

THE IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN HIGHER EDUCATION IN INDIA

***PROF. M. DEVARAJULU**DR. P. MUNIKRISHNAIAHAND ***DR. G. PRATHAP**

**Professor, Dept. of Economics, S. V. University, Tirupati – 517502.*

***Ward Welfare and Development Secretary, Dept. of Economics, S. V. University, Tirupati – 517502.*

****Academic Consultant, Dept. of Economics, S. V. University, Tirupati – 517502.*

ABSTRACT

The Higher Education classification in India had been feel pain a lot due to nonexistence of access to the technology and discrimination. However the application of ICT in Higher Education has not only conveyed about divergence but also stimulated new determination of international kinesis for both home and in a foreign country. The understood circumstance is that ICT can modernize a new view of Higher Education era in the nation. It should discourse and deal with the needs of several roles in Higher Education to gain benefit stack holder. But now the aim is on the end product than on the process overdue the well-functioning model of ICT in Teaching and Learning process. Toward truthfully understand the position of ICT in Education there is needed to essentially understand the meaning of ICT. The concept of moving the out-dated classroom of desks, notebooks, pencils and blackboard to an online opportunity of computers, software, and the Internet frightens many teachers who are adapted to the face-to-face communication of the out-of-date classroom. In the past 10 years, online teaching has become tremendously popular as is obvious in the rise of online universities, Improvements, standards, stipulations and subsequent implementations have led to most important development in the extensibility, interoperability and scalability of E-learning knowledge. E-learning is undependable becoming a most important form of knowledge. Computer multimedia offers ideal occasions for creating and hand out visually augmented learning surroundings. The up-to-date technologies accompanying with virtual authenticity will also play a significant role in not too distance future. The association between ICT and higher education can be well-thought-out from the active viewpoint and from the functional perception. The contributory perspective suggests educational and catalytic rationale employing educational change to advance the educational procedure and the cost-effectiveness foundation and cost saving, while the functional perception implicates the social and occupational foundation, combining ICT effortlessness as a book learning objective in catalogues.

KEY-WORDS: Higher education, Information and communication Technology, Learning, Proportion.

INTRODUCTION

Information and communication technologies (ICT) have become conventional entities in all aspects of life. Across the past twenty years the use of ICT has essentially changed the practices and events of nearly all forms of endeavour within business and governance. Education is a very socially focused on activity and quality education has traditionally been associated with strong educators having high degrees of personal contact with learners. The use of ICT in education lends itself to more student-centred learning settings. But with the world moving rapidly into digital media and information, the role of ICT in education is becoming more and more important and this position will continue to grow and develop in the 21st century. Higher education organizations have grown exponentially in the last five decades to meet the demands of quality education for all. This characteristic has further gained momentum due to swift advancements in Information and Communication Technology (ICT). Demand for skilled and knowledgeable labour is ever increasing in the contemporary globalised society. In this framework, access to quality in higher education for all has emerged as defining factor of economic growth and development. In order to increase the access to higher education and enlightening its reach to the remotest parts of the country contribution of open and distance book learning facilities is on the increase. In accumulation, it is catering to life-long learning aspirations and that too at affordable cost. The last two decades have witnessed the inclusion of progresses in ICTs in higher education systems around the world. Even then the encounter to develop a higher education system that is flexible and dynamic so as to holistically take part the technology in the management and delivery of learning programmes is daunting. The focus of this paper is to examine the role of Information and Communication Technology (ICT) in higher education in India in the 21st century.

ROLE OF ICTS IN FORMAL EDUCATION

India has a billion-plus people and a high extent of the young and hence it has a large formal education system. The petition for education in developing countries like India has skyrocketed as education is still observed as Asignificant Bridge of social, economic and political mobility. There exist associations, socio- economic, verbal and physical barriers in India for people who wish to entrance education. This includes arrangement, teacher and the processes quality. There exist disadvantages in general education in India as well as all over the world like lack of schoolingsupplies, teachers, detachment of education facilities, high dropout rate etc. State-of-the-art use of Information and Communication Technology can hypothetically solve this problem. Internet practice in home and work place has grown exponentially. ICT has the potential to eradicate the barriers that are manufacturing the difficulties of low rate of tutoring in any country. It can be used as a tool to overwhelm the issues of cost, less amount of teachers, and poor eminence of instructing as well as to overcome time and remotenessobstacles.

