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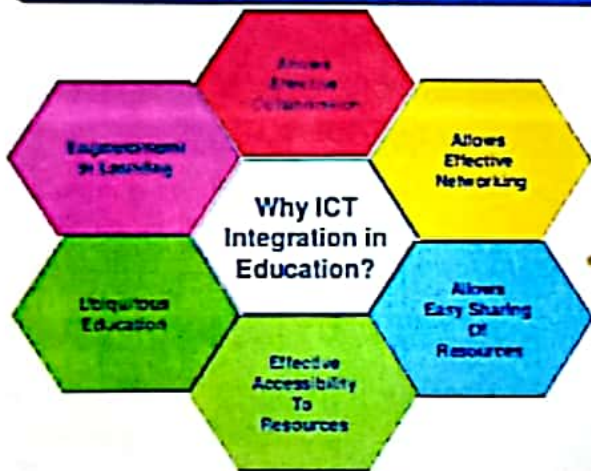
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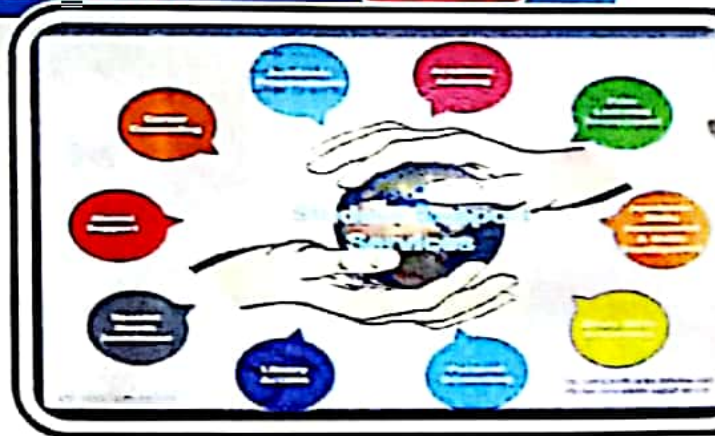
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ICT FOR A NEW DIRECTION



Editor-Dr.Deepa Bharatbhushan Kshirsagar
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ICT : MANTRA OF MODERN EDUCATION SYSTEM**H.U. Joshi¹, S. V Thakur², G. M. Dhond¹, S. R. Bagal³**¹ Dept. of Chemistry, Swa. Sawarkar College, Beed (MS) 431122 INDIA.²Dept. of Chemistry, Milliya Art's Science and Management Science College, Beed³Dept. of Applied Science, Zeal Education Society's, College of Engineering, PuneEmail:hansarajjoshi307@gmail.com**Introduction :**

IT has become a buzzword while talking about technology and its applications. IT is used in various business and management functions. The hardware, software, the methods and know how required or used in acquiring, storing, processing and displaying data and information is collectively known as Information Technology (IT). Also on other hand, many developments and achievements took place in communication technology sector after and Second World War. Hardware, know how, programs and the methods used in ensuring that message is transmitted correctly, efficiently and cost effectively are collectively known as Communication Technology (CT). Both of these technologies became complementary to each other means progress in one alone is not much beneficial. Hence IT and CT started moving together and a new term was coined named as Information and communication Technology (ICT). Convergence of these two technologies gave birth to ICT.

Only presence of ICT in education sector is not sufficient there is also great need for development of good and relevant quality content. ICT can be utilized for the major areas which are content and administration. In this area certain initiatives have been taken at state and Centre levels. For content development in India certain initiatives have been taken for creating digital repositories and learning objects. Such initiatives include Sakshat portal of Govt. of India (GOI), National Programme of Technology Enhanced Learning (NPTEL) and Multimedia Educational Resource for Learning and Online Teaching (MERLOT) which create quality digital content for different levels of Education.

Paradigm shift

Education around the world is experiencing major paradigm shifts in educational practices of teaching and learning under the umbrella of ICT enabled learning environment. The present generation has easy access to any kind of information they want. The thrust, today, is on dissemination rather than accumulation of information and on sharing it. But if we look at the transactions in the classrooms, it is still the teacher talking and students listening. But this method of teaching-learning will not work in an information age. We need to shift from giving information to 'constructing' knowledge! This is where the student becomes an active learner and teacher a facilitator of learning. This is the paradigm shift that should happen.

The purpose of teaching has not been understood in the new scenario. Information need not be given rather it has to be extracted from the learners. Very few things are new to the learners now. They see, hear, read a lot from TV, Internet, and the newspaper. The main role of the teacher, therefore, is to help students organize, create, and share the information they are gathering.

