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Present Status of Higher Education with Reference to Information and Communication Technology

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ABSTRACT

This paper discusses the Information and Communications Technologies (ICT) education is basically our society's efforts to teach its current and emerging citizens valuable knowledge and skills around computing and communications devices, software that operates them, applications that run on them and systems that are built with them. What are these things? How do they work? How do you use them productively? How are they deployed, assembled, managed and maintained to create productive systems? How they are used in specific business and industry settings? What are the underlying science and technologies behind them and how might those be developed to advance ICT fields? ICT is complex and quickly changing, and it is confusing for many people. It is so pervasive in the modern world that everyone has some understanding of it, but those understandings are often wildly divergent. ICT is used strategically in almost all businesses and industries. Many have developed specialized systems and uses of ICT, and many have specialized legal and regulatory requirements; quality control systems; integrations with production and research equipment and systems; security requirements; and software applications. For example: Bioscience industries rely on specialized ICT systems and applications to conduct research, analyze organic materials, produce biotech products and do required reporting; Financial services industries rely on ICT to maintain customer records, do business, conduct trades, do financial reporting, secure proprietary information and comply with regulations; Manufacturing industries use specialized computer controlled systems and robotics to design, produce and test products. Property management operations use ICT to network and control heating and cooling, lighting and building access systems. Electric utilities use ICT to monitor and manage electricity distribution, customer billing and smart metering systems. Telecommunications, cable TV and other entertainment industries use ICT to store content, manage customers and deliver their services. We need to develop a competent workforce that understands not only relevant technologies,

but also specialized business and industry environments and operations, to meet these specialized needs.

Key Words: Information and Communication Technology, Education, Implementation.

INTRODUCTION

A teacher should always a learner. So a teacher should make him as ever learner. According to the change of modern inventions we will have to change our method of teaching method as well his attitude towards the technology. In this segment we are about to discuss the ICT in Higher Education.

Higher institutions has the enormous responsibility of equipping the students for success in life, workplace and in their personal lives. Over the years with the increasing pressure to meet greater expectations, be it student numbers, educational preparation, workforce needs or infrastructural and economic development has risen to such an extent that new strategies need to be devised. To overcome the exiting setbacks a drive for innovation in higher education especially in the Open and distance educational institutions which are the only source to cater the growing needs of the learners plays a pivotal role. With the support of Information and Communication technology (ICT) virtually on every aspect of higher education, including finances, learning, research, security, and sustainability can be achieved at ease.

It has become a buzzword while talking about technology and its applications. IT is used in various business and management functions but not in the improving the quality of education. Quality of education has been issue of concern in the absence of standard parameters of to measure the quality. The hardware, software, the methods and know how required or used in acquiring, storing, processing and displaying data and information is collectively known as Information Technology (IT).

“Education is the manifestation of perfection which is already in man” says Swami Vivekananda. With this quote we start the ICT of education deals with systematic application of the resources of scientific knowledge of the processes of learning that each individual has to pass through in order to acquire and use knowledge. ICT in education refers to the use of technological hardware in education.

When we talk of ICT's we refer not only to the latest computer and internet based technologies, but also to simple audio visual aids such as the transparency and slides, tape and cassette recorders and radio; video cassettes and television and fill. These older and more familiar technologies are referred to under the collective heading of “analogue media” while the newer computer and internet based technologies are called the “digital media”. However, in today's world, with the increased convergence or blurred and consequently, the way people define and refer to ICTs is also getting blurred. Often, the definition of ICTs is also done in terms of “Old” and “New” as if to distinguish between the analogue and digital.

Technology democratizes access to information and offers new opportunities to change the way education is delivered. Online lessons and learning resources designed in ways that are proven to work: This can help support more flexibility and choice in the curriculum and extend learning outside the traditional school environment. In areas of specialist teacher shortage, specialist teaching could be provided for groups of schools online. A smart classroom is a classroom that has an instructor station equipped with computer and audiovisual equipment, allowing the instructor to teach using a wide variety of media. These include DVD and VHS playback, Power Point Presentations, and more all displayed through a data projector. Some smart classrooms have a semi-permanent unit in the room called a Smart Console. These Smart Consoles have similar equipment housed inside them as the other smart classrooms.