NEW GLOBAL ECONOMY

People have to access knowledge via ICT to preserve pace with the latest developments. ICT can be used to eliminate communication barricades such as that of space and time. ICTs also consent for the formation of digital resources like digital reference library where the students, instructors and professionals can access research material and course material from any place at any time. Such accommodations allowthe introduce yourself of instructors and researchers and hence sharing of scholarly material. This avoids duplication of work. ICT provides new educational approaches. It can provide speedy dissemination of education to target disadvantaged groups. ICT enhances the international dimension of educational services. It can also be used for non-formal education like health campaigns and literacy movements. Use of ICT in education develops higher order skills such as

collaborating across time and place and solving complex real world problems. It improves the perception and understanding of the world of the student. Thus, ICT can be used to get ready the workforce for the information society and the new global economy. ICT offerings a completely new knowledge environment for students, thus necessitating a dissimilar skill set to be successful. Precarious thinking, research, and assessment skills are developing in prominence as students have cumulative volumes of information from a variety of sources to sort through. Cognitive Development: ICT changes the characteristics of problems and learning tasks, and hence play an important task as mediator of cognitive development, enhancing the acquisition of generic cognitive competencies as essential for life in our knowledge society. Students using ICTs for book learning determinations become absorbed in the development of learning and as more and more students use computers as information sources and cognitive tools, the influence of the technology on supporting how students learn will continue to increase. Learning approaches using contemporary ICTs provide many opportunities for constructivist learning through their provision and support for resource-based, student centered settings and by enabling learning to be related to context and to practice.

The World Wide Web (WWW) also provides a virtual international gallery for students' work. ICT can engage and inspire students, and this has been cited as a factor influencing ready adaptors of ICT. Democratisation of Education. The increasing use of information and communication technologies (ICTs) has brought changes to teaching and learning at all levels of higher education systems (HEs) leading to quality improvements in the 21st century. Traditional forms of teaching and learning are more and more being converted to online and virtual surroundings. There are endless potentials with the integration of ICT in the education system. The use of ICT in education not only improves classroom teaching learning process, but also provides the capability of e-learning. ICT has heightened distance learning in the 21st century. The teaching community is able to reach isolated areas and learners are able to access qualitative book learning environment from anywhere and at any time. It is important that teachers or instructors should be made to adopt technology in their teaching styles to provide pedagogical and enlightening gains to the learners. Successful putting into practice of ICT to lead change is more about manipulating and empowering teachers and supporting them in their engagement with students in wisdom rather than acquiring computer skills and obtaining software and equipment. ICT permitted education will at the end of the day lead to the democratization of education in the 21st century.

What are ICTs? There are abundant definitions of ICT, but the definition by UNESCO is accepted by this author as adequate. Most classifications fail to capture many ICTs. They create the impression that ICTs are only computers and computer systems, but UNESCO (2002, p. 10) defines ICT as "forms of technology that are used to transmit, process, store, create, display, share or conversation material by electronic means." This definition covers such technologies as radio, television, videotape, audiotape, tape recorder, compact disc (CD), digital versatile disc (DVD), flash drive, telephone, satellite systems and computer hardware, software and networks. It covers also services accompanying with these devices, such as video-conferencing, email and blog.

WHAT IS ICT

Information and Communication Technologies (ICTs) are talk about to as the varied collection of technological gear and possessions which are made use of to transfer. They are also made use of to prevent, distribute, collect and administer information. ICT is a force that has rehabilitated many aspects of the way we live. Information and Announcement Technologies be made up of of the hardware, software, networks, and media for collection,

storage, processing, transmission and performance of information, as well as related services. ICTs can be separated into two modules, Information and Communication Infrastructure (ICI) which mentions to physical telecommunications systems and networks (cellular, broadcast, cable, satellite, postal) and the services that utilize those (Internet, voice, mail, radio, and television), and Information Technology (IT) that refers to the hardware and software of information collection, storage, processing, and demonstration. The concept of a “Digital Divide” has been from one place to another almost as long as ICT has been publicly available. While conventionally it has come to mean a division in society, based on socio-economic factors, this does not ‘decorate the entire picture’. Introducing ICT as a tool to support the education sector has initiated considerable considerations since the late 1990s. A decade ago the emphasis was on Technical and Vocational Education and Training and working out teachers. During the last few years, an increasing number of international development agencies have contained the possible of ICT to support the education sector.

UNESCO has played a foremost role in organizing the Education for All creativity to harness the potential of ICT. The widely contributed Dakar Framework for Action recognizes that, ‘these technologies (ICTs) have great potential for knowledge distribution, effective book learning and the development of more efficient education services’. When considering at the incorporation of ICT to support the accomplishment of educational objectives, it can be found that after almost a decade of using ICT to excite development, it is not yet fully integrated in development happenings and responsiveness rising is still compulsory.

