International Journal of Innovative Studies in Sociology and Humanities (IJISSH)

ISSN 2456-4931 (Online) **www.ijissh.org** *Volume: 3 Issue: 6 | June 2018*

Learning with ICT : A Quality Teaching

Sabyasachi Mukherjee

Research Scholar, Tilka Manjhi Bhagalpur University, Bhagalpur Bihar, Rabindrapally Bypass, Bolpur, Birbhum, West Bengal

Diya Ghosh

Assistant Teacher of Ramkrishna Mission Vidyapith, Bolpur, Birbhum, West Bengal

Abstract: *In the arena of education, the term 'ICT' is very common and famous one. It simply abbreviates 'Information and Communication Technology. Today's world is a cyber-world. We are living in an era of technology. Keeping in touch with this scientific development, education too steps farther. It has shuned its old methods and tools and welcomes scientific tools and technologies in its own world for the sake of learners. This use of tools and techniques of science brings a sea-change in nearby all sectors and segments especially linked to the education landscape. It has become an integral part in the vast structure of education so much so that it is crafting the role of future education in India. The use of it in education adds value to teaching and learning by enhancing the effectiveness of learning. To be very honest, it has become able to add a new dimension to learning which was totally missing earlier. The main focus of this present article is the meaning and scope of I.C.T, its uses in teaching-learning process and the various obstacles to face in respect of its implementation in the context of India.*

Keywords: *Education, Information, Technology, tool, science.*

1. INTRODUCTION

In recent years, technological sophistication affected not only our lives but also increased our efficiency in education. In the past, teaching depended almost entirely on verbal communications to the students with the support of printed-reading materials. Along with this communication challenges, today's students are learning facts, skills and attitudes through films, tape sounds, copy machines, radio, television, computer and other media. Most of the educators are trying to use technology which is now-a-days a catalyst for educational change and an integral part of a well-thought out educational system, to help both teachers and learners.

With the advancement of communication as well as technology, educators are now using various terms like 'educational communications technology', 'instructional media' instead of audio-visual aids because it is seen from the view points of learners. So now, it is not merely teaching aids in the hands of teachers. Such terminology of instructional media, communications technology in education is used due to tremendous expansion of educational television, computer programmed instruction and electronics. Earlier such teaching aids as classified as 'projected', 'non-projected', software, hardware, audio, visual audio-visual etc. but Wilber (1973) categorizes computer video cassette and various visual as little media.

The Information and communication Technology has been around for a long time. Basically as long as people have been around I.C.T. It has been around because there were always ways of communicating through technology available at that point of time. There are mainly four ages that divide up the history of Information and Communication Technology. Only the latest age (Electronic) and some of the electro-mechanical age really affects us today but it is important to learn about how we got to the point we are at with technology today. The Pre-mechanical age is the earliest age of Information Technology. It can be defined as time between 3000 B.C and 1450 AD. We are talking about a long time ago when humans first started communicating. They would try to use language or simple picture drawing known as Petroglythis which were usually carved in rocks. Early alphabets were developed such as 'Phoenician Alphabet'. The Mechanical age is when we first start to see connection between our current technology and its ancestors. It can be defined as the time between 1450 and 1840. A lot of new technologies were developed in this era, as there is a large explosion in interest with this era. Charles Babbage developed the engine which tabulated Polynomial equation using the method of finite difference. Now we are finally

close to some technologies that resemble our modern technology. The Electro-mechanical age can be defined as the time between 1840 and 1940. They are the beginnings of tele-communication. The telegraph was created in the early 1800s. Morse code was created by Morse in 1835. The telephone was invented by Bell in 1876. The first radio was developed by Marconi in 1894. All these were extremely crucial technologies slowly and gradually emerging in the world of education.

Now I.C.T that stands for 'Information and communication Technology' has been defined as a 'diverse set of technological tools and resources used to communicate and to create, disseminate and manage information. These technologies include Computers, the internet broadcasting technologies (radio and television) and telephony. In recent years, there has been a groundswell of interest in how computers and the internet can best be harnessed to improve the efficiency and effectiveness of education at all levels and in with formal and non-formal settings. But ICTs are more than just these technologies. Older technologies such as the telephone, radio and television although now given less attention have a larger and richer history as instructional tools.

Now-a-days the role of information and communication technology in the education sector plays an important role, especially in the process of empowering the technology into the educational activities. Education sector can be the most effective sector to anticipate and eliminate the negative impact of I.C.T. Technology in another side can be most effective way to increase the student knowledge. Talking about the presence of ICT in education Ashok Mehta, the President of ICT and skills of smartless Educational services Pvt. Ltd. Stretched out his views on the industry. I.C.T has Pivotal role to play to address the issue of quality content and quality of teachers. Globally the role of I.C.T has been acknowledged and appreciated. MHRD has already emphasized on the importance of I.C.T in education and there are some schemes already floated by the Government where companies like smartclass have made huge contributions. It plays a catalytic role in enhancing learning in classroom and beyond. One needs to do a due diligence before a content provider is selected, as content is the wholesome, said the president of smartclass Education Pvt. Ltd.