Definition of ICT: The term “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. This broad definition of ICT includes such technologies as radio, television, video, DVD, telephone (both fixed line and mobile phones), satellite systems, and computer and network hardware and software, as well as the equipment and services associated with these technologies, such as video conferencing, e-mail and blogs. (UNESCO 2007).

Present Scenario of Higher Education in India

As on today we have more than 300 universities, institutions of higher learning and deemed universities, out of which 95 deemed to be universities, 13 institutions of national importance, 19 central universities, 203 state universities, 5 institutions established under state legislation act and about 16,885 colleges including 203 colleges including 303 Autonomous colleges. Education System has increased fourteen-fold in terms of the number of universities and thirty three-fold in terms of the number of colleges, in comparison to the number at the time of Independence. At the beginning of the academic year 2004, the total number of students enrolled in the formal system of education in universities and colleges was 99.53 lakh-12.97 lakh (13.3 percent) in university departments and 86.57 lakhs (86.97 percent) in affiliated colleges and 4.37 lakhs teaching Faculty employed making India's system of higher education the second largest in the world. “To finance this expansion, the Government of India has consistently increased its share in the total expenditure on higher education from 49.1 percent in 1950-51 to more than 90 percent today. It is significant that despite these impressive statistics the system caters to hardly 6 percent of the relevant age group, as compared to more than 80 percent in the developed countries. “The is partly because the expansion has been offset by the growth of the population in the relevant age group. Nevertheless, the fact illustrates how difficult it is for developing countries to bridge gaps and to keep pace with the developed world. Massification of higher education has rather been responsible for this expansion. Resource constraints are severe, and the quality of education available to most Indian students is questionable in terms of its ability to face the challenges posed by further education as well as employment market. The situation is further complicated by the rigidities of the higher education system, the political pressures from regional, religious and caste-based

by the rigidities of the higher education system, the political pressures from regional, religious and caste-based groups, and related problems.

In India, one problem is numbers and the other is quality. We want to be a developed country by 2020. If we really want to achieve that target, we should have at least 20% of the age group in higher education by 2020. The present number is uncertain but is reported to be around 10%. In other words within a decade (that is, from 2010 to 2020), we will have to double the opportunities for higher education. It is just impossible for the Government alone to create the facilities needed. Private providers have to play a role. Coming to another important component of higher education, that is research. In the Science Summit held in Bangalore, in 2000, the former secretary of the Department of Science and Technology gave the following information based on estimates that emerged in a discussion meeting. In technology that is used in India, the foreign components were:

Foreign technology used without alteration 50%, foreign technology modified and adopted to suit our need 45% and Indigenous technology 5%.

ICT in Higher Education

In 21st century the higher education institutions face a lot of challenges and these challenges need to be met and the pressure needs to be handled which can be achieved by accepting the changes and challenges that new ICT's bring. The new ICT's are also expanding the access, reach and range of educational institutions without any time bounds. It helps in minimizing the geographical boundaries thereby enabling the students across the globe to study.

The Higher Education which was once an specialized activity of young people has now become lifetime need for everyone. A Nation's wealth depends increasingly on knowledge societies and knowledge based high-tech industries. The education and training throughout lifetime are essential elements of the new information age. Thus, ICT promises not only the widening access but, also strives at improving the quality of learning making it skill asked for the Open and distant learners.

Education today is offered in three different kinds of campuses:

- Campus based education (Conventional Universities).
- Off campus education (Open and distance education).
- Global electronic campus (Virtual universities, electronic based consortia/ Global net works).

There has been a tremendous growth and diversified learners outside the classrooms looking for learning opportunities which are provided at large not by the by conventional universities but by open and distance learning institutions also help the corporate houses in upgrading and retaining their workforce. Thus, distance education is no longer the province of a few as it saves students of wide geographical boundaries.

There is also an increasing need to meet the demands of lifelong learning and training for professional development and upgrading of skills. This has led to the search for new delivery methods. By using ICT, the formal universities are transforming into distance learning institutes. They will lecture on and offline to meet the growing pool of part-time students and to open another potentiality. On the other hand, distance learning institutions make it possible to teach and learn beyond spatial/time

limits. With their adoption of ICT, they are integrating elements which were available only in the formal system, Virtual seminars as real seminars allow cooperative learning. In other words, ICT can personalize the prevailing impersonal studies by making possible dialogue teaching forums, transmitted via data networks, which so far only existed in the Conventional systems. Distance educators are increasingly interested in some of the newer technologies such as the World Wide Web, Video conferencing and CD-ROM, as they allow the student to interact directly and flexibly with a teacher or the peer group while also providing a very powerful learning environment.