During the last three decades, the changes in educational environment have been phenomenal. The model, focus, role of the learner and technology has been changed drastically from traditional instruction to virtual learning environment as depicted below.

Changes in Teaching-Learning Environment

MODEL	FOCUS	ROLE OF LEARNER	TECHNOLOGY
Traditional	Teachers	Passive	Chalk & talk
Information	Learners	Active	Personal computer
Knowledge	Group	Adaptive	Pc network

Changes in Media Applications

From	To
Single Sense Stimulation	Multi Sensory Stimulation
Single Media Application	Multimedia Application
Delivery of Information	Exchange of Information
Monologue Communication	Dialogue & Collaborative
Analogue Resources	Digital Resources

All these changes taking place in teaching learning process needs a new learning environment. This is possible with effective use of ICT. ICT has potential to change the nature of present education. It will provide joyful learning experience and will carve a knowledge society with responsible citizenship. ICT facilitates interactive, collaborative, independent learning and provides proper tools for feedback.

Instructional Techniques for Appropriate Multimedia Use: The teaching method depends on the nature of the topic. Certain topics are easily adaptable to group discussions, while some need to be explained, some can be debated, while others require lab work. For a topic that requires many pictures, animation, videos, etc., to be shown, multimedia can be used in the classroom. PowerPoint is very useful in making multimedia presentations on topics of study. Pictures and information on a variety of topics are available on the Internet, but you could use your own photos and videos in your PowerPoint lessons.

Prepare a Class Plan: The class plan is perhaps the most important resource for the successful use of multimedia materials, because it guides the selection of media and provides the context for each media element. Multimedia programs and materials are tools to direct attention and emphasize key points that are best understood visually rather than all-purpose guides for every point of every lecture.

Instructors who begin integrating multimedia into their classes often report that the media use forced them to improve the organization of their class sessions.

Develop the Class Plan as a Slideware Presentation: Many instructors use PowerPoint, Keynote, Flash, or a series of linked web pages to organize and present their lecture outline and media. Because PowerPoint is available on nearly all classroom computers, it has become the organizing tool for most instructors.

Where Possible, Include Animations and Video Clips: Although it requires more effort to locate and insert these types of materials, research suggests that these materials have a particularly powerful impact on student learning. Suitable diagrams, pictures, graphs, animations or video clips should be incorporated in the presentation at proper places. Animations and video clips are of great importance as these are helpful in illustrating a

dynamic process that changes over time or has multiple stages. Camtasia Studio desktop video/audio capture application software, Flash or some other powerful animation software is helpful in this regard.

Use Multimedia in Creative Ways: Although multimedia materials may have some value when merely added to a PowerPoint lecture outline, many instructors are exploring ways to incorporate these materials in collaborative learning activities involving case-based scenarios or problem-based exercises.

Choice of the Right Equipment: The equipment is relatively straightforward, and already widely available in many classrooms (Eskicioglu & Kopec, 2003): a standard computer system equipped with a CD/DVD drive, external speakers, and an internet connection, with the computer output displayed through a digital projector.

Good Multimedia Content – Legally : However, the equipment won't be of much use unless one has a good set of multimedia materials and a carefully developed plan for organizing the entire class session to incorporate the media effectively. Many textbook publishers now provide libraries of images, animations, and video segments licensed for use in class—although instructors may still want to augment these collections with other materials. The same computer technology that facilitates multimedia creation and distribution makes it temptingly easy to obtain materials from a wide variety of sources.

Teachers can incorporate several software applications to help students learn more about the course material. Word processors, spreadsheet, database programs, and presentation software enable teachers to create fun and interactive ways to help students learn the course material while also reinforcing computer skills.

As we become increasingly supported by ICT, teaching and learning will not be the same as before. We will have to make use of the rich and exciting opportunities offered by the new technologies in education to reach our training goal and mission. Learning is not mere a transfer of knowledge, rather an active construction.

This paradigm shifts give the learners a completely new role that was not earlier described in the transmission model of teaching. Technology and teacher professional development in its use are best introduced in the context of broader educational reform which embraces a shift away from teacher-centred, lecture oriented towards learner centered, interactive and constructive learning environment. Multimedia and ICT can play the role of catalyst for such educational reforms. Multimedia courseware can promote effective instruction that is more engaging: learner centered, interdisciplinary and more closely related to real life events and processes and adaptive to individual learning styles and needs. It also encourages higher order thinking skills and help to construct knowledge society. Thus teacher professional development in the use of interactive technology should embody and model the forms of pedagogy that teacher can use themselves in their classroom.