The founder of Kiwami, Ms. Mitsuyo Tamai expressed her concern over the effectiveness of I.C.T on education. She said looking at the present scenario of education, many changes have taken place especially in the teaching learning to assessment and evaluation. Information and communication technologies are extremely influencing every discipline including education. It is affecting every aspect of education from teaching learning to evaluation. It aids literacy movements. It enhances the scope of education by mobile learning and inclusive education. Impact of ICT and its potential for the education field is manifold. A Judicious use of ICT technologies together with few functions can bring about more efficient and effective teaching.

It is noteworthy that Indian education system is evolving in many ways, Owing to the advancement of technology as well as rapid change of mentality of the people of all segments in society. Government intervention in merging technology with pedagogy system of education has taken Indian education to a new avenue, opening new doors of opportunities for both the educator as well as students. There are two segments in every education system – teacher and learner. In a traditional education system, the teacher narrates a topic to student, held demonstration of the topic occasionally and then access the students. However not every student has a same grasping capabilities due to which traditional models of education are gradually paving way for newer innovative methods supported by technology. The Government of India had acknowledged the limitations of existing pedagogy and take initiative of incorporating ICT in the educational system.

When education is infused with ICT, learning is augmented which deeply impacts a student's learning experience. ICT supports learning through Video Chat or online distance learning, meaning a student from any remote area can easily had education from any institution of the world. For a country like ours modern age methodologies can have a transformational impact on our society and the economy as whole. Moreover since the learning of process becomes interactive and comprehensive, it sparks an interest in students leading to grater attention and attendance at schools. This creates as environment, Conducive to learning.

India is emerging as a super power and it cannot function without the support of ICT. The gap between demand and supply of higher education has urged the government and institutions of the country to formulate policies and initiative so that education can easily integrate with ICT. The Central and State Government have taken various

initiatives for integration of ICT with education system. Since the past two or three decades, the Indian education system has been plagued by many challenges, such as lack of students, Poor infrastructure and a standard curriculum to name a few. With the integration of ICT in schools, education in India is poised for a paradigm shift where the education system will be compatible with international education standard.

The Information and communication Technology (ICT) in schools have been subsumed in the Rashtriya Madhyamik Siksha Abhijan (RMSA). Now ICT in schools is a component of the RMSA. The ICT in schools was launched in December, 2004 and revived in 2010 to provide opportunities to secondary stage students to mainly build their capacity on ICT Skills and make them learn through computer aided learning process. The scheme is a major catalyst to bridge the digital divide among the students of various social economic zones and other geographical barriers. The scheme provides support to states to establish computer labs on sustainable basis. The scheme has essentially four components – the first one is the partnership with state Government and union territories Administrators for providing computer Aided education to secondary and higher secondary government and government aided schools. The second is the establishment of smart schools which shall be technology demonstrators. The third component is teacher related interventions such as provision for engagement of an exclusive teacher capacity enhancement of all teachers in ICT and a scheme for national ICT award as a means of motivation. The fourth one relates to the development of a e-content mainly through central Institute of Education Technology (CIET), Six State Institutes of Educational Technology (SIETs) and five Regional Institute of Education (RIEs), as through outsourcing.

Although valuable lessons may be learned from best practices around the world, there is no one formula for determining the optimal level of ICT integration in the educational system. Significant challenges that policy makers and planers, educators, education administrators need to consider include educational policy and planning, infrastructure, language and content, capacity building and financing. Attempts to enhance and reform education through ICTs require clear and specific objectives, guidelines and time bound targets, the mobilization of require sources and the political commitment at all levels to see the initiative thorough. They can be summup –

1. A major obstacle in the use of ICT in education is a lack of knowledge and skills. There is dearth of dynamic teachers formally trained in ICT. Moreover there is hardly any quality training imparted on a regular basis to teachers involved in ICT education. Often in developing nation the educational organization and school management fail to perceive the importance and seriousness of the role of ICT in education enhancement. Also the teacher's attitude and beliefs are outdated and orthodox. They are unaware and rigid and not willing to adapt to the change. They harbor false beliefs that ICT meant primarily for the youngsters and are skeptical about the effectiveness and utility of ICTs in school education.
2. In schools, teachers are usually burdened with multiple tasks other than teaching. Moreover they have to teach along with ICT. They do not have time to design, develop and incorporate technology into teaching and learning. The teachers need time to collaborate with other teacher as well as learn how to use hardware and software and at the same time keep oneself updated with latest technology.
3. Maintenance and upgrading of ICT in schools is subject to their limited financial resources. Largely the Government initiatives are restricted by budgetary constraints. The ICT Projects in Rural school are not self sustainable. With the project launched by Government or Private sectors phases out, the maintenance of equipments need to be borne by the students. The students often with weak economic background are unable to fund maintenance and computing facilities expenses.
4. Appropriate and latest hardware and software facility availability determines the effective and efficient usage of technology. In developing countries technology implementation into education system is a difficult task, as it requires a magnitude of farms, infrastructure and equipment in school learning a huge lacuna in the process of enabling ICT skills and implanting ICT education, thereby rendering entire ICT experience meaningless.
5. A large portion of the educational software produced in the world market is in English. In developing countries English language proficiency is not high, especially outside the urban area which becomes a serious barrier to maximizing the educational benefits of I.C.T.

