

ROLE OF INFORMATION COMMUNICATION TECHNOLOGIES IN EDUCATION

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Received: May 23, 2018

Accepted: July 05, 2018

ABSTRACT

Information Communication Technologies are the influence that has transformed many aspects of the lives. The impact of the ICT on each area of the life crosswise the past two-three decades has been massive. The way these fields act today is different as contrast to their pasts. Across the past twenty years the use of ICT has mostly changed all forms of endeavor within business, governance and off-course education! ICT has begun to have a presence but unluckily we are lacking to attain desired impact. The education is a publicly oriented activity. It plays vital role in structure the society. The quality education by tradition is associated with strong teachers having high degree. Using ICTs in education it enthused to more student – centered learning. As world is moving quickly towards digital information, the role of ICTs in education appropriate more and more important and this importance will continue to raise and develop in 21st century. This paper things to see various impacts of ICT on contemporary higher education and also discusses prospective future developments. The paper argues the role of ICT in transforming teacher-centered learning to proficiency based learning. It also explores some challenges in higher education like cognitive tutors, need for developing a model, mutual authoring etc.

Keywords: Implementation of ICT, online learning

INTRODUCTION

The education has vital position in building the culture. Education determine standard of culture. The quality education helps to empower the nation in all aspects by given that new opinion, the way of execution of various technology and so many things. The quality education is essential require of the culture. There are number of useful teaching & learning methodologies in practice.

Technology is the most useful way to increase the student's knowledge. Here come the position of ICT in the education part! Being an academicians I cannot imagine education without ICT. at the moment ICT (specially an internet) plays forthcoming role in the process of integrating technology into the educational actions.

➤ Requirements that were not met as desired:

In the 21st century also there are million people still out of school and many of them nearly are uneducated. What were the necessities that were not met to the probable extent? This paper points out some area regarding this.

1- The helpful policy context:

The socio-economic context had changed radically soon afterwards require an completely different supportive context. The following six changes have been mention as the most remarkable changes.

- i. The political, social and financial shifts.
- ii. The fast development of the Internet as a persistent lever of change for the organization of life, commerce, activity and education.
- iii. The up-and-coming new economy based on intangible capital and calling for much increased adaptableness to rapid change and a new repertoire of entrepreneurial capabilities and attitudes.
- iv. affected developments in the life sciences with far-reaching implications.
- v. The voluntary and compulsory movements and mixing of people and cultures.
- vi. The growth of poverty and increasing debt around citadel of increasing prosperity, and the speedy advance of economic and cultural globalization.

In addition, civil conflict, natural disaster, the destruction brought about by Swine Flue and the continued rapid population growth – factors outside of the educational area and often of the state control – affected the helpful strategy context.

2- Building national technical capacity:

The Director General of UNESCO said:

- i. Formal schooling has been the main concern in the field of education, entailing neglect of non-formal avenues of knowledge.
- ii. Many countries have been slow to redefine their educational needs, in exacting concerning educational content sparkly cultural variety and corresponding to the exact needs of each society.
- iii. The inequality within education systems have been growing, with the result that the poorest of the poor, minority groups and people with special learning needs have simply just been taken into account or may even have been barred from the mainstream of education.
- iv. Early childhood education has shown little growth and still favors the better-off urban populations, rather than those for whom an educational head start in life would be most useful.
- v. The “digital divide” has marginalized the poorest social sectors even more, jeopardizing their chances of having the new information and communication technologies serve their definite wants.

3- Strengthening international solidarity:

There has been sharing of experiences and precious insights about strategy to achieve EFA in national, regional and international summit. Whatever new knowledge had been gain, most of it has remained unutilized because of lack of capital as harmony has been lacking in sharing of resources as talk about above. Lack of sharing technology and the fact of globalization have both, at least in the short term, expand the gap between the wealthy and the poor countries.

What is ICT?