ICT AND HIGHER EDUCATION

The major teaching and learning contests in front of higher education revolve around student Diversity, which includes, in the middle of others, diversity in students’ academic preparedness, language and instruction background. Education is possibly the most strategic area of involvement for the empowerment of girls and women in any the social order and the use of information and communication technologies (ICTs) as an educational tool in the promotion of women’s advancement has immense potential. The application of ICTs as a tool for effective augmentation of learning, teaching and education management covers the entire spectrum of education from early juvenile development, primary, secondary, tertiary, basic education and further education and training. Integrating ICT in teaching and learning is high on the educational reform agenda. Over and over again ICT is seen as essential tool to fully contribute in the knowledge society. ICTs need to be seen as “an indispensable aspect of teaching’s cultural toolkit in the twenty-first century, have the funds for new and transformative models of development that extend the nature and reach of teacher learning wherever it takes place”. For developing countries like Vietnam, ICT can additionally be seen as a way to merge into a globalizing world. It is assumed that ICT brings ground-breaking change in teaching methodologies.

INTRODUCTION AND USE OF ICT, BUT IN ITS ROLE AS A CONTRIBUTOR TOWARDS A STUDENT-CANTERED FORM OF TEACHING AND LEARNING

The Information and Communication Technology (ICT) national curriculum make available a broad viewpoint on the nature of technology, how to use and apply a variety of technologies, and the impression of ICT on self and the social order. Technology is about the ways things are done the procedures, tools and performances that alter

human activity. ICT is about the new ways in which People can interconnect, inquire, make decisions and solve problems. It is the progressions, Tools and procedures for

- ❖ gathering and classifying information
- ❖ classifying and consolidating
- ❖ to the point and synthesizing
- ❖ analysing and assessing
- ❖ take a chance and forecasting

Improving and advancement the quality of education and instruction is a vital concern, for the most part at the time of the spreading out and development of education. ICTs can improve the quality of education in a number of ways: By supplementing student enthusiasm and obligation, by making possible the achievement of fundamental skills and by improving teacher training. ICTs are also tools which enable and bring about conversion which, when used properly, can raise your spirits the shift an environment which is learner entered. ICTs which can be in the form of videos, television and also computer interactive program software, that merges sound, transcriptions and multicolour moving imagery, can be made use of so as to make available stimulating, thought aggravating and reliable content that will keep the student interested in the learning process. The radio on the other hand through its interactive programs utilizes songs, sound effects, adaptations, satirical comedies and supplementary collections of presentations so as to induce the students to listen and get drawn in to the training that is being provided.

The use of online pedagogy within universities and management institutes is snowballing. The introduction of the Wi-Fi system too has led to the growth of hi-tech education system, where ease of understanding and accountability of subject matter is made readily available to the students. The students can now study and understand the related information at their own appropriate time.

The main purpose of the Strategy for Information and Communication Technology Implementation in Education is to make available the prospects and trends of integrating information and communication technology (ICT) into the general educational activities. There are some unavoidable facts in the modern education.

First

The ICT has been developing very rapidly nowadays. Therefore, in order to balance it, the whole educational system should be transformed and ICT should be integrated into educational activities.

Second

The influence of ICT, especially internet cannot be overlooked in our student's lives. So, the knowledge activities should be reoriented and reformulated, from the manual source cantered to the open foundation ones. In this case the widely use of internet access has been an unavoidable policy that should be expected by schools authorities.

Third

The attendance of multimedia games and online games by internet has been another serious problem that should be wisely handled by the enlightening institutions. The students cannot be eradicated from this case. They

can devise and do with it everywhere and whenever they want. Schools, as a matter of fact, do not have enough power and time to prevent or stop it after school times. For the time being, most parents do not have enough times to accompany and control their children. So, the students have large prospects to do with multimedia games or online games or browsing *the negative and porn sites*. Having been addicted, the students will have too little time to study, and even do not want to attend classes.

In such situation, education organizations play an important role to eradicate these problems. One of which is by simplifying the students to do edutainment or educational games. Schools can let their students be familiar with educational games in the swing of things by their teachers. Besides, they can also support and facilitate their students to have their own blogs in the internet. A lot of Weblog breadwinners are free to the users, such as *WordPress*. In their blogs, the students can create and write approximately, like an article, poem, news, short stories, features, or they can also express their opinion by an online forum provided in the internet. They are able to share experiences throughout their blogs to others from all over the world. I think it will be an thought-provoking activity for them, and *it will lessen their time to visit the negative or porn sites* existed. By doing so, I think our young age band will get more and more information and knowledge by browsing in the internet. They can also create modernisation in web design that it may be out of the formal national curriculum content, but it will be valuable for their future.

