North Asian International Research Journal of Social Science & Humanities

ISSN: 2454-9827 Vol. 4, Issue-5 May-2018

IRJIF: 3.015

Index Copernicus Value: 57.07 UGC Journal No: 48727

IMPACT OF ICT IN TEACHING LEARNING SUBJECTS

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ABSTRACT:

Education enhances the popularity in the field of social and economic sector. We can find out several changes in education system in India with respect with various admittance, equality and qualitative attributes. With respect of such type of changes affects in the higher education system inadvertently, which spreads a great value in our country. Though some barriers exist in the infrastructure, evaluation process and throughout the system, but it will solve totally in one day. Our main approach of this paper is to resolve all of these barriers and enhancing the quality of higher education method by giving some positive sides to find out the root of these issues.

KEYWORDS: ***ICT, Teaching, Learning, Teaching-learning Subjects etc.***

INTRODUCTION:

Information and Communication technology usually called ICT, is often used as an extended synonym for information technology(IT), but is usually a more general term that stress the role of unified communication and the integration of telecommunication (telephone lines and wireless signals), intelligent building management systems and audio visual system in modern information technology. Different technical parameters related to information help to succeed ICT. In other words ICT is directly connected to broads cast media, video processing and transmission and network based parameters.

Studies over the past decade reflect a striking change in usage pattern of technology amongst medical students. Earlier which was used for mails, chats, movies, videos, video games, dictionaries, entertainment has expanded prospects exponentially by e-books, science apps, readymade power-point presentations, evidence based medicine, Wikipedia etc. The rapid development leading to enhanced medical literature retrieval applications, together with increased access to personal computers have changed both the study and practice environments in health professions Studies depict high utilization patterns of ICT among health care professionals and learners;

now advocate the incorporation of training in computer skills as part of their curriculum which they report, will enhance their ability to acquire, appraise, and use information in order to solve clinical and other problems quickly and efficiently in the course of their studies, and more importantly when they graduate.

The optimum use of ICTs in India's higher education system can propel the country to become a knowledge superpower. The innovative use of information technology (IT) in higher education addresses access, equality, and quality.

OBJECTIVES:

The following objectives were considered for the study-

- To know the importance of ICT in Teaching-Learning Subjects.
- To analysis the requirement and initiatives of ICT in Teaching-Learning Subjects.

METHODOLOGY OF THE STUDY:

The study is qualitative in nature and documentary analysis. This work is based on different secondary data like journal, paper, books etc. This work has been conduct at first collected of documents from different sources than synthesizing and analyzing the data and finally making generalization.

Meaning of Information and Communication Technology:

According to united Nations Development Programmed (UNDP) definition, ICTs are basically information handling tools –a varied set of goods, applications, and services that are used to produce, store, process, distribute, and exchange information.

ICT includes both old and new tools. Old ICT tools mainly include radio, TV, and telephone. New ICT tools mainly includes computers, satellite, wireless technology and the internet. These different tools are now able to work together, and combine to form our networked world-a massive infrastructure of interconnected telephone services, standardized computing hardware, the internet, radio, and TV, which reaches into every corner of the globe.

However, definition, as "the concepts, methods and applications involved in ICT are constantly evolving on an almost daily basis."The broadness of ICT covers any product that will store, retrieve, manipulate, transmit or

receive information electronically in a digital form, e.g. personal computers, digital television, email, robots. For clarity, Zuppo provided an ICT hierarchy where all levels of the hierarchy "contain some degree of commonality in that they are related to technologies that facilitate the transfer of information and various types of electronically mediated communications". ICTs not only refer to the latest computer and internet- based technologies, but also to simple audio-visual aids such as transparencies and slides, tape and cassette recorders, and radio, video cassettes and TV; and film.

ICT AND EDUCATION:

Liberalization, privatization, and globalization (LPG) merged with the advancement in IT, have introduced a attractive demand for skilled manpower, mainly in the services sector. In this case, education has been identified as one of the twelve main services under General Agreement on Trade in Services (GATS), which needs to be created or free flow of trade between countries. Knowledge wants to a traditional commodity itself; and it will be important that Indian educators remain pace with the change, or else perish in the face of competition from multinational forces in all fields of education and learning, including adult learning. The various kinds of ICT products available and having relevance to education, such as teleconferencing, e-mail, audio conferencing TV lessons, radio broadcasts, interactive radio broadcasts, interactive radio counseling, interactive voice response system, audio cassettes, and compact different purposes.ICT encompasses both the internet-enabled sphere as well as the mobile one powered by wireless networks. It also includes antiquated technologies, such as landline telephones, radio and television broadcast -- all of which are still widely used today alongside cutting-edge ICT pieces such as artificial intelligence and robotics. CT is sometimes used synonymously with IT (for information technology); however, ICT is generally used to represent a broader, more comprehensive list of all components related to computer and digital technologies than IT.