ICT is an acronym that stands for “Information Communication Technologies”. Information and communication technologies are an umbrella term that include all technologies for the manipulation and communication of information. ICT consider all the uses of digital technology that already exists to help individuals, business and organization. It is difficult to define ICT because it is difficult to keep up the changes they come about so fast. ICT is concern with the storage, recovery, manipulation, communication or receiving of digital data. The definition taken from the direction in the QCA schemes of work for ICT is *“ICTs are the computing and communication services and features that variously support teaching, learning and a range of behavior in education.”*

➤ Objectives of ICT Implementation in Education:

- i. Improvement in learning achievement.
- ii. Decrease of adult illiteracy rate, with adequate importance on female literacy.
- iii. Expansion of provisions of basic education and training in other important skills required by youth and adults.
- iv. Increased attainment by individuals and families of the knowledge, skills and morals essential for better living and sound and sustainable expansion.

➤ Role of ICT in Higher Education:

- i. To raise diversity of educational services & medium.
- ii. To promote equal opportunities to obtain education & information.
- iii. To develop a system of collect & disseminate educational information.
- iv. To promote technology literacy.
 - a. To support “Distance Learning”.
 - b. To support sharing experience & information with others.

➤ ICT as a Change Agent In Learning Process:*** Conventional Learning Process:**

In the process of conventional learning emphasis was given on contents. It follows the particular course structure / syllabus for many years. Accordingly the subject wise textbooks & reference books have been written. By using appropriate material to the subject teachers supposed to teach through lectures and presentation Teachers used their lesson plans, tutorials, different way of assessment to calculate student performance etc.

*** Competent Course Structure / Syllabus:**

It is the need of the day to get better quality & structure of the syllabi by enforcing proficiency & performance based approach towards it To include advance technology and practical approach is also on of the imp. One such curricula requires,

- i. Access to information types & different forms.
- ii. Student-centered learning though information access.
- iii. Learning surroundings concentrated on information access & inquiry.
- iv. Real life examples.
- v. Teachers as mentor rather than content expert.

The role of ICT in the education at higher level recurring and unavoidable.

It is challenge to put together ICTs with universities, into their strategy and educational process. It should be implemented at national & international level. It will be helpful to get better qualify and flexibility, the widen access to the field of tuition. Many universities are providing distance education by creating N/w throughout general partnership.

➤ **Change In The Way of Learning:**

We discussed ICTs are cause to make a move from a teacher centered learning to ability based learning. Universities are also accountable to make supporting changes in the way students are learning. Traditional way of learning is based on Tran missive modes. Use of ICT in education also affects the way students learning. The following points are particular forms of learning.

a- Students Centered Learning:

With the help of technologies it is possible to help transformation of education from teacher centered inst. To students centered inst. e.g.

- ✓ Increased use of web as a source.
- ✓ Internet user can select the experts from whom they will learn.
- ✓ Process will become problem – based learning.
- ✓ The creation of capability, competency and outcomes oriented curricula.

ICTs in education acts as a change agent .It supports independent learning. Students become immersed in the learning process by using ICT.

b- Supporting Knowledge Construction:

The emergence of ICTs as a learning technology unknowingly insists to think on alternative theories for learning.

The conventional teaching process has focused on teachers planning and leading students through a series of in structural sequence to achieve desired outcome. This way of teaching follows the planned transmission of knowledge though some interaction with the content as a means to consolidate the knowledge acquisition .It depends on the process of personal understanding. In this domain learning is viewed as the construction of meaning rather than memorization of facts. Use of ICTs provide many opportunities through their condition and support for resource based, student centered learning. It acts to support a variety of aspects of information construction and as more and more stud. Employ ICTs in their learning process, the extra pronounced impact of this will become.

