THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN IMPROVING TEACHING AND LEARNING PROCESS

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Abstract: *ICTs are rolling out powerful improvements in the society. They are impacting each part of human life. Use of ICT instruments in Teaching-Learning Process has changed the aggregate scenario of Teaching-learning process. Teaching- Learning Process isn't currently restricted inside the limits of classrooms. ICTs are making significant distinctions in the encouraging methodologies and ways students are learning. This article examines the significance and meaning of ICT, different segments of ICT, ICT in education, advantages of ICT in Education, advantages of ICT in teaching- learning process. The primary purpose of this article is how ICT devices are useful in classroom transaction.*

Keywords: ICT, Education, Knowledge, Environment, System, Technology, Computer, Students, India, Opportunity, Classroom.

Introduction: The present period is the era of Information Communication Technology (ICT). Due to the appearance of ICT and IT, life has turned out to be easier. Amid the most recent couple of decades, there has been a colossal development in the utilization of ICT in all fields, such as, industries, businesses, societies, lives of people and education. Presently the educational institutions everywhere throughout the world are incorporating ICT with the teaching– learning process so as to give knowledge and skills to the students to address the difficulties of educational environment. It is only through education and the integration of ICT in education that one can teach students to be participants in the growth process in this era of rapid change.

Since ICTs give more prominent opportunity to the both teachers and students to alter learning and teaching to individual needs, so it is important to incorporate ICT application in Teaching-Learning Process. Yet, introduction and assimilation of ICTs at various dimensions and different kinds of education in a developing nation like India is the most difficult endeavour. Failure to address the difficulties would mean a further extending of the knowledge gap and developing of existing financial and social disparities among the developed and developing nations.

Meaning and Definition of ICT: ICT means Information Communication Technology. It has three parts Information, Communication and Technology. Information is the summarization of data. Technically data are raw facts and figures that are processed in to information. Communication is a process which disseminates information and Knowledge. And Technology is a mode or media through which information can be disseminated. So ICT is the technology required for information processing and spreading. ICTs are technologies such as radio and the newer digital technologies like computers, satellites, mobile phones and the internet. ICTs are electronic collection, editing, storage, distribution and presentation of information. ICT is the means in which individuals connect with their associates the world over, exchange their thoughts, information, messages and co-ordinate each other through assortment of technical means.

Role of ICT in Education:

ICT make education framework increasingly gainful, fascinating, give more powerful instruction and furthermore ready to extent the educational opportunities to masses and making information – rich learning environment.

ICT has made the classroom exchange all the more engaging. It has broadened the teaching-learning process beyond the limits of classroom. Students are presently ready to use laptop, computers and wireless networks anywhere in campus. A computer permits high speed information exchanges to happen with people inside the institution and also around the globe. ICT gets the outside world to the classroom teaching-learning process, makes the things increasingly realistic and thus helps the students to comprehend the abstract idea distinctly.

ICT can enhance the nature of advanced education by encouraging experimentations, researches and innovations, receiving the new strategies in the teaching – learning process and assimilating the new information with the best practices. In 1998 UNESCO world Education Report focused on the significance of ICT in higher education to craft quality education. Recently, ICT has turned out to be fruitful tool in the field of education. ICT invigorates the students to procure quality research through team work, time management, analytical reasoning, worldwide awareness, fundamental communication, problem solving and guided instruction.

ICT has also played a pivotal role in providing distance education very effectively. IT provides online provision of courses, online evaluation and online design courses to large number of students at a time. The IT –based framework like digital libraries; online courses,

audio and video conferencing, contribute meaningfully to the domain of E- Learning and have opened new vistas in the zone of E-Learning.

Benefits of ICT application in Education:

The benefits of ICT application in education can be summarized as below:

> ICT increases the access to education.

> It improves the quality of education by evolving new means of interaction and also makes teaching –learning process more stimulating.

> It provides equal opportunities to the large number of learners to gain education and information.

> It provides specialized tools for learners with visual, hearing or mental deficiency, so that they learn and acquire knowledge as per their convenience.

> It provides support to each and every school in sharing educational / learning experiences with the different schools throughout the country.

> It facilitates the distance education system to be more fruitful.

> It helps in promoting technology literacy to every citizen and especially to youngsters.

> It provides prospects for lifelong education.

> It enhances the teacher's quality both in terms of teaching and research.