Fourth

The employment of ICT in education has not been a priority trend of educational reform and the state paid little consideration to it. Therefore, there should be an active participation, initiative and good will of the schools and the government institutions to improve ICT operation at school.

Fifth

The teachers should be the foremost promoter and initiator of the ICT implementation at schools. The teachers should be aware of the social change in their teaching activities. They should be the mediator of change from the classical process into the modern one. They must also be the part of the global modification in learning and teaching variation.

The followings are the aim and objectives of ICT implementation in education

- ❖ To implement the attitude of life-long learning / education.
- ❖ To increase a variability of educational services and medium / method.
- ❖ To promote equal openings to obtain education and information.
- ❖ To develop a system of collecting and broadcasting educational information.
- ❖ To encourage technology literacy of all citizens, especially for students.
- ❖ To develop distance education with nation-widestuffing.
- ❖ To promote the culture of book learning at school development of learning skills, expansion of optional education, open source of education.
- ❖ To promote the culture of learning at school progress of learning skills, expansion of non-compulsory education, open source of education.

MOST EFFECTIVE FORM OF ICT IN EDUCATION

The use of videos came across as the most nominal ICT component in our teacher interviews. It was stressed by those using and wanting to use videos in educations that imagination in presentation is just as important as the use of innovative media. Educational videos now encompass audio-visual aid CDs, interactive games, flash and 3-D animation, slide-shows, video books, digital story-telling and many other forms that ingeniously combine visuals with text and audio that can be distributed on a range of platforms. Following current discussion forums on ICT in education, it is seen that videos can be used in a variety of book learning environments, such as to develop learning in classrooms, train illiterate women on basic life skills, teach children from wandering tribal communities, and encourage children to make their own video films on Vikramshila Education Resource Society ShikshakSammelan 2009 local issues of concern. Additionally, videos can also be made accessible to the blind, as some organizations are doing using audio description. ‘Various organizations have produced videos on a range of topics together with disaster management, child rights, forced migration, adolescent and gender issues and HIV and multiplicative and sexual health topics. While noting the positive impact videos can have on education, it was felt that educators often view the use of videos as an alien mouth outside the regular curricular teaching and thus the challenge is to integrate videos into routine teaching. They contended a clear policy emanating from a broad consultation on using ICT in education is compulsory. If ICTs are used, teachers and schools need capacity construction to recognize educational videos as an extension of the experiential aspect of learning and not merely as a visual alternative to textbooks. Teachers also acknowledged complications like

- the non-existence of computers,
- TV sets and
- video playback systems

ICT ADVANTAGE IN HIGHER EDUCATION

After knowing real facts of ICT, complete globe accepted the use and putting into practice of ICT in Higher Education. Subsequently there is raise in volume of majority of people towards ICT apparently there will be many compensations in teaching and learning and keep also in authority for better quality output. ICT is basically the use of technology and provide a basic idea on how to use the technology and gives knowledge where it can be applied also helps to analyses impression of that technology in classroom. This technology is all about how the teacher and student interconnect with each other, inquire about doubts, helps is making decisions and provide proper road map to understand and solve certain problem. This cannot be only applied in seminar room it can also be implied in our daily life.

- ❖ Gathering information.
- ❖ Categorizing and associating.
- ❖ Summarizing and joining.
- ❖ Exploratory and assessing.
- ❖ Take a chance and forecasting.

The main advantages of ICT in Education

- ❖ Enables students to learn round the clock. Affords coaching to the necessities/necessity of the student
- ❖ Provides educational goings-on in geographic areas larger
- ❖ Offers Committed teaching through different announcement.
- ❖ Empowers real education.
- ❖ Deliver instructions conferring to the student necessities.
- ❖ Offers educational activities covering large geographical areas.
- ❖ Boost the distinct learning habit.

From Student Perspective

- ❖ Increased right of entry to tool or site.
- ❖ Content rigidity is eradicated hence in effect delivery is achieved.
- ❖ Amalgamation of work and enlightenment which student can map to real time scenario.
- ❖ Learner-cantered line of attack, allows you to learn effectively and also come up with new things.

From Teacher Perspective

- ❖ Innovating contemporary/modern learning modules.
- ❖ Easier use of interactive program or simulation tools.
- ❖ Helps to focus ICTs on distinction research through utilization of diligent research procedure and inclusive exploration.
- ❖ Improves the quality and helps to attract the students.

CHALLENGES IN IMPLEMENTING ICT

Instant advancement of ICT is taking place all over the world. ICT had become authoritative instrument for movement/transmission of knowledge and facts. Arrival and intense use of ICT in Higher Education has engendered diverse retort. This will lead a potential challenge in using ICT in Education. Use of ICT in Education has understandable benefits and also transport experiments.

