Effective Teaching through Information Communication Technology's (ICT) in Digital Age

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ABSTRACT

This paper discusses about Effective Teaching through ICT, The use of ICT in teaching-learning process is a relatively new phenomenon and it has been the educational researchers' focus. The effective integration of this technology into classroom practices poses a challenge to teachers and administrators. The innovations that ICT has brought in teaching learning process include: E-learning, e-communication, quick access to information, online student registration, online advertisement, reduced burden of keeping hardcopy, networking with resourceful persons, etc. However, the presence of all these factors increased the chance of excellent integration of ICT in teaching-learning process. Therefore, the training of teaching staff in the pedagogical issues and administrators in administration should be increased if teachers and administrators are to be convinced of the value of using ICT in their teaching-learning process and administration.

Key words: *ICT, Teaching-Learning, Effective, Higher Institutions of learning*

INTRODUCTION

A teacher must be able to manage students effectively as the relationship of effective classroom management to other effective teaching behaviors is a closed one. It is virtually impossible to manage a classroom without simultaneous effective instruction. An effective teacher establishes a climate with high expectations for all students. The teacher should model appropriate behaviors and should be warm, enthusiastic and dynamic within the boundaries of his or her nature and personality, consistently communicating these factors both verbally and nonverbally.

Effective teachers and classroom managers address the needs of children both in terms of *what* they teach and *how* they teach. Though teaching is generally a group activity, learning is very individual. Effective teachers are sensitive to these differences and take actions to accommodate these so that, ideally, each child is provided an optimal learning experience. Classroom management is a term used by teachers to describe the process of ensuring that classroom lessons run smoothly despite disruptive behavior by students.

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

IT was limited only to the textual mode of transmission of information with ease and fast. But the information not only in textual form but in audio, video or any other media is also to be transmitted to the users. Thus, the ICT = IT + Other media. It has opened new avenues, like, Online learning, e-learning, Virtual University, e-coaching, e-education, e-journal, etc. Third Generation Mobiles are

also part of ICT. Mobile is being used in imparting information fast and cost effective. It provides e-mail facility also. One can access it anywhere. It will be cost effective. The ICT brings more rich material in the classrooms and libraries for the teachers and students. It has provided opportunity for the learner to use maximum senses to get the information. It has broken the monotony and provided variety in the teaching – learning situation. The ICT being latest, it can be used both at school and higher education levels in the following areas:

1. Teaching
2. Diagnostic Testing
3. Remedial Teaching
4. Evaluation
5. Psychological Testing
6. Development of Virtual Laboratory
7. Online Tutoring
8. Development of Reasoning & Thinking
9. Instructional Material Development

REVIEW OF LITERATURE

The ICT Test Bed evaluation (Underwood 2006) provides an evidence that many teachers use ICT to support innovative pedagogy. It states: "New technologies that provide a good fit with existing practices, such as interactive whiteboards are first to be embedded, but others like video conferencing, digital video and virtual learning environments are now being incorporated, providing evidence of ongoing learning by the workforce. Training needs to continue to support innovative pedagogy." Both examples show that ICT is being integrated in a continuous process. Therefore, ICT can improve teaching by enhancing an already practiced knowledge and introducing new ways of teaching and learning. Transforming teaching is more difficult to achieve. "Changes that take full advantage of ICT will only happen slowly over time, and only if teachers continue to experiment with new approaches." (Underwood 2006)

which students are 'passive learners of knowledge instead of 'active producers able to take part in the learning process. In a document entitled teaching and learning with ICT, G. Galea (2002) explains how ICT can promote teaching and learning. According to her there are two main reasons behind increasing the use of ICT in education in UK. Firstly, ICT can change the lessons' pace: she stated that children in modern society need to develop sufficient potentials and skills that enable them to take full advantage from the new opportunities that ICT offer. Second, there are groundswells of interest of academic researches in UK in how technological tools can enhance the quality of teaching and learning in schools, and so help learners to achieve better outcomes.

OBJECTIVES

1. To developing understanding and application of the concepts
2. To developing expression power
3. To developing reasoning and thinking power
4. To improving comprehension, speed and vocabulary
5. To developing self-concept and value clarification
6. To developing proper study habits

7. To developing tolerance and ambiguity, risk taking capacity, scientific temper, etc.

TECHNOLOGICAL COMPETENCIES

The use of computer based technology has become the need of the day due to different reasons. The technological advancement has brought the use of sophisticated hardware and software like radio, television, tape recorder, films, and transparency in the field of education. The professionals/teachers of today employ numerous Information Communication Technology (ICT) supported methods and materials in the classroom to enhance the teaching-learning process in a more effective way by presenting power point presentations (PPT) slides.

1. Web sources /Websites/Subject gateways
2. E-mail
3. Blogging, Social Networking with Professional Forums
4. File formats.(Audio/Video/Text/Image)
5. Information Storage Devices (CD's/DVD's/Pendrives/Blue Ray Disks)
6. Software's and Hardwares

ICT is referred to as all electronic technologies for collecting, storing, processing and transmitting information.

Computer competence is defined as being able to handle a wide range of varying computer applications for various purposes. Computer competence is a major predictor of integrating ICT in teaching. Evidence suggests that majority of teachers who reported negative or neutral attitude towards the integration of ICT into teaching and learning processes lacked knowledge and skills that would allow them to make "informed decision" teachers with more experience with computers have greater confidence in their ability to use them effectively. Teachers competence relate directly to confidence. Teachers "confidence also relate to their perceptions of their ability to use computers in the classroom, particularly in relation to their students perceived competence.

