



ICT: CHANGING EDUCATION

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ABSTRACT

The world is changing very rapidly due to technological developments. Application of new technologies is seen increasingly. Digital technology has influenced all aspects of human life. Education is not an exception. With the advances in such areas of knowledge and human activity, new pathways of development have come into reality. Efficient and alternative educational systems have been worked out. Information and communication technologies have brought about great change in classroom techniques and other modern physical infrastructure of educational institutions. From almost two-three decades the power of ICT has begun to have a presence but unfortunately we are lacking to achieve desired impact. This paper highlights various impacts of ICT on changing education system.

Key words: Education, Application, Technology, Information, Communication.

Introduction:

With the advancement in the field of science and technology, communication, explosion in information/knowledge and researches in the areas of human biology, psychology, and learning have left a great mark on human development and education is no exception. Education plays vital role in developing the society system. This is the education which determines standards of society. The quality education is basic need of the society. The quality education helps to empowering the nation in all aspects by providing new thoughts, the ways of implementation of various technologies and so many such things. There are number of effective teaching & learning methodologies in practice.

Technology is the most effective way to increase the student's knowledge. Here comes the role of Information and communications technology (ICT) in the education sector! Being an academican I cannot imagine education without ICT. It is no longer possible nowadays to conceive of education without information and communications technology (ICT).

Information and communications technology (ICT) is an acknowledged component in today's society and plays key central role in teaching learning process. Information and communications technology (ICT) provide both students and teachers better opportunities to meet the needs of individuals and society. ICT improves the educational process by developing better interactive educational materials to increase more effective teaching learning situations. ICT also facilitate individuals for easy acquisition of basic skills. Basocally at school level ICT includes various multimedia devices i.e. computers, Projective aids, videos, television etc.

What is ICT?

The term ICT is stands for "Information Communication Technologies". Information and communication technology has become quite popular to meet the challenges of knowledge explosion in recent years. Information and Communication Technologies refer to technologies that provide access to information through telecommunications. It also includes internet, wireless networks, cell phones and other communication medium. ICT means a sunshade that includes all technologies which are used for information management and communication. In other words, ICT is used to cover technologies used in the collection, processing, and transmission or infromation. Infact ICT have created a "Global Village" as people can communcite to each other as if they were living together.

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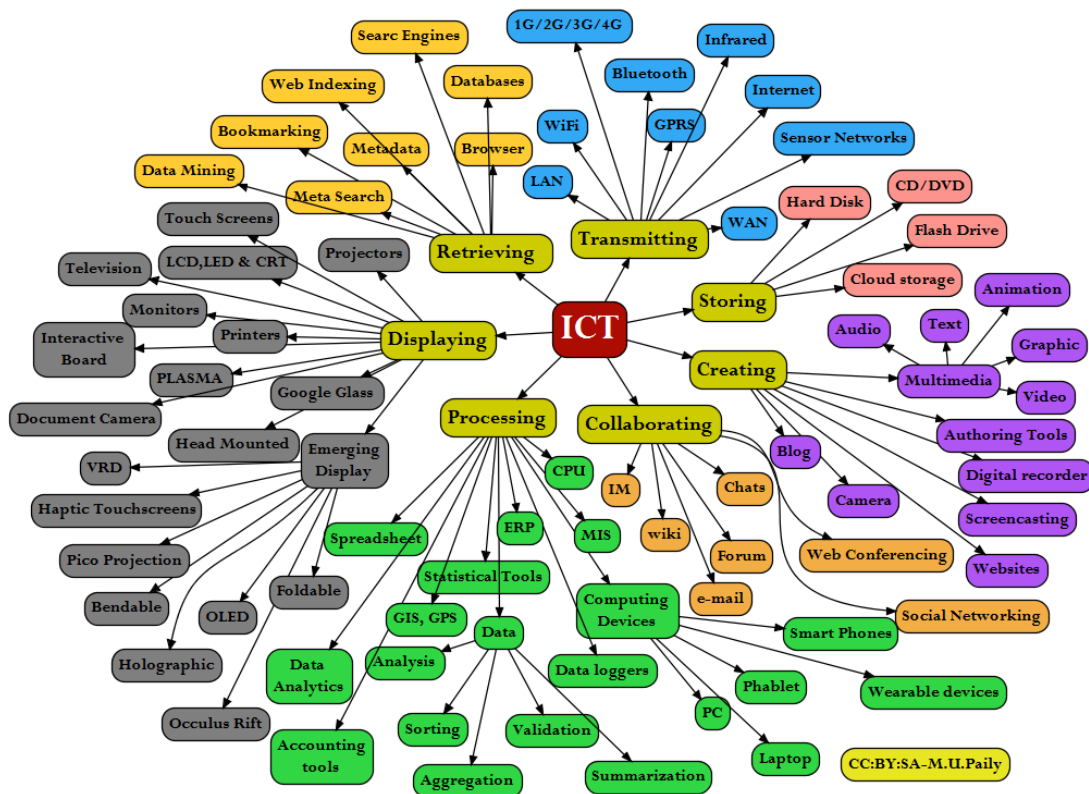
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Here it is pertinent to note that in a diverse country like India, education is the key factor for the development and this can take place only if we maintain the quality at all the levels. Education sets the right direction for development of the country. Information and Communication Technology (ICT) has become, within a very short time, one of the basic building blocks of modern society.