The list of ICT components is exhaustive, and it continues to grow. Some components, such as computers and telephones, have existed for decades. Others, such as smartphones, digital TVs and robots, are more recent entries.

There are three ways in which ICT in education is considered in current thinking.

1. ICT education- It refers to the production of trained manpower to conduct the IT needs of knowledge society. The role of ICT in the education policy of a government is to prepare students with IT skills.

2. ICT assisted education- Now a days, many distance universities and institutions use ICT for the help out printed study materials. ICT mainly includes TV programmed, audio and video tapes. Multimedia contents such as lessons are offered on CDs.
3. ICT enabled education- The total educational programmed and instruction is purely released through ICTs that is using them as a basic medium for the T-L process, it requires ICT access.

Rationale	Basis
Social	**Technology and society are direct related and co-Related .so students are attached to learn.**
Catalytic important	**The features of technology is very much to improve teaching effectiveness.**
Vocational for	**The fruit of the technology is directly needed Every job.**
Pedagogical learning	**The use of technology is proportionate to Flexibility and efficiency.**

ICT LEARNING CLASSIFICATION:

In view of ICT, education can be classified into three categories:

- E-learning
- Blended learning
- Distance learning

In addition there are face to face, self paced, and online collaborative learning under major ICT learning categories.

E- learning: is also known as online learning and is commonly associated with field of advanced learning technology (ALT),which deals with both the technologies and associated methodologies in learning using networked and multimedia technologies.

E- Learning has following advantages-

- Reducing time
- To overcome geographical barriers for learners as well as teachers
- Upgrades the education service at international level.

Blended Learning-is the sum total of several approaches to learning. It is usually applicable where several delivery methods are mixed up to delivery particular courses.

Face to Face Learning – It learning implies to learning where conventional classroom occurs. Here lectures, workshop, presentation, tutoring, conference are the main features.

Self-paced Learning-is the accessibility and availability of learners own time and pace. Here web based or CD based courses assignments, projects, etc are the main focus.

Online – Collaborative Learning- is the one where learners and faculty members interacts each other those are (i) synchronous interaction and (ii) asynchronous interaction are actively found.

Distance Learning – It is a type of education, where students work on their own at home or at office and communicate with the faculty and other students via e-mail, electronic forums, video conferencing, chat rooms instant messaging, and other forms of computer based communication. It also known as Open learning. Most distance learning programs include a computer based training (CBT) system and communication tools to produce a virtual classroom.

ROLE OF ICT IN HIGHER EDUCATION:

The use of ICTs in education extends beyond equipping classrooms with computers and an Internet connection. There are a wide variety of ICTs currently available to schools and universities that can be implemented to enhance students' overall learning experiences in numerous ways. Those schools and universities that have implemented ICTs primarily use this technology to fulfill three objectives:

- **Increase Networking Opportunities** ICTS help connect schools to other schools, as well as individuals within those schools to one another. This ability to network is especially important for students in rural areas and students in developing countries.
- **Provide Distance Learning** with the advent of ICTs, learning has become Web-based. As a result, ICTs have started to replace correspondence schools.
- **Supplement Traditional Learning** one of the most common uses of ICTs in education involves students using software programs such as Microsoft Word to produce otherwise traditional written assignments.

BARRIERS OF ICT IN TEACHING EDUCATION

- Absences of minimum level of knowledge.
- Linguistic blockage.
- Connotation is not up to the marks.
- Technological immediate execution.

