

# Use of ICT in Higher Education

Manisha Tanwar

M. Tech (Computer Science)

Banasthali University, Rajasthan

## ABSTRACT

ICT (Information and Communication Technology) is a term that refers to any communication device like mobile phone, computer (any hardware or software related to them), radio, television etc as well as the various services and applications associated with them like videoconferencing, distance learning etc. ICT can be used in the field of education very effectively by making the process of learning very interesting and easy for the students. It has revolutionarised the field of education by its advanced way of depicting the concepts. Technology is now more and more embedded in our culture therefore it has become necessity to incorporate more advanced methods of learning in the field of education. Use of such technology makes it even easier for the teachers to teach the concepts clearly. This paper presents where and how Information and Communication Technology can be used in the field of Higher Education.

Keywords: Technology; Communication; Education; Computers

## INTRODUCTION

Today in each and every institution ICTs are being used even for day to day tasks. ICTs are being used in educational field in order to cope up with and to move forward along with this modern world. Earlier the focus used to be on the 'Computers' which was related to the computing technologies but later it got shifted to the Information technology which included storing and retrieving information effectively which later led

to the introduction of ICTs for communication. According to a United Nations report (1999) ICTs cover Internet service provision, telecommunications equipment and services, information technology equipment and services, media and broadcasting, libraries and documentation centers, commercial information providers, network-based information services, and other related information and communication activities[2]. When communication capability is combined with Information Technology it becomes Information and Communication Technology. Various ICT products and services are available today which can be used for Higher Education like Email, Videoconferencing, Mobile phones, CDs and audio cassettes for lectures, delivering lectures through presentations using projectors and many more. Now days almost all of the companies and firms want their employees to be very much familiar with the modern technologies so that they can utilize the resources of a company in a very well manner. While the companies hire fresh graduates they prefer students who are technologically sounder or at least familiar with the current technologies. While the students in the colleges are imparted education through modern ways they become habitual to the environment which they will be facing while they will be getting jobs in the companies. Theoretical knowledge is criticized today and practical knowledge is encouraged. Imparting education through Information and Communication Technologies can prove to be a good means to prepare students for future.

## USE OF ICT IN HIGHER EDUCATION

### **Videoconferencing**

In videoconferencing (VC), telecommunication technologies are used which enable the different parties (which are geographically apart from one another) to communicate by simultaneous two way video and audio transmissions of the data. Videoconferencing is a groupware that helps people to achieve goals involved in a same target task.

Computer networking is used to make videoconferencing happen. Videoconferencing is also called video teleconference. It is quite useful in CSCW (Computer Supported Co-operative Work) where people working on the same project (but geographically apart) have to interchange their data and information with one

another. Videoconferencing is very much effective way or communication because it gives a feel that as if the conference is happening with the real time presence of all the parties but actually everything happens virtually. The involved parties are geographically apart from one another. It is an effective way to impart education where it is not possible for the person giving lecture to be physically present with the student. Student can take the lecture via videoconferencing just as if he/she is actually present in the class. Student can also raise questions in the same way as he/she does in the actual class. Moreover if a student is not able to attend the class at the actual time of delivering the lecture, he/she can get the CDs of recorded lectures which is not possible in our traditional way of delivering lectures in the class. With the help of multipoint VC three or more students can attend the conference in a manner such that they are sitting in the same class.

Each participant of videoconferencing needs to have some devices to be present along with the system like video camera, speakers and microphone. The microphone enables the voice of a participant to be carried to the other participant and the corresponding participant listens to the voice using his/her speaker. The video camera captures an image of the participant and the monitor on the other end displays it on the screen. The following image shows how the environment of the video conference looks like.



Figure 1. Videoconference (VC)

## E-mail

Email or Electronic mail is a method of communication which uses internet. There is a sender and one or more recipient. A sender composes a mail by writing all the information which he/she wants to deliver to the recipient/ recipients. Once a mail is composed it is sent to the destination. The sender needs to specify the address of the recipient. With a single click of button a message is delivered to the destination. While the

receiver receives a message, he/she can get to know about the content of the message by reading its subject. Students as well as people from other fields make tremendous use of this service. Email is basically an official way of communicating (Universities use this service to communicate with the students and vice-versa). If we see it from the student's point of view there can be a number of uses of it:

- Students exchange notes for the purpose of study via Email.
- Students use it for multicasting any information that may be necessary for whole of the class.
- All the communication (between an employer and an employee (student)) when a student gets placed in a firm or company happens with the use of email.
- Assignments are assigned to students via emails and the students are required to submit their assignments timely using mail addresses.
- While the students have to submit multiple copies of their assignments they just have to forward the same mail to the different destinations.

This process of communicating and learning is quite simple and is very commonly used by the students and the universities for the required purposes. This process is an easy and time saving way of communication.

## Television

Television is a telecommunication medium used for transmitting sound with moving images in monochrome (black-and-white), or in color, and in two or three dimensions. It is very famous and one of the most common mode of communication. It is a mass medium for entertainment, and advertising. Today television and the television programs have made such advancement that they can be effectively used for the purpose of education. Everyday various educational programs are telecasted on television. Television is one of the most effective ways of imparting education because along with the sound it plays the video of the corresponding event. Human mind can better understand and grab the things if he can visualize. Visual display of each and every activity that is happening is available to the viewer. By listening to the news which is telecasted, students can come to know about the various activities which are happening not only in the country but all over the world. Various debates on the current topics are telecasted; students can listen to them and can make their own opinion regarding any current issue. Television acts as a good source to

accumulate the knowledge about the current affairs and thus helps an individual to develop confidence in him. Today technology has made that much advancements that the information received through television can be obtained in the desired language, thus it has no boundaries linguistically [5].



Figure 2. Students watching educational program on television

## Mobile Learning

Mobile learning is also called M-learning. Mobile technology is used in it. This mobile technology can be used in combination with other Information and Communication Technologies thus it can be used as a source of learning for anyone anytime [4]. Mobile can be used to communicate and connect with the other people and can be used to access any educational content. Mobile learning is considered to be the ability to use mobile devices to support teaching and learning. Today mobile devices have become very much common that almost everyone owns it. With the advancement in technology it is much more than receiving and making a call. These devices today are capable of connecting to internet and can do each and everything that a computer can do. In fact they can be called as micro computers. One can connect to the internet and can access the information stored on World Wide Web (Information Repository). Students use them as a means to get each and every kind of information whether it is related to their studies or general knowledge. While connected to internet it can help a student to complete any kind of assignment that is given to him/her. Students can study from notes which are available on internet and can gain more and more knowledge about any topic. Books provide a confined source of knowledge but devices having internet can act as an unlimited source of knowledge. Students can access their college websites and can stay updated. While e-learning

requires internet labs and the student to stay inside the lab, mobile learning do not require user to sit there in the internet labs rather he can roam anywhere with his/her mobile [1]. While earlier, students have had to submit their assignments in the form of papers by going there in the class, mobile learning allows them to perform each and every activity electronically. Moreover mobiles are easy to handle than books and thus can be comfortably carried [3].

## CONCLUSION

Information and Communication Technology can improve the way of imparting education tremendously. It can make the learning process very simple, easy and more interesting. It can make the task of learning easier for the deaf students as they can grasp the thing by visual displays. Use of ICTs during learning can help the students to prepare them well for the future requirements as it will help students to be technologically sound. Use of ICTs is very common in many fields today thus it has now become the necessity to include ICTs in learning programs for students. ICTs can help in imparting education regardless of time and geographical barriers and thus finds importance in many fields.

## REFERENCES

- [1] Yousef Mehdipour, Hamideh Zerehkafi (June 2013). *Mobile Learning for Education: Benefits and Challenges*, IJCER, Volume 03, Issue 6.
- [2] Syed Noor-Ul-Amin. *An effective use of ICT for Education and Learning for Drawing on World Wide Knowledge, Research and Experience: ICT as a change agent for Education (A Literature Review)*.
- [3] Douch R., Savill-Smith C., Parker G. and Attewell J. 2010. *Work-based and vocational mobile learning: Making IT work*, London.
- [4] Crescente, Mary Louise; Lee, Doris (2011). *Critical issues of M-Learning: design models, adoption processes, and future trends*, Journal of the Chinese Institute of Industrial Engineers 28 (2): 111–123.
- [5] Binod C Agrawal (2000). *Higher Education through Television: The Indian Experience*, New Delhi.