
RESEARCH ARTICLE

Problems that face the Implementation of ICT and the Suggested Solutions

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ABSTRACT

The primary objective of this paper is to illustrate the problems and the various challenges that hinder the implementation of ICT (information and communication technology) within the educational sector. The paper started with a brief definition of ICT. Some practical problems encountered by teachers as well as students when practicing (ICT) in classes are identified and well explained and some several proposed remedial strategies are introduced. The lack of comprehensive, effective training and the scarcity of time represent the fundamental problems that confront a significant number of educators and learners who are engaged with contemporary technological advancements.

KEYWORDS

Implementation of ICT, fundametal problems, Challenges, Remedial Strategies, technological advancements

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Introduction

Nowadays, people are living in a constantly evolving digital world. ICT has an impact on nearly every aspect of our lives - from working to socializing, learning to playing. The digital age has transformed the way young people communicate, network, seek help, access information and learn.

Mrs. Swati Desai 2010) states that;

ICT is an acronym that stands for "Information and Communication Technologies". Information and communication technologies are an umbrella term that includes all technologies for the manipulation and communication of information. ICT considers all the uses of digital technology that already exist to help individuals, businesses and organization. It is difficult to define ICT because it is difficult to keep up with the changes that happen so fast. ICT is concerned with the storage, retrieval, manipulation, transmission, or receipt of digital data.

The definition taken from the guidance in the QCA schemes of work for ICT is:

"ICTs are the computing and communication facilities and features that variously support teaching, learning and a range of activities in education."

Researchers agreed with the mentioned definitions for ICT as an acronym for information and communication technologies. ICT is an essential component of basic life; it plays a major role in education as it facilitates learning and teaching by using technological tools. **Information and Communication of Technology (ICT)** is all information and communication digital devices that can be used in the teaching and learning process, encompassing: hardware (such as computers, interactive whiteboards, digital cameras, projectors, scanners etc.), software (such as word processor programs), and communication networks (such as the Internet and email). ICT includes technologies as radio, television, video, DVD, telephone, satellite systems, computer and network hardware and software and other related information and communication activities. So ICT covers any product that will store, retrieve,

manipulate, transmit or receive information electronically in a digital form. For example, personal computers, digital television, email, and robots.

Problems and Suggested Solutions

Many practical problems are encountered by teachers as well as students when practicing (ICT) in classes are identified, accompanied by some suggested solutions.

According to Eid (2014) he states that; some researchers investigated the difficulties that teachers may encounter while implementing ICT. They revealed that the difficulties in the use of ICT are related to the weakness of a teacher's knowledge about what technologies are available and how they can be used in the educational process in the classroom. In addition, teachers should know how to use ICT in relevant ways to help them in the delivery of the curriculum (Morrison, 2011).

As a solution for this problem, it is necessary that teachers feel confident in their skills to assist student learning with technology, to incorporate technology into their classrooms. Therefore this needs to become a more qualified development to increase a teacher's skill (Ward and Parr, 2010).

According to the researcher's own point of view and from his past experience in teaching, one of the major problems that teachers face is how to use ICT in the classroom. In addition to that, how to get access to technology is a real dilemma. Obtaining a computer, for example, is a real problem in some parts of the world. The solution for this problem is that the teacher should be trained how to deal with technology and make it available to all teachers and students by giving financial governmental support.

In a recent report (1999-p.30) written by **Prof .Blurton** from the University of Hong Kong, explained that, "Lack of teacher technology training has been the failure of most schools trying to grasp technology and harness the power that technology can bring to the classroom. However, successful technology training can be

accomplished only through effective administrative leadership ... These leaders must be knowledgeable in the use of technology and must show support by providing access to the equipment and materials necessary for successful integration. (Murphy and Gunter, 1997, p. 136; 138)".

To solve the above obstacles, the researcher recommends the followings:

- 1-Teachers who deal with ICT or technology in general are supposed to be trained in order to know how to deal with it.
- 2-All means of technology must be made available for teachers as well as students.
- 3- Financial support for education must be a priority in every country.

Mohammad Riasati, Negah &Kok-Eng, (2012P.26-28)illustrated the advantages and barriers in using ICT.The barriers as the writers mentioned, are the following:

- 1 .Lack of access: Lack of access to technology resources that require an Internet connection is a major disadvantage for those schools and individuals who can barely afford or do not have access to a computer

or an Internet connection (Coghlan 2004). The initial startup expenses (Warschauer&Meskill 2000) and the costs of hardware and computer

equipment are also an issue for low-budget schools (Gips et al. 2004; Lai & Kritsonis 2006). Mike (1996) states that unequal opportunity to access technology and the Internet have been frustrating for both language teachers and students. Non-availability of technology resources is not, in and of itself, the result of inaccessibility to such sources. The low frequency of technology use could be due to a lack of expertise on the part of the teachers. In some other cases, school budgets may not be able to support teacher training (Vi2005).

2. Lack of Effective Training

Many researchers believe that lack of teacher training, lack of knowledge and practice are factors that prevent the successful use of the Internet as a learning tool.

Many researchers (e.g., Coghlan 2004; Lai&Kritsonis 2006; Schwab &Foa 2001) agree that teachers must increase their computer competency to use technology effectively. As found in Symonds (2000), teachers are not given sufficient training.

Romano (2003) found clearly that access to technology does not improve learning unless teachers are empowered to adopt technology as an educational tool.

Baylor and Ritchie (2002) also argue that technology would remain unused if faculty members do not develop the appropriate skills, knowledge and attitude for incorporating it into the curriculum.

3. Teachers' Attitude:

Research into the barriers to technology use in education has found that teachers' attitude was a significant barrier in academia (Hodas 1993). Some teachers thought that technology was a disruptive tool and resisted any changes (Mc Grail 2005). Fang & Warschauer (2004) reported that traditional teachers were afraid of authority loss.

Some scholars agreed that context could be a big barrier to deterring teachers from adopting the use of technology (Dawes 2001; Becta 2004).

Teachers' lack of confidence was rooted in their fear of failure or lack of technology knowledge, which made them feel anxious (Beggs 2000; Balanskat et al. 2006). In Becta's (2004) study, the teachers reported that they felt frightened to use technology in the classroom if they could not trust their knowledge.

4. Students' Attitude:

Some researchers, on the other hand, have been concerned about the students' reactions to the use of technology in the classroom. The justification for their concern is that the use of technology is in its infancy and its use requires a shift from traditional teaching approaches. If the shift is drastic and sudden and students perceive the experience negatively, they may resist such changes, which in

turn will lead to poor academic performance.

5. Lack of Time:

Lack of time and technical support (Jacobsen & Lock 2005; King 2003) could be other reasons for teachers' disinclination toward using technology.

In an exploration of teachers' perceptions of the use of technology in teaching languages in United Arab Emirates schools, Ismail & Almekhlafi (2010) reported teachers' lack of time for preparation and technology implementation as the most important barriers. Similarly, the teachers in ChanLin et al. (2006) reported that the integration of technology in their classes required much more time and effort

compared to regular classes which do not use technology.

The solutions to the above mentioned barriers as researchers said are in sum that; before any change is to train the staff adequately. re equipping institutions with technology and implementing In addition, teacher training might prepare teachers for their new roles to use technology for collaboration and engagement.

Teacher training centers should work towards providing teachers with sufficient computers, Internet access, and technical support. Additionally, as time is a legitimate

concern of teachers to plan technology-based lessons, to surf the different websites, and to cover sufficient content in the allotted time frames, schools should provide

teachers with sufficient time to spend on incorporating technology into their teaching practice. For example, giving opportunities to teachers during regular professional

development courses to explore different