ICT in Classroom Instruction: The precise utilization of ICT devices in classroom instruction makes the teaching-learning process increasingly fruitful and profoundly interactive. It has switched the teaching-learning process from teacher-centred learning to student-centred learning. Research has shown that high level of student and instructor satisfaction can be produced in ICT empowered learning process. But, the viable and proficient utilization of ICT relies upon on technically competent educators /teachers. They ought to have the capacity to welcome the potentiality of ICT and have positive demeanour towards ICT.

The effective and efficient use of ICT in classroom instruction depends on:

a) ICT literacy of Teachers

b) Effective use of ICT hardware and software for teaching –learning activities

c) ICT – based pedagogy, online support, networking and management.

d) Embracing best path-breaking practices in the use of ICT.

Various ICT tools used in Classroom Instruction: The following are some of thetechnological tools used in teaching –learning process. These are, Computer-Aided

Instruction (CAI), Computer –Assisted Learning (CAL), LCD projector, PowerPoint Presentation, Smart board, E-mail, YouTube, CCTV, Video conferencing, Teleconferencing, Google earth, Google Maps, etc.

Problem faced in grafting of ICT in Teaching –Learning process in Indian Milieu:

- Inadequate infrastructural development in rural areas.
- Inadequacy of Skilled and trained teacher in primary and secondary schools in remote areas where most of the primary schools are run by single teacher.
- Lack of proper funding is another problem, mostly found in developing country. ICT implementation in teaching learning process needs widespread investment which is not possible for developing country, though India is trying their level best to reach the advancement but still it is on the process.
- Frequent power cut problem. Most of the village schools are still short of proper electrification.
- Lower bandwidth capacity than developed country.
- Language barriers: An estimated 80% online is in English Language. A large fraction of educational software designed in world market is in English. Where as in developing country like India where English expertise is not high especially outside the cities.
- Lack of ICT awareness among the mass. Now it is high time for the people to change the mind-set and embrace the new technology for their future academic growth.

Conclusion: Application of ICT in education and teaching learning process has changed the traditional system of learning to modern ICT based learning. Teaching- learning process is not now limited within the boundaries of classroom. The modern technologies including new web 2.0 has changed the total scenario of teaching learning process.

Utilization of ICT in education and teaching-learning process has changed the conventional arrangement of learning to the modern ICT based learning. Teaching-learning process isn't currently constrained inside the limits of classroom. The advanced innovations including new web 2.0 has changed the overall set-up of teaching-learning process. ICTs are making key alteration in the teaching approaches and the ways students are learning. ICT welcoming innovative pedagogies in to the classroom, creating network

among educational institution, improving overall standard of education by reducing the gap between the quality of education in urban area and rural area, commencement of smart school with objectives to nurture self-paced, self-assessed and self-directed through the application of ICTs, and developing ICT policy for education and training.

There is an accord that the improvement of any nation relies on the nature of education program offered to natives. ICTs, in spite of their known limitations, are accepted to be helpful in such manner. The computer and the internet are particularly helpful to upgrade students' commitment in learning and emphatically affect students' performance and achievement.

Role of teacher is very much vital in teaching learning process. Teacher is the primary mainstay of teaching-learning process. Teacher is the facilitator of learning. ICT can't supplant the teacher; it can help the teacher in the process of teaching and make the teaching– learning process more interactive. The viable utilization of ICTs in teaching-learning process likewise relies upon teacher's ICT competency and expertise. So the teacher needs to understand that if the students are to accomplish high level of competency and competitiveness, they have no other options but to embrace technology as an integrated tool in the field of education.

Works Cited:

1. Arulsamy. S & Sivakumar. P. *Application of ICT in Education*. Hyderabad: Neelkamal Publication.2009. Print.

2. Borghans, L., &Weel, Baster. "Are computer skills the new basic skills? The returns to computer, writing and math skills in Britain," *Labour Economics*, Elsevier, vol. 11(1), pages 85-98, 2004.

3. Bauer, J., & Kenton, J. "Toward technology integration in the schools: Why it isn't happening". *Journal of Technology and Teacher Education*,vol. 13, no. 4, pp. 519–546, 2005.

4. Das, B.C. *Educational Technology*. New Delhi. Kalyani Publishers. 2002. Print.

5. Dutta, Indrajeet & Dutta, Neeti. Blended Learning; A pedagogical Approach to teach in Smart Classrooms. *Edutracks; A monthly Scanner of Trends in Education*, 11(10), 6-10.2012.

6. Franklin, C. "Factors that influence elementary teachers' use of computers". *Journal of Technology and Teacher Education*,vol. 15, no. 2, pp.267–293, 2007.