*** The Impact of ICT on place 'When' & 'Where' to learn:**

In the past, there was no or little choice for students in terms of method & manner in which programs have been deliver .Students typically being forced to accept what has been delivered. ICT applications give many options & choices in the same case.

a- Any place learning:

The use of ICT has extended the scope of offering programs at a distance. The off-campus delivery was an option for students who were unable to attend the campuses. Today, many students are able to make this choice through technology – facilitated learning settings. e.g.

1. In many instance conventional classroom learning has given way to learning in work-based setting with students able to access courses and program from their place of work. The advantages of education and training at the point of need relate not only to convenience but include cost savings related with travel and time away from work, and also situation and application of the learning activities within relevant and significant contexts
2. The interactions capability of modern technologies provides opportunity for many learners to enroll in courses offered by external institution rather than those situated locally. These opportunities provide such advantages as extended course offerings and eclectic class cohorts comprise of students of differing backgrounds, culture and perspective.

3. The freedoms of choice provided by programs that can be accessed at any place are also behind the delivery of programs with units and course from a variety of institution, There are now countless ways for students completing undergraduate degrees for example, to study units for a single degree, through a number of different institution, an activity that provides considerable variety and choice for students in the programs they complete.

b- Any time learning:

In case of environmental flexibility, technology, facilitate educational program also eliminate the temporal constraint. It is the good opportunity for stud. To take on education anywhere, anytime & any place.

1. Through online technologies learning has become an activity that is no longer set within program schedule and slot. learner are free to participate in learning actions when time permits and these freedoms have very much better the opportunities for many students to contribute in official program.
2. The wide variety of technologies that support learning are able to give asynchronous supports for learning so that the need for real-time participation can be avoided while the advantages of message and collaboration with other learners is retain.
3. As well as learning at anytime, teachers are also finding the capability of teaching at any time to be opportunistic and able to be used to benefit. Mobile technologies and seamless connections technologies support 24x7 teaching and learning. choose how much time will be used within the 24x7 envelope and what period of time are challenge that will face the educator of the prospect

The role of ICT in enhancing the growth of basic education and Literacy:

We take the same broad definition of ICT to include radio, television, satellite, fixed and mobile telephone, fax, computers and CD-ROMs and the internet. The ICTs can be divided into two groups: traditional or old ICTs (namely, radio and TV) and the new ICTs (namely, the Internet and telecommunications). Learning through new ICTs is also called e-learning. Recent studies show the enormous possible of e-learning, particularly in industrialized countries. In April 2001, MIT announce that learning resources and syllabi for all course were being put on the Internet for anyone to use recognize the power of the Internet and that awareness is for sharing. E-learning has the following **advantages:**

1. Access to the learning programmed any time appropriate to the learner.
2. Learners can be at any place to log on.
3. Asynchronous communication provided that member and tutors with time to prepare their response leading to concise and to-the-point interaction and on-track, considerate and creative talk.
4. Enhanced group collaboration creates shared electronic conversation which can be more considerate and stable than voice conversation. Aided by group coordinators, these sessions can be influential for learning and problem solving.
5. New educational approach can be used. For example, faculty from anywhere in the world, faculty teams with different area of expertise can be put jointly and modernization of teachers can be shared among themselves for advance and adaptation.

➤ **The utilize of ICTs to support basic education:**

We shall inspect below how and where ICTs, both new and old, can enhance education for all in rising countries. As in the case of higher education mention in the earlier section, there are four ways ICTs can support essential education.

- a- Supporting education in schools,
- b- Providing non formal education for out-of-school children and adults,
- c- Supporting pre-service distance education of teachers and their in-service expert development, and
- d- Enhancing the management of schools. These are full below.

➤ **Supporting education in schools:**

ICT can provide access to information sources, enable interactions, create interacting learning surroundings and promote change in method of teaching. class and access to up-to- date and applicable resources can be better while offsetting some costs of textbooks. However, the improvement in excellence resulting from the new ICTs is yet to be justified with the cost in developing countries. Radio is still the most cost- effective ICT for enhancing quality in school education. However, with the falling cost of hardware ,maintenance and Internet access and increasing e extension of telecommunications and power infrastructure, it is expected that the benefits of using new technology in the schools of developing countries will exceed the costs.