6. Rural schools face trouble with respect to the availability of ICT related resources such as supporting infrastructure, uninterrupted electricity, supplementary resources like multimedia, projectors, scanners, smart-boards and so on. Despite being an integral component of the ICT, internet is lacking in most rural schools. Most-schools cannot afford the high fees charged by the internet providers and even where there is internet, slow or erratic connectivity destroys the very essence and impact of ICT.
7. Rural schools face issues related to technical know-how, absence of ICT service-centers, shortage of trained technical personnel. Whether provided by in school staff or external service providers or both technical support specialists are essential to the continued viability of ICT use in a given school. Without on-site technical support such time and money may be lost due to technical breakdown. One of major obstacles to optimizing computer use in schools has been the lack of timely technical support.
8. To make ICT's effective and integral tools of education, monitoring and evaluation must be a priority. The urban-rural divide in terms of access, equality the main issues that Indian education will have to address as the needs of the learning community will change. Migration of rural Indians to urban areas is not the solution to the growing gap between the two regions. Rather with health education a lot of infrastructure and livelihood opportunity life in rural India may become better and more welcoming than that in urban areas.
9. The highest barrier to integration of information and communication technologies into the teaching learning process is the change as such. According to educationists there are five stages of integration and overcoming difficulties-

   a) Entry – learners are trained how to use information and communication technologies.

   b) Adoption – teachers use technologies as supplementary aids in the context of traditional teaching learning methods.

   c) Adaptation – technologies are used for expansion, enrichment of the curriculum.

   d) Appropriates – Technologies are integrated and used due to their exceptional and unique qualities.

   e) Invention- New areas are invented where the use of technologies is appropriate.,

   However, solutions to all problems for the proper implementation of ICT lie in our hand. They can be-

   i) Using information and communication technologies in the process of teaching learning, their integration into the present curriculum, aiming at improvements of teaching learning is the most difficult process. This attempt to integrate information and communication technologies can be fruitless and inefficient unless the Ministry of Education and science plans and provides schools with proper resources.

   ii) Schools can play a very important role in integrating ICT into the system of education. It is worth mentioning that not only ministries should tell how the process of integration should be organized but also schools could give feedback on difficulties they are facing integrating ICT into curriculum and suggesting what could be done differently.

   iii) Teachers have to experience learner's position. In the learner's position, teacher models a positive situation for learner's show a different perspective which makes the perception of new subjects easier. Teacher has to feel free aid without any restrictions in the teaching environment. Only these feelings will foster the teacher to learn and develop further

   iv) The emerged difficulties should be viewed as opportunities to develop. It should not decrease motivation but should be transformed into the constructive process of teaching-learning which could support ICT integrations in a more efficient way.

   v) Reliable colleague can become internal 'technology' teachers who could teach in small groups. Teachers can be provided help by sharing best practices of the same school teachers or analyzing the bench marking projects.

vi) If the school intends to achieve good results in the area of ICT integration, then at least one week a year should be devoted to teacher activities outside the class. During these events teachers should be acquainted with innovations in information and communication technology area and should be explained in detail how to use these innovations and integrate them into the process of teaching-learning.

vii) Teachers can learn the working of technological tools along will their students. They can discuss about various ideas that they can implement to create projects and learn. This technique works better than one day workshops and training session. The benefits that integration of technology in education offers are plenty like easy access to any suspect related information, expansion of knowledge at a global level, visual learning through school apps for pre-schoolers. Therefore school must make sure that they integrate technology with learning.

2. CONCLUSION

The fact is that technology is not a total learning solution, as there will never be a substitute for classroom learning for particular parts of the learning process. However, information delivered via everyday devices means that the communication and learning process as a whole becomes more continuous. It has been judged that a lot of barriers actually lie in our approach and attitudes to learning in the corporate world, as here a lot of the technology barriers have been removed. What is important to take away from this awareness, is that attitudes will soon change as the generation currently at school begin to enter the workplace. Technology too will play a part in driving this change as all of our expectations regarding the way we receive knowledge changes, as will our appetite for good quality, and most importantly engaging content.

REFERENCES

[1] Al-Ansari, H. (2006) – Internet use by the Faculty Members of Kuwait University, The Electronic Library vol. 24.

[2] Davis, N.E and Tearle, P.(Eds), 1999- A cross curriculum for Telematics in Teacher Training.

[3] ASER (2014). Annual Status of Education Report (Rural), Facilitated by PRATHAM.

[4] Sarkar, S. (2012). The Role of Information and communication Technology in Higher Education for the 21st century.

[5] Rebecca, W. and Marshell, S. (2012) – A New Face of Education : Bring Technology into the classroom in the developing world, Global Economy and Development, Bookings.

[6] Abbot, Chris. – ICT : Changing Education (2001).

[7] Hatherly, Ann. – ICT and the Greatest Technology : A Teacher's Mind (2009)