The mobile web is the internet for the small screen, and therefore, reaps many of the same rewards as its desktop counterpart such as:

- *Information access, wherever and whenever.* Web-enabled mobile devices provide owners with round-the-clock access to the internet regardless of location. By freeing information from the restrictions of a desk or search for a nearby WiFi hotspot, distance learners can quickly retrieve and exchange information. Accessing the internet on a mobile device is all about getting the content what the distance learners precisely want when they want it. Local information on the mobile web satisfies learners' immediate needs, like counseling sessions, assignments, exams schedules etc.
- *Limitless access.* As mentioned earlier, the mobile web is not only restricted to those sites which have been specially designed for mobile browsing but encompasses the whole web. Web-enabled phone users have access to all of the similar online resources that they would find via their desktop computer.
- *Mobile data potentials.* Learners can download the information to their pocket PC or smart phones and can move with the data for reading it at their convenience, even after switching off the internet.
- *Interactive capabilities.* The mobile web offers users the participatory experience of the read/write web in the palm of their hand. Users can create content such as assignments, project reports and upload videos taken with their camera phones, share and get markings, comments, write blog posts, tag resources and form connections on educational networks.
- *Location-aware.* Many of today's smart phones and pocket PCs have global positioning system (GPS) capabilities which make them aware of where they are at all times. Distance learners can search for study points near their locations, retrieve directions to a desired destination, and discover nearby peer groups

MOBILE EDUCATION IN IGNOU

Indira Gandhi National Open University is the largest University in the world with 2 million students on its rolls taking 15 percent of total higher education enrollment. It serves the educational aspirants through 21 Schools of Studies and an elaborate network of 62 Regional Centers, 2,300 Student Support Centers in India and 52 partner institutions in 33 countries abroad. The IGNOU University acts as a National Resource Center and functions as a leading apex body to promote coordinate and maintain standards of distance education across the world.

Mobile education or m-education is a new paradigm in the history of IGNOU with use of mobile and wireless technologies for its distance education system. Aimed at fulfilling the county's 11th Five Year Plan motto, “Education for All”, the move is an effort to take education to the marginalized and disadvantaged people of Indian society. IGNOU is encouraging peer collaboration over wireless mobile devices, PDAs and hand-held devices to create opportunities for discovery and education among the distance education community. M-education in IGNOU is expected to leverage collaborative activities in synchronous and asynchronous mode with its learners and their peers. Through m-learning distance learners will be provided wireless virtual classrooms on their mobile devices to facilitate the learning activities of teachers, students and peers through collaboration in a distributed environment.

- **KEY ISSUE IN ICT**

1. Sustainability and scale

The use of ICT in development programs supported by INGOs has, to date, been relatively ad hoc, with many examples of small initiatives or pilots but very few large-scale, sustainable, ICT-supported programs. To unleash the full potential of ICT in development programs, a new level of collaboration, both internally and with other organizations and a new approach to scaling solutions to achieve a really material impact are needed.

2. Lack of knowledge

Many INGOs are not well equipped internally to support and nurture the effective exploitation of ICT to benefit development. They simply do not have the knowledge, expertise, or organizational capacity needed. The use of information technology is often seen as a thorny, problematic issue relating to back office systems.

3. Pace of change

INGOs' current structures, staffing, and ways of operating have a strong momentum that is not easy to halt or redirect It is incredibly difficult to conceive of new ways of working with organizational constructs that are fundamentally different from the status quo and require a shift in terms of strategy, competence, skills, and organizational structure.

4. Funding

There also is a significant challenge in adequately planning and financing the use of ICT in development programs. With cyclical donor funding and pressure to minimize administrative and management costs, it is hard for INGOs to properly plan and resource financial and human investments in ICT as a core capacity for improvement programs.

5. Changing roles and norms

The emergence of new ICT possibilities potentially presents some more fundamental and far-reaching questions, challenging or even undermining the assumptions on which INGOs came into being. When we reflect on why INGOs were originally founded, we can isolate a number of specific gaps between people and communities in poverty and those in more affluent, developed parts of the world.

- **TECHNOLOGY AS TOOLS OF TEACHING**

There are various types of technologies currently used in classrooms. Among these are:

• Computer in the classroom: Having a computer in the classroom is an asset to any teacher. With a computer in the classroom, teachers are able to demonstrate a new lesson, present new material, illustrate how to use new programs, and show new information on websites.

• Class blogs and Wikipedia: There are a variety of Web 2.0 tools that are currently being implemented in the classroom. Blogs allow for students to maintain a running dialogue, such as a journal, thoughts, ideas, and assignments that also provide for student comment and reflection. Wikipedia, an online encyclopedia, are more group focused to allow multiple members of the group to edit a single document and create a truly collaborative and carefully edited finished product.

