

ICT, Its Affinity To Online Learning With Reference To Indian Learning On Higher Education

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ABSTRACT:

With the beginning of 21st century trends of mankind found in accessing to the digital and information technology leaving the traditional age. In the same time the demand of online learning in human society is gradually growing high and high, Higher Education in India now-a-days is attributing by the effective use of ICT. Here the chance is expected to have a profound effect on the way of life, money making and development of education. It would be needed to evaluate the negative of development of ICT along with also the development of Internet and Computer devices. Online education may provide through the means of open school and University, distance course, correspondence courses, e books, etc. It is a way of studying that allows people to learn when and where need during whole life.

Keywords: Information, Communication, Technology digital, Computer, online, Higher education

Introduction:

Information and communication technology (ICT) as the name suggests to deals with the technology that is used to handle information. It concerns with the storage, communication and processing of information. The IT in its fully convergent form encompassing various modes of information delivery such as printed media, radio, TV, computer and internet into one integrated environment provides a unique opportunity to touch the lives of everyone over coming earlier divisions. Hence computer is one of the major components in information technology. Its application has penetrated every sphere of existence of modern man, airline, railway, weather forecast, medical diagnosis, banking, offices, education, entertainments etc... the list is endless. The IT in the field of higher education provides opportunities to globalise world by digitizing and mobilizing the socio-economic, cultural, political and educational development in the society. Some most basic hardware devices of ICT and their application along with the advantages in the field of higher education are taken for a brief discussion which are also called the instructional technologies such as: Radio, Microwave and satellite channels, Newspaper, bulletin board, Smart board, white board, Filmstrip projector, Slide (overhead projector), Gramophone, Calculator, Video cassette recorder, Mobile phone, Smart phone, laptop, desktop, Tape recorder, LCD, LED, DVD etc.

Review of Literature:

Study reveals that ICT has a good relation and a vital role to play in the prevalence of Online Education, especially its responsibility in the field of higher education is notable and appreciative. With the expansion of Online learning, the demands of ICT devices and techniques are growing more and more. 21st century is the gateway to entering mankind in digital age, leaving the traditional age in all the sphere of social living.

Significance of the study:

The study enhances understanding of the increasing demands, benefits, and usability of online education in modern societies. Also extend the mindset of the people in studying the developments of internet, computer and conveniences of educational communication. Gratify the people's need of higher education without the cost of much money, time and efforts. So, this study is exactly important.

Objectives of the study:

The study aims and objectives to understand that both ICT and online education are as follows.

- Focus on enhancing learning experiences of the people throughout life.
- Provisions for learning from different countries in global mode and advanced education.
- Improving learning engagement without physical contacts.
- Overcoming geographical barriers for learning.
- Promote specific skill through digital literacy and competencies.
- Encourage learners to manage time effectively and to succeed in an online environment.
- Virtual collaboration and communication are done among large number of learners.
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Methodology of the Study:

Methodology encompasses the strategies, techniques and procedures used to conduct a research study. A researcher may systematically design a study. In this study the following methods used to learn the topic with meaning full, which further help to researcher and policy maker. (I) Descriptive method (II) Analytical method (III) Case history method (IV) Survey method (V) Conclusive method (VI) Comparative methods (VII) Longitudinal Study method (VIII) Cross section study method (IX) Experimental method etc.

Presentation and Analysis:

The main features of the Research topic are presented and analyzed in the followings.

Meaning of ICT:

Information and Communication Technology (ICT) encompasses a wide range of technologies used for communication and information processing. The Internet and computers are the devices and broadcasting technologies likely to radio, television and telephone. Essentially any technology that helps in creating, disseminating, storing and managing information falls under the umbrella of ICT.

ICT in Education:

ICT can impact students in learning when teachers are digitally literate and understand how to integrate it into curriculum. Nowadays, schools use a diverse set of ICT tools. It becomes integral in teaching-learning interaction through such approaches as replacing chalkboard with digital white board using smartphone by the students during class time.

ICT integration to higher education section is seen more. Successive and creative to students and overall system of education as well. These approaches are more fruitful and valuable in the field of higher education. Online Courses, learning, E-readers are the electronic devices.

Online Education - Concept:

Online Education, also known as e-learning, is a form of education where learning materials are delivered electronically through the internet. This allows learners to access courses and educational content remotely, often at their own pace, using devices like computers, tablets, and smartphones. Online education replaces traditional classes with a digital learning platform. Students can access courses, materials, lectures, assignments, and assessments from anywhere through Google without geographical barriers. Online learning involves any institutions that are 100% virtual. It is a development of distance education that expanded in the 1990s with the widespread of commercial internet and the World Wide Web (WWW). The learner's experience is asynchronous but may also incorporate synchronous elements.

ICT and online education:

ICT and online education are transforming Indian higher education system by increasing access, enhancing experience, and promoting innovative teaching method. It is synthesizing the Indian education into global styles. It is a means of globalization. ICT and initiatives like SWAYAM, frab' SWAYAM prabhava, and the national digital library are the examples of how ICT is integrated into the Indian Education and higher education realm.

Benefits of ICT and online Education:

- Increase access: ICT enable wider access to educational resources, specially, for students in remote areas or those facing geographical barriers.
- Improved Quality: Online platforms and digital resources can provide access to high-quality education contents, interactive learning experiences, and expert faculties.
- Personalized learning: Allowing students to learn at their own pace according to their individual needs.
- Cost-effectiveness: Online courses are more affordable than traditional learning, engaging a wider range of students.
- Flexibility and convenience: Online learning offers flexibility in terms of time, course location, and convenience.
- Government Initiatives: The Indian government has launched many initiatives like Swayam, Swayam Prabha, NDL (National Digital Library), e-Pathshala, and NAD (National Academic Depository) to promote online education and ICT integration.

