy and is reflected in their own training and professional development.

Teachers integrate ICT to improve learning and management of learning processes whereby they become active and creative teachers and integrate with a range of students learning styles.

ICT has been used in various areas of education such as teaching learning information storage assessments and evaluation of students learning educational research and administration.

ICT enables the assessment of students learning and other extreme of using computers for online examinations.



The teacher can improve their subjects and compete with others in the field. They can keep pace with the developing trends in the field.

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