Coming to the knowledge revolution and role of teacher, the pace of technological revolution and emergence of a knowledge society can change the traditional role of the teacher and the students. Traditionally, the teacher used to be the source of knowledge for the students. There is some cooperation among students to explore new knowledge. In many cases, the teachers do not possess adequate knowledge to supplement the view of the student. In other words, we can say that there is a decentralization of the knowledge source. This has an overall impact on the development of children's learning abilities

A graphical representation of what is ICT is represented in more details in the figure below (*Graphic courtesy: Dr.M.U.Paily, RIE, Mysore*)



EDUCATIONAL IMPLICATIONS OF ICT

1. *Open New Horizon:* Modern ICT opens new opportunities for the students as it makes information more easily accessible to all.
2. *Helpful for Data Collection:* Data required for different types of work can be collected with the help of ICT. Students can collect pictures as well as content to make their learning more permanent.
3. *Research Purpose:* It helps the students to collect and analyse data for their research projects.
4. *Self-pacing:* It is based on the principle of self pacing as students can learn according to their requirement and mental level as it is suitable for all types of learners.
5. *Source of Earning:* It is easiest way to earn money sitting as their home with the help of different ICT tools.



6. *Sharing of Ideas*: Students can share their views and content matter by email and through other newsgroups and discussion groups.
7. *Individual Learning*: It helps in Individualized learning with the help of different types of applications.
8. *Makes learning Interesting*: Learning the same exact way from the same person every day can really get boring. This boredom turns into a lack of motivation in the students but use of ICT into normal classroom makes learning more simple and interesting for students.
9. *Encourages Collaboration*: Students can practice collaboration skills by getting involved in different online activities. By use of ICT students can share documents and other informations as per need arises. Technology can encourage collaboration with students in the same classroom, same school and even with other classrooms around the world.
10. *Reduces stigma of Failure*: Failure is a natural part of learning, but it is harder to deal with it in actual classroom settings because of societal pressures. An online environment provides enough privacy and space for learners to not feel miserable about minor failures that come along the way and thus helps keep up the motivation.

Focus on ICT in Teacher Education

Generally it is seen that teacher education institutions are faced with the challenge of preparing budding of teachers to use the modern teaching learning technologies effectively their teaching practices. Indian education system facing a lot of problems and these problems include the shortage of qualified teachers, very large number of pupils, high dropout rates, limited resources, and inadequate curricula. These negative aspects result in poor delivery of education. The most important technique for professional development for teacher is to provide knowledge of ICT and its uses in imparting education. It is essential for teachers to become trained in handling and operating the new technologies effectively as educational tools. In planning for infusion of ICTs into teacher preparation programs, the factors important for a program's success must be considered. A holistic framework proposed by the UNESCO (2002) takes into account the factors, cultural, educational, technology, resources that are important in planning the integration of technology into pre-service curriculum.

It is apt to mention here that the vision is not simply of ICT but of better education facilitated through the adoption and promotion of ICT. The Society for Information Technology and Teacher Education has identified basic principles for development of effective ICT teacher education (SITE 2002). These are: technology should be infused into the entire teacher education program. Throughout their teacher education experience, students should learn about technology and how to incorporate it into their teaching.

Restricting technology experience to a single course or to a single area of teacher education, such as methods course, will not prepare students to technology-using teachers. Pre-service teacher education students learn about a wide range of educational technologies across their professional preparation from introduction and foundation courses to student teaching and professional development experience.

Primarily, ICT is the technology used to handle information and aid communication. It is a term that is used for desirable, exciting and innovative way to provide lifelong learners with global access to information learning and support. Information systems in ICT include the fusion of computers and telecommunications. The use of ICT can change teacher education mainly in two ways: The rich representation of information changes learner's perception and understanding of the content; Vast distribution and easy access to information because of social, cultural, economical constraints.



As already stated the phrase information and communication technologies (ICT) refers to forms of technology that are used to transmit, process, store, create, display, share or exchange information by electronic means. It includes such technologies and radio, television, video, DVD, telephone, satellite systems, computer network, hardware, software and services associated with these technologies such as videoconferencing, interactive whiteboard, e-mail and virtual classroom. Primary uses of ICT are of development of teaching skills and providing tools for teachers and students. Successful education applications of ICT are involving a complex, interplay of contexts, people activities, machines and available software within specific setting.

The use of ICT in the educative process has been divided into two broad categories: ICT for Education and ICT in Education. ICT for education refer to the development of ICT specifically for teaching learning purposes, while the ICT in Education involves the adoption of general components of ICT in the teaching learning process.

Summing Up

To sum up, ICTs are a major factor in shaping the new global economy and producing rapid changes in society within the past decades. The new ICT tools have fundamentally changed the way people communicate and do business. Teacher education institutions and programs must provide leadership for pre-service and in-service teachers and model the new pedagogies and tools for learning. ICT in education will not function on its own. It is the teachers who are required to use the technology to enhance student learning. Competencies of integration are selection, use, mix and fusion under pedagogy and technology.

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