USES OF ICT IN TEACHING

1. Through ICT, images can easily be used in teaching and improving the retentive memory of students
2. Through ICT, teachers can easily explain complex instructions and ensure students' comprehension
3. Through ICT, teachers are able to create interactive classes and make the lessons more enjoyable, which could improve student attendance and concentration

The use of ICT should satisfy the diverse needs of all kinds of learners characterized by all kinds of socio-cultural conditions including the diversity of multiple intelligences. Teachers should continue to learn through their lives new ways of using technology for the growth of their learners as well as the very systems of education. The critical question in education is- in what ways ICT can enhance learning and teaching practices. Broadly ICT tools help to open up opportunities for learning by enabling four major key processes in transforming teaching and learning as follows:

Access ideas and information from diverse sources through searching, locating, selecting, and authenticating material in a wide range of multimedia forms;

Extend ideas and information through processing, manipulating, analyzing & publishing material in different multimedia forms;

Transform ideas and information into new or different forms through synthesizing, modeling, simulating and creating material in many multimedia styles and formats; and

Share ideas and information across local, national and international networks by interacting electronically with others in actual and/or delayed time.

The integration of ICT with teaching and learning has produced some of the significant positive gains in learners' knowledge, skills and attitudes by providing the following key advantages:

1. Explore and represent information dynamically and in many forms
2. Become socially aware and more confident
3. Increase motivation
4. Communicate effectively about complex processes
5. Develop better understanding and broader view of processes and systems
6. Greater problem solving and critical thinking skills.

Fig. 1: UNESCO ICT Model

CONCLUSION

The rapid growth in ICT has brought remarkable changes in the twenty-first century, as well as affected its adoption and integration by teachers in teaching-learning process. The effective integration of technology into classroom practices poses a challenge to teachers and administrators. The findings of this study indicate that teachers and administrators have strong desire for the integration of ICT into education but they encountered many barriers to it. Technology and teacher professional development in its use are best introduced in the context of broader educational reform which embraces a shift away from teacher-centred, lecture oriented towards learner centred, interactive and constructive learning environment. Multimedia and ICT can play the role of catalyst for such educational

reforms. Multimedia courseware can promote effective instruction that is more engaging; learner centred, interdisciplinary and more closely related to real life events and processes and adaptive to individual learning styles and needs. It also encourages higher order thinking skills and help to construct knowledge socially. Thus teacher professional development in the use of interactive technology should embody and model the forms of pedagogy that teacher can use themselves in their classroom.
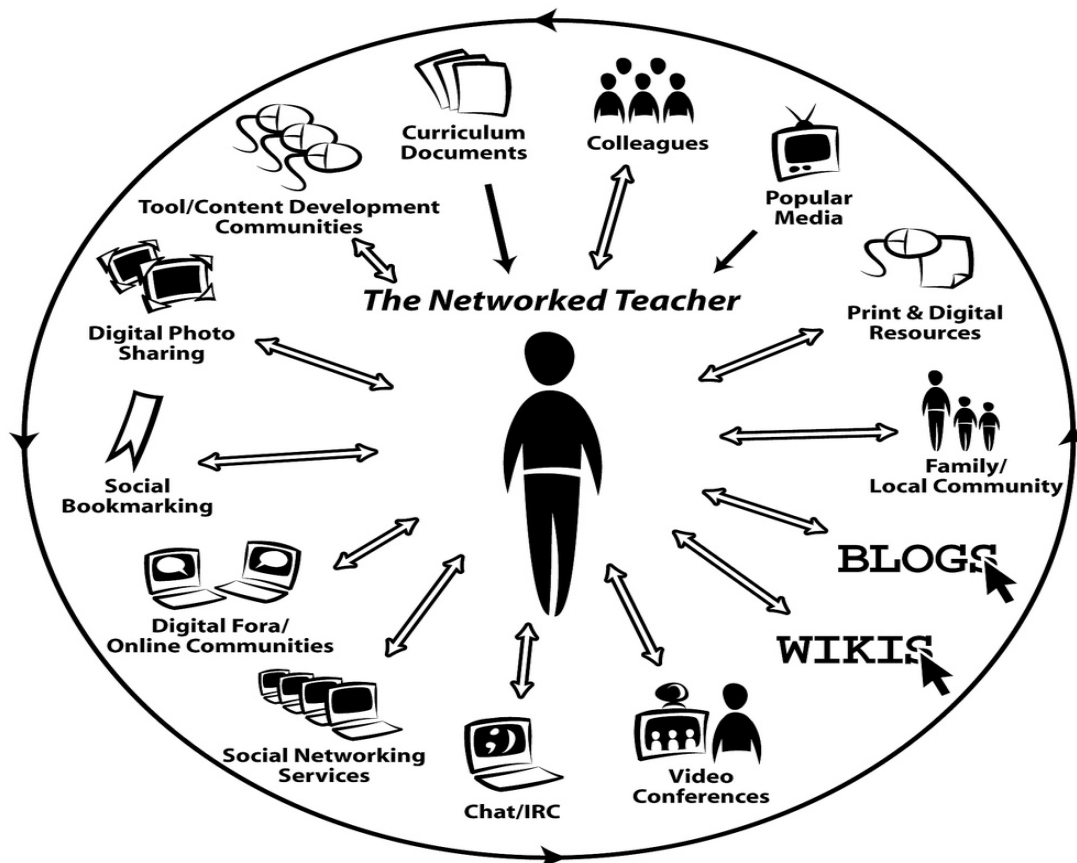

Fig. 2: Technology based Networked Teacher

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