Challenges:

Despite the potentials, challenges like the digital divide, computer devices, reliable internet connection in remote areas, and digital literacy among both students and teachers need to be addressed to ensure equitable access and effective utilization.

Mode of Online learning/education:

Online education consists correspondences course, open learning, open universities, distance education etc. are the different mode of online education. There are also some online facilities available in the field of education and in other sectors of government offices in modern day society which offering easy access to information and data collection with the help of the appropriate applications of different ICT devices. These save time and consume expenditure also.

10. Correspondences education:

The concepts were first started in England by Ijack Pitchman in 1840. Now there are above 100 open universities, several online universities and also several offline cum-online universities, research institutions etc. have been established in India, which provides facilities to have information and knowledge to those who are engaged in different jobs and profession and also intended to continue higher studies. So open education is a form of learning where teachers and students keep separate physically and teaching learning take place in an electronic system corresponding from distance or remotest places.

Around 1930 the radio program for educational expansion was applied first and later the computer, internet, audio-visual aids etc devices are using largely for refining the distance learning which strengthen the modern online education system. 'Adger Dale' introduced a new technique for using audio visual aids along with movies in the field of education who is called the father of modern mass media in education. The idea about the 'cone of experiences' is introduced and developed by his endeavour. Through his attempt the classroom teaching is made lively and active by correlating the teaching with practical life experiences. The use of satellite is also one of the modern trends in the higher education which can achieve data transfer rate of about 1000 Mbps and is higher far more than radio frequency transmission (radio below 30 MHS) and 10 times higher than microwaves.

Blended learning:

This term normally refers to combining internet-based distance learning with face-to-face virtual class room tuition like. It may also be used to describe combining ICT based materials with more traditional materials, such as books, audio and video devices.

Flipped Classroom and Digital Class Room:

This is a form of lively classroom environment, provides both offline and online teaching learning opportunities by the use of modern electronics ICT devices like computer, projector, LCD, smart board, White board, smart phone, camera, Video recorder, electricity facility etc in a conditioner. The provision of storing and preserving the teaching is available here in digital and flipped class room situation. This preservation is also sent to the e-mail ID of students for retrieval of those teaching points for their clarification if it feels

necessary when they continue study in own study room. The teaching topics of the teacher's cab be printed out from those there the mutual interaction and active participation of students is highly welcomed. It is a learner centric approach where students learning is taken place through sharing of ideas with discussion and analysis by using practical instances. All these done very accurately, systematically and effectively, in flipped class room environment. This is very much fruitful also for medical and research scholars. The teaching learning is completed through playful, funny and recreational conditions. The student motivation and willing participation is there in the flipped class room also.

Computer Assisted Instruction (CAI) & Computer Based Training (CBT):

CAI refers to a learning situation in which students interact with and are guided by a computer through a course of study aimed at achieving certain instructional goals. In a typical CAI setting, the student sits with a personal computer and communicates with the programme.

CBT is a method of training also by using computer and multimedia technology in a way that promotes student more interest and motivation. Multimedia creates a complete multi-sensory learning program. CBT can be delivered on a compact disk or over the internet. These both are very much effective in online learning programs more in the fields of higher education.

Learning Management systems:

Most online learning occurs through a college's or university's learning management system (LMS). A LMS is a software application for maintaining, delivering, and tracking educational resources. According to the Educause Center for Analysis and Research (ECAR) use of a LMS is nearly ubiquitous as 99% of colleges and universities report having one in place. Among faculty, 87% report using a LMS and find them useful for "enhancing teaching (74%) and student learning (71%)".

Most institutions utilize LMSs by external vendors (77%), Blackboard currently dominates the LMS environment with an adoption rate of 31.9%, followed by Moodle at 19.1%, and Canvas at 15.3%.

The graphic shows the market share of LMS across U.S. and Canadian higher education institutions.

Reflecting these changes the ECAR reported that 15% of institutions are in the process of updating and/or replacing their LMS; the main reasons cited were the need to "upgrade functions (71%), replace legacy systems (44%), and reduce costs (18%)".

ECAR's survey of institutions found that generally, both faculty and students are satisfied with the LMS; with three-quarters satisfied with the LMS for posting content (faculty) and accessing content (students). In contrast, the lowest levels of satisfaction with the LMS reported by faculty were with features that allow for "meaningful" interaction between students and their instructor, students and other students, and for study groups or collaborating on projects (p. 12). Similarly, just under half of the students surveyed reported satisfaction of the LMS for "engaging in meaningful interactions with students" (p. 12).

While LMSs are largely being used as a repository for course materials (e.g. syllabus, learning content, etc.) and platforms for the assessment of learning, recent developments are making them more customizable through LTI standards. According to a report by the Educause Learning Initiative the *Next Generation Digital Learning Environment* will be more responsive to students' needs creating a more customizable experience. The functional characteristics of the next generation of digital learning environments include: "interoperability and integration; personalization; analytics, advising, and learning assessments; collaboration; and, accessibility and universal design"

Conclusion:

In both offline and online systems of education or higher education, the appropriate use of ICT in modern day is highly appreciated. The role of ICT is very much vital which develops the synthetic thinking of the students and to achieve the critical methods and processes for gratifying the emerging needs and demands of the modern information and digital societies of the 21st century. ICT plays a vital role as a strong agent for change among many educational practices – conducting online examinations, online fee payment, applying online, tutorials and journals. ICT also helps in teaching learning and providing the facility of online learning. Thousands of students overcoming the geographical barriers who can't avail the forced benefit of formal offline higher education due to several personal, familial, or other factors like time, cost, and locations.

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