- Wireless classroom microphones: Noisy classrooms are a daily occurrence, and with the help of microphones, students are able to hear their teachers more clearly. Students learn better when they hear the teacher clearly.
- Mobile devices: Mobile devices such as tablet or smart phone can be used to enhance the experience in the classroom by providing the possibility for professors to get feedback.
- Interactive Whiteboards: An interactive whiteboard that provides touch control of computer applications. These enhance the experience in the classroom by showing anything that is not only aids in visual learning, but it is interactive so the students can draw, write, or manipulate images on the interactive whiteboard
. • Digital video-on-demand: Digital video eliminates the need for in-classroom hardware and allows teachers and students to access video clips immediately by not utilizing the public Internet.
- Online media: Streamed video websites can be utilized to enhance a classroom lesson.
- Online study tools: Tools that motivate studying by making studying more fun or individualized for the student.
- Digital Games: The field of educational games and serious games has been growing significantly over the last few years. The digital games are being provided as tools for the classroom and have a lot of positive feedback including higher motivation for students.

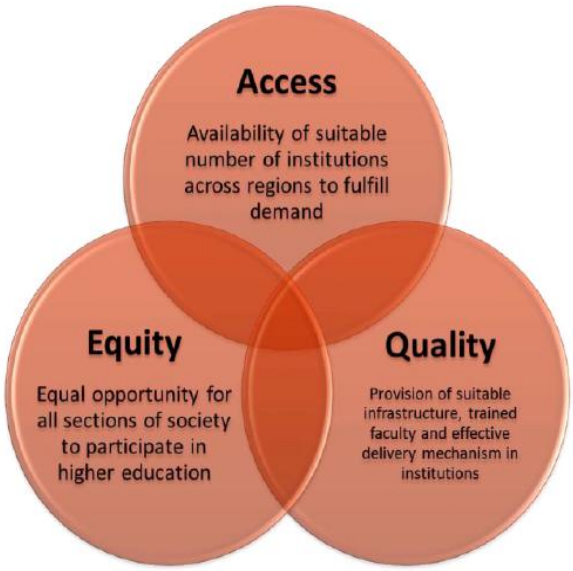
EDUCATION TECHNOLOGY PROJECT IN INDIA

The Government of India in the Ministry of Education and Social Welfare realized the importance of Education Technology for Qualitative improvement of education and included the Education Technology Project in its Fifth Five Year Plan in 1971. This project had four sub-schemes as follows:

- Setting up an Education Technology Unit in the Ministry of Education and Social Welfare
- Establishing a Centre for Education Technology (CET) in the NCERT.
- Assisting States for setting up Education Technology Cells and their programmers on 100% basis.
- Strengthening a few education institutions for undertaking Education Technology Programmers. Accordingly, unit was started in the Ministry since 1971 and a CET in the NCERT was set-up during 1973. Education Technology Cells come into being different states from 1972-73 onwards.
- Systems designing and implementation.
- Prototype production of suitable hardware and software.
- Training in several sectors of Education Technology.
- Research and Evaluation

IT/ICT BENEFITS TO UNIVERSITIES

The innovative use of IT/ICT is believed to be a game changer that can significantly strengthen India's higher education system and propel the country into becoming a "Knowledge Superpower". The innovative use of IT in Higher education addresses the three fundamental challenges of Access, Equity and Quality.



1. The adoption of IT/ICT in higher education facilitates the following:
2. Improving the access to the system through online education
3. Improving the quality of teaching especially across remote locations
4. Increasing transparency and strengthening systems, processes and compliance norms in Higher Education Institutes
5. Analyze students' performance, placement, application volume, website analytics, and social media metrics for brand audit
6. Analyze student behavior to maximize student's involvement, optimize retentions, and improve placements.
7. Measure students learning participation and effectiveness.

CONCLUSION:

Innovative deployments of ICT solutions have been instrumental in transcending multiple barriers in providing access to education in the country. With increasing digital literacy in the country, ICT solutions have gained momentum in driving quality education .The qualitative change occurs in education due to advanced improvement of ICT in education. Conventional Education method is being annihilated and online and virtual

educational methods are in process. ICT not only upgrades the classroom learning, but also help improve e-learning and distance learning. The aspirants of remote area are able to take quality learning by the use of ICT at any time and any place. The use of ICT helps develop a good relation in case of Hardware and Software. Overall, the application of ICT in sphere of education creates a democratic environment. With government initiatives such as "Digital India", with a vision to transform the country into a digitally empowered society and knowledge economy, ICT solutions will play a more critical role not only in promoting education but also towards boosting digital literacy.

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