



IMPACT OF ICT AS EFFECTIVE TEACHING- LEARNING IN HIGHER EDUCATION INSTITUTIONS IN INDIA

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ABSTRACT

The aim of this paper is to examine role of ICTs in teaching-learning in higher education in India. Implementation of ICTs, empowering teachers and supporting them in their engagement with students in learning. There are endless possibilities with the integration of ICT in the higher education system.

KEYWORDS : ICT (Information and Communication Technology), E-learning, UGC, IGNOU and IIT.

INTRODUCTION:

Education is a very socially oriented activity and quality education has traditionally been associated with strong teachers 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 higher education is becoming more and more important. Higher education systems have grown exponentially in the last two decades to meet the demands of quality education for all.

In the era of Knowledge-based society, technical education has assumed an indisputable significant role. The new developments in information technologies have opened-up fresh prospective in teaching and learning. There is now widespread recognition that the way forward is to make greater use of ICT. These ICT enabled methods helps the teachers to offer quality e-content; both - education in classroom situation and to a large number of population in a structured, flexible, interactive, blended and open way.

India has a high proportion of the young and hence it has a large formal education system. The demand for education in developing countries like India has skyrocketed as education is still regarded as an important bridge of social, economic and political mobility (Amutabi and Oketch, 2003). There exist infrastructure, socio- economic, linguistic and physical barriers in India for people who wish to access education (Bhattacharya and Sharma, 2007). This includes infrastructure, teacher and the processes quality. There exist drawbacks in general education in India as well as all over the world like lack of learning materials, teachers, remoteness of education facilities, high dropout rate etc (UNESCO,2002). Innovative use of Information and Communication Technology can potentially solve this problem. Internet usage in home and work place has grown exponentially (Mc Gorry, 2002). ICT has the potential to remove the barriers that are causing the problems of low rate of education in any country. It can be used as a tool to overcome the issues of cost, less number of teachers, and poor quality of education as well as to overcome time and distance barriers (McGorry, 2002).

Technology trends in higher education Institutions:

Today, technology-based tools are gaining prominence to impart education to students. Such tools are helping students to learn, communicate, collaborate and study on and off campus. Following are some of the exciting technology trends in Indian universities:

- **Digitization of books:** Learning from the West, Indian universities are now creating their own digital repository of books so that students can be provided a digital learning environment. It enables students to learn through e-books, pictures, videos, simulations and visualisations.
- Using ICT, the **National Mission on Education** is trying to formulate new online course content for Undergraduate (UG), Post Graduate (PG) and Doctoral students. Course content for more than 130 courses, both in UG and PG, is underway.
- **The All India Council for Technical Education** – Indian National Digital Library in Engineering and Technology (AICTE-INDEST) is a consortium which has been set up by the Ministry of Human Resource Development to make journals and bibliographic databases easily accessible to the students.

- The **UGC** initiated a scheme called – ICT for teaching and learning process to achieve quality and excellence in higher education. Along with this, UGC has launched a mega programme namely – **UGC INFONET**. It is a network of Indian universities and colleges with integration to Information and Communication Technology (ICT) in the process of teaching, learning and education management. In addition, UGC is encouraging creation of e-content for improved teaching-learning processes in colleges and universities.
- **Indira Gandhi National Open University (IGNOU)** uses radio, television and Internet technologies to provide content and deliver lectures.
- **IIT-Kanpur** has developed “Brihaspati”, an open source e-learning platform (Virtual Classroom).
- **IIT-Bombay** has started the programme of Centre for Distance Engineering Education Program (CDEEP) as emulated classroom interaction through the use of real time interactive satellite technology.
- **SWAYAM** is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy
- Many institutes have collaborated with NIIT for providing programmes through virtual classrooms.
- **Mobile phones:** With the increased use of mobile phones, educational institutions can easily approach students to make them aware about the courses. Tasks like administration, sharing class notes, downloading lectures, instant messaging, etc have been made easy by a simple smart phone.
- **Social learning:** Students today are using various websites, blogs and social media channels, as well as new online video repository to get the content for a specific subject or course.

Challenges of ICT in india:

'Digital India' is a dream which was envisaged by Prime Minister Narendra Modi. India is moving towards digitization at a fast pace, but still there are many challenges like:

- **Limited access to computers:** Higher education without laptops and computers cannot be imagined today, but there are a large number of colleges in rural areas where computers are yet to reach. Rural India is still far behind in adoption of information technology. One of the main reasons for it is inadequate infrastructure.
- High cost of acquiring, installing, operating, maintaining and replacing ICTs. Introducing ICT systems for teaching in developing countries has a particularly high opportunity cost because installing them is usually more expensive. Using unlicensed software can be very problematic, not only legally but in the costs of maintenance, particularly if the pirated software varies in standard formats.
- Online teaching has its own unique challenges as not all faculties are ICT literate and can teach using ICT tools.
- Installing learning technology without reviewing student needs and content availability

- Imposing technological systems from the top down without involving faculty and students;
- Using inappropriate content from other regions of the world without customizing it appropriately and Producing low quality content that has poor instructional design and is not adapted to the technology in use.
- In many states of india the basic requirement of electricity and telephone networks is not available. Also many collages do not have proper rooms or buildings so as to accommodate the technology.
- Another challenge is that the teachers need to develop their own capacity so as to efficiently make use of the different ICTs in different situations. They should not be scared that ICTs would replace teachers English being the dominant language most of the online content is in English. This causes problems as in many nations the people are not conversant or comfortable with English.

CONCLUSION:

The adoption and use of ICTs in higher education have a positive impact on teaching-learning. The ICT in education not only improves class room teaching but also provides the facility of e-learning. Learners can access the best practices and best course/study materials by means of ICT. This transformation is taking the teaching-learning process at universities and colleges to the next level.

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