This is the most common understanding of the field of ICT's in education. Essentially, it refers to the creation of human resource to meet the IT needs of the knowledge economy. In developing countries of Asia, each country is trying to create a pool of manpower to address job opportunities in computers-hardware and software, creating and training people in computer engineering.

Need and Importance of Information Communication Technology

The information communication Technology is required basically for the fulfillment of the ever-increasing demand of education as well as their related academic needs.

1. Information-communication technology in being treated as an excellent tool for making the learning content more comprehensible.
2. Information-Communication Technology is widely used in making the teaching learning process more comprehensible, easier and simple.
3. Information-Communication Technology plays a vital role in all of the form of education Viz, Formal Education Informal Education, Non-formal education etc.,
4. Information, Communication Technology has played a central role in the field of Distance Education.
5. Information-Communication Technology is generally used as popular media in all sorts of vocational training courses. It suggests its vital strength as a media.
6. Information-Communication Technology means teaching and learning process more interesting and enjoying. It also accelerates motivation in students.
7. It promotes permanent learning among the students through satisfying their primary senses and outputs first hand learning experience.
8. Information-Communication Technology plays vital in imparting general education to the masses. It is the greatest contribution in the field of education by ICT.
9. Information-Communication Technology helps in focusing student's attention and interests in the content and permeates through the psychological nature of the students.

Application of Information and Communication Technology.

In order to harness ICT's basic potentiality, multimedia, Kits have been developed for promoting education and research. The Multimedia Kits are developed on the basis of the following stages:

- a. To determine the objectives of the content.
- b. To select an appropriate communication technology.
- c. To follow the adequate instructions in order to employ favorable techniques.
- d. To organize the adequate techniques properly.
- e. To make proper arrangements for education.
- f. To evaluate the complete process.

Use of ICT in Teaching

Teaching at School as well as Higher Education, mostly, concentrates on giving information which is not the sole objective of Teaching. Along with giving information, the other objectives are:

- Developing understanding and application of the concepts.
- Developing expression power.
- Developing reasoning and thinking power.
- Development of judgment and decision making ability.
- Improving comprehension, speed and vocabulary.
- Developing self-concept and value clarification.
- Developing proper study habits.
- Developing tolerance and ambiguity, risk taking capacity, scientific temper, etc.,

On INTERNET many websites are available freely which may be utilized by teachers and students for understanding different concepts, improving vocabulary, developing & Thinking,

Use of ICT in Learning

The following are some of the instruction strategies involved in learning process. The students can learn effectively through computer assisted instruction (CAI) and computer aided learning (CAL).

ICT Supported Higher Education: A large number of distance education universities and programmes use ICT to support the print content that they deliver to students. These include broadcast audio and video such as radio and television programmes, audio and video tapes delivered to students as part of a learning kit, and in more recent times, multimedia content such as lessons which are delivered off line, i.e. on CDs.

Conclusion

In the fast growing world we have to make ourselves fast. Education is the Panacea (remedy) to promote everything in human life. In teaching and learning we should make change on education system or method. To make education effective, we should utilize the modern technology and ICT in proper way.

Quality it education through ICT and its awareness among stakeholders will have positive impact on the society. By employing ICT in teacher training can save a lot of money of the Government. Moreover a lot of qualitative improvement can be seen as resource persons for the training can be best of the world. By employing ICT in administration can help in solving the problem of Absenteeism of students and teachers. Good quality content is one of the major issues and directly affects the standards of education and quality. By overcoming the certain challenges involved in the process of education can help a lot in this side. Conclusively a lot of quality improvement is possible after careful and planned implementation if ICT in education by various stakeholders.

Thus ICT is a science of techniques and methods by which educational goals can be achieved. In Higher Education it is very effective in Teaching Learning process which includes open learning system. The IGNOU and TNOU students at the world level have their own programmes through Gyan Darshan, which is a learner study centre. Moreover Video/Teleconference programmes organized by many universities are live in nature for the Higher Education students. Hence the Higher Education courses made this country progress with the help of ICT.

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