- Primary challenge is exclusive cost which will come to know while performing feasibility study which will incur acquiring, mounting, Operating, Maintaining and replacing ICT's in Traditional/Manual development institution.
- Another challenging/hectic process is incorporation of ICT into teaching is still in initial stages/phases.
- Speed up Higher Education competence to innovate and adopt technology rapidly and effectively.
- Helping Higher Education Institutions to find and use technology in reduced cost.
- Imposing technological system without involving faculty and student, Automation of manual process from top to down pecking order of the ladder will create a mesh and progressive expected result will not be achieved.

ICT OPPORTUNITIES

ICT putting into practice in educational institutions has brought the professional practice in teachers which enables and generates occasions to take up more complex real time problematic and make available a solution by

using ICT tools and resources. Need to make faculty/teacher to get involve and funding this new initiative rather than to resist and hamper the present coming changes. Likewise there are so many other challenges in the way of implementing ICT in increasing countries like basic need is electricity/power and telephone network which even check-out today many places which is not accessible. In addition to this many colleges not have enough classroom or organisation like building to incorporate technology in classroom. One more encounter is that teachers should adapt to ICT and develop their own passion for efficient use of the different ICTs in poles apart environments. Using unlicensed/cracked variety of software transferred from internet can cause problems lawfully which will lead and end up in reimbursing huge penalty. Particularly plagiarised software varies in normal format and functionalities.

The university is a machinery whereby education accommodations are provided to all those who are intellectually capable of using those conveniences to be the best advantages but who cannot avail themselves of those amenities for want of funds or for other handicaps in life". The people in university education shape the deeds minds and the social and human values of the student community .Operative use of technology can encourage students, make our classes more dynamic and thought-provoking and renew teacher enthusiasm as they learn new skills and practises. Technology is also helping the students to understand any abstract concepts clearly. CT has become an integral part of today's teaching book learning process. The integration of ICTs in teaching in all-purpose and teacher education in particular is the need of the day. The use of ICTs can make significant changes both for teaching and training mainly in two ways; firstly, the rich depiction of information changes learner's perception and understanding of the context. Secondly; the vast distribution and easy process access to information can change relationships between teachers and taught. CT can also provide powerful support for educational innovation.

CONCLUSION

The most important teaching and knowledge encounters facing higher education turn around student Diversity, which includes, amongst others, diversity in students' academic preparedness, language and schooling background. Education is possibly the most strategic area of involvement for the permission of girls and women in whichever civilization and the use of information and communication technologies (ICTs) as an educational tool in the promotion of women's advancement has immense potential. Higher Education and Technology both are reached the inflection point that will head the potential way which will change in upcoming years and decades. According to educes, Higher Education industry is under massive pressure to reduce the cost and develop the graduates and post graduates who are fully willing and well equipped to enter the corporate work force which is the prime opportunity. It is only through Education and integration of ICT in education that create wide opportunity for teacher and student to participate in advance progressive era of swift change. Since this allows the creation of digital library with the help of digital resources which will help the students, teachers and professionals to access anytime.

REFERENCES

1. Mediha Tezcan., The Role of Education and ICT in Economy Proceedings of the International Conference on Human and Economic Resources, 2006, pp 338-347 from Izmir University of Economics.
2. Sharma Parul., Approach To ICT in Library Training, Education & Technology: Issues & Challenges. ICAL, Poster paper, 2009.
3. Shiksha Sammelan 2009, kolkata. ICT for Quality Education, Vikramshila Education Resource Society.
4. Irvin R. KATZ, USA. ICT Literacy: Integration & Assessment in Higher Education. Systemics, Cybernetics and Informatics Volume 5 - Number 4, P.50-55.
5. AdeyinkaTella and Emmanuel OlusolaAdu, Nigeria. ICT & Curriculum Development: the challenges for education for sustainable development. Indian Journal of Science and Technology. Vol.2 No 3 (Mar. 2009) ISSN: 0974- 6846.
6. John LeBaron., Research Report for GeSCI Meta-Review of ICT in Education Phase One -Partial document-17 April 2009.
7. Ron Oliver, Australia. The role of ICT in higher education for the 21st century: ICT as a change agent for education. Importance Of Ict In Education www.iosrjournals.org
8. Shukla, Bhavna (2016). ICT in Education: Visions and Realities. Agra: Agrawal Publication.
9. Sharma, Pooja and Nigam, Shivani (2016). Information and Communication Technology. Meerut: R.Lall Book.