➤ **Supporting non-formal education for out of school children and adults:**

Experiential proof demonstrates that radio and television, the traditional ICTs are cost helpful means to reach out-of-school children and adults where the costs are spread over a large number of learners, in the regions of conflict and for refugees. If the reason of ICT is to reach children and adults who cannot go to school for remoteness and/or for chance costs, radio and television are more likely to broaden access than the new ICTs which may not be obtainable to them. However, basic education is more successful when deliver in the mother tongue and traditional ICTs may be less economic because of the small number of learners. The option of two-way communications with new ICTs makes them more attractive where the target group has easy access to them, for example in peri urban areas Supporting pre and in - service teacher education. The high demand for teachers calls for the rapid supply of trained teachers. Distance education of teachers is an essential medium to achieve education for all. Radio and television (radio more than television) still remain popular means because of low costs. However, teacher education using new ICTs are increasingly becoming popular because of the possibilities of the 'multiplier effect', greater interactivity between students and tutor, opportunities for learners to proceed at their own pace , at any place and at any time, the possibilities of combining video, audio and texts to improve delivery and quality of teaching and finally the possibilities of establishing teacher resource centers with access to power and telecommunications equipped with computers and Internet facilities. Regional initiatives.

➤ **Enhancing educational Management**

In this area new ICTs are more relevant. Computer software program are being used in time tabling and school organization to get better the use of staff time, student time and space, thus reducing costs significantly. Only a few computers are essential for this type of application. It is noted that ICTs in schools can get better quality with less cost. Old ICTs are still cost-effective for stipulation of education to out-of-school children and youth in developing countries. New ICTs have a very large potential for teacher education in larger amount and better quality. A combination of old ICTs to widen coverage and access and new ICTs to provide interactivity are hypothetical to be cost useful for teacher education. If a nationwide network of society learning centers ready with computer laboratories with broadband right of entry and skilled staff to access online distance learning and to give tutoring support could be set up in increasing countries until a computer is available at home, there are potential for these countries to take ben efit of the benefits of e-learning mentioned above. Some of the E-9 developing countries are already taking a step in this direction as will be noted in the following Section.

CONCLUSION:

The role of ICTs in the education is recurring and unavoidable. Rapid changes in the technologies are indicating that the role of ICT in future will grow tremendously in the education.

- 1- By observing current activities and practices in the education, we can say the development of ICTs within education has strongly affected on
 - What is learned?
 - How it is learned?
 - When & where learning takes place
 - Who is learning and who is teaching.
- 2- ICT also focus change of the role of teachers. In adding to classroom teaching, they will have other skills and responsibilities. Teachers will act as near guide for students who use electronic media.
- 3- eventually, the use of ICT will enhance the learning experiences of students. Also it helps them to think separately and communicate imaginatively. It also helps students for structure successful careers and lives, in an increasingly technological world.

FUTURE SCOPE:

1. To harness the modern information and message technologies for all. The potential of these technologies must be exploited in order to broaden the reach of basic education, particularly in the direction of the excluded and underprivileged groups; and to enhance and improve classroom teaching.
2. To replace costly, rigid and culturally alienating educational structures with less expensive delivery systems that are more flexible, more diversified and universally affordable, without ever sacrifice quality.

3. To develop basic education services easy to get to all, including the poorest, illiterate adults, children outside the school system – whether at work, in the street or refugee – through a strategy relating both the formal education system and all the alternative offered by the non-formal sector. Basic education must become a field which is free of all forms of exclusion and discrimination.

These are the ways of achieving an education that is authentic, accessible to all without exclusion or bias, modern and universally reasonable, will provide each individual with the keys to diversify and virtually limitless knowledge.

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