

ICT Contributinal Approach in Teaching and Learning

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Abstract : Present scenario is of information technology and communication technology (ICT). ICT is become an essential component of the both of companies and trade in world. Educational institutions are now highly computerized, and all teachers should be able to use the technology to improve their teaching methods. Now a day's Internet and computers are heart of ICT. In the absence of both there is no sense of ICT. It has been a crucial instrument of the teaching-learning process for both teachers and students as it provides users with great opportunities to access information and communicate. The theme of the current study is to describe the real play of ICT in the life of teachers in education and research. In present study we focused on how teacher's life effects by Internet.

Keywords: Learning, Teachers, ICT, Education.

I. INTRODUCTION

Now days it is easy for common man to access global information with the initiation of Information Technology (IT). In general sense Information includes text in fax and e-newspapers, images in video and television broadcasting, voice in mobile, video conferencing and data in computers. All the information can be digitized, transported, stored, retrieved, modified and then distributed [1]. The definition provided by United Nations Development Programme (UNDP): '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. They include the 'old' ICTs of radio, television and telephone, and the 'new' ICTs of computers, satellite and 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 television, which reaches into every corner of the globe [2]. The use of Information Communication Technology (ICT) at all levels of education is no doubt the medium for improving access to quality education by all and to acquire knowledge-based economy [3]. Teachers use Internet for a large variety of purposes including materials development, planning lessons, accessing instructional resources and communicating with colleagues [4]. As internet has become an important resource for the teaching-learning process, the importance of internet using skills for both teachers and learners increases along with the emphasis on information technology literacy skills such as accessing, retrieving, evaluating and applying information.

II. RELATED WORK

The view of "the Internet opens classrooms to the world, the Internet opens the world to classrooms" by Joo and also suggests the importance that teachers should place on use of Internet in teaching environments and processes. Zimmerer, C also suggested that experiments can be carried out in

analytical chemistry labs by means of teleconference and multi-media teaching materials via Internet [5]. Becker, H. found that the higher the level of teachers to command technology is, the higher the level of teachers to use this technology in their courses will be higher [6]. Oliver, M. and Trigwell, K. revealed that e-learning is being used as a supplement to classroom teaching with staff providing course content on-line (lecture notes, web resources). This so called, "blended learning", can encompass a number of approaches – mixed e-learning and traditional teaching, or online learning versus face to face learning. Positive attitude regarding ICT of teachers [7].

Daugherty and Funke described that the barriers most commonly identified by staff included a lack of technical support and adequate equipment, and the increased amounts of preparation time required [8]. Similar Pajo and Wallace revealed that themes have been identified by subsequent research [9]. Thus Okay found out in a study about use of Internet by teacher candidates that Internet is intensely used for homework and research [10]. Kara-man and Açıkyıldız found in their study on attitude of chemistry teacher candidates towards use of Internet sources that the teacher candidates have positive attitude towards use of Internet in generating teaching materials [11].

Mehmet Tekerek and Orhan Ercan said that one of the remarkable results of the study is that the teachers in general have positive attitude towards use of Internet in teaching. We consider the fact that the technological advances have been reflected upon teaching materials within the recent years increases the positive attitude towards use on Internet, which is also a technological product, in teaching. Moreover it is also understood that "learning from Internet" has also speeded up recently with the fact that many encyclopedic information is available on Internet [12].

III. ROLE OF ICT IN TEACHING & LEARNING

Attitudes refer to the ability to predict a person's behaviour toward certain targets. An attitude is a predisposition to respond favourably to an object, person, or event. Attitude toward the behaviour means to the degree to which a person has a favourable or unfavourable evaluation about the final behaviour. There are various items to encouragement the usability of ICT by teachers of any institutions.

1. Availability of Study Material

Most of faculty uses ICT to prepare their lecture notes by taking the help of computers and Internet today. Internet provides numerous websites to provide different solutions for a

given problem. Expert computer teacher can now a day's upload their notes on web. So that remote students who are far away from his, can access well.

2. Diminish Burden of Paperwork

Most of teachers who have believe in e-work, they avoid writing their notes on paper. They are using Internet to make their own blogs where they keep e-notes for students. ICT plays major role to avoid hard paper work.

3. Interactive interface

ICT provides attractive and focused graphical interface for learning and teaching. Now a day's students are like to understand by visual learning. So projector, electric board, power point presentations are the gifts of ICT. Most of well reputed universities and colleges are using these smart devices. Even though in modern time in schools smart class concept is introduced.

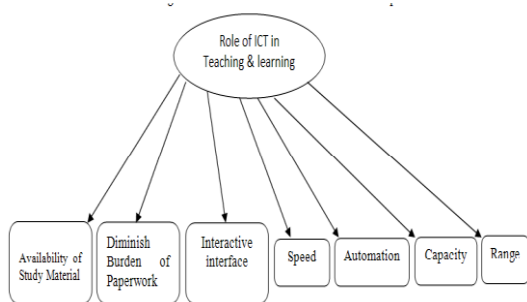


Fig 1. Source (Author)

4. Speed

Though ICT has offers massive capacity for improving the speed of teaching, it can be detrimental to younger (or less able) children if used too quickly. Learners' needs must be considered at all stages of planning and the pace and timing of the lesson adjusted to learner responses through ICT use when necessary and productive.

5. Automation

The development of materials, in terms of scale, creativity and choice was far more difficult before the advent of ICT - as was planning, recording and assessment of pupil progress. ICT has indeed become an integral educational aid for teachers and school staff.

6. Capacity

Linked to automation is storage capacity. ICT has offers high levels of increased storage capacity. Even small devices have huge memories which store great amounts of data. Some data networks are not even „wired connections“ and as cloud storage can be accessed from anywhere, access to many sites is made easy and swift. ICT makes for an especially bright future when linked to innovative and creative pedagogies.

7. Range

There is now a wide variety of media easily accessed and available so that lessons can be ICT based. However, ICT should partner and complement traditional modes of teaching such as „Big Books“ and other materials, not just replace them.

IV. ICTS FOR TEACHING OBJECTIVES

In present paper we considered five objectives for teaching for which ICT technology can use efficiently.

ICT includes computer, Internet, Video, Audio and Text also. Following table 1 reflecting the use of ICT in relation to given objectives.

Teaching purpose	ICT				
	Text	Audio	Video	Computer	Internet
Presentation	x	x	x	x	x
display	x	x	x	x	x
tool and method	x	(e.g., Language lab)		x	x
Research	x	x	x	x	x
Supervision of student knowledge	x			x	x

Fig 2. Source (Author)

ICTs for Learning Objectives

It is also assume five learning purpose here in present paper for which ICT technology can use efficiently. Following table 1 reflecting the use of ICT in relation to given objectives.

Learning Purpose	ICT				
	Text	Audio	Video	Computer	Internet
Store or show	x	x	x	x	x
Examination	x	x	x	x	x
Appliance	x			x	x
Investigation				x	x
Assessment	x	x	x	x	x

Fig 3 . Source Author

V. CONCLUSIONS

As proposed model giving us clue to a faculty to plays their role in use of ICT resources efficiently. Faculty plays an important role in the implementation of ICT into educational institutions. Their attitudes have proved to be significant predictors of technology use in other words; teachers' attitude towards the use of ICT for educational purposes is one key factor for the success of the ICT utilization in institutions. Researchers from different parts of the world believe that the use of ICT tools for educational purposes depends upon the attitudes of teachers toward the technology. Teachers are more likely to incorporate ICT use in their classroom if they see its relevance to their instruction and are convinced that the design of education software is compatible with educational goals and the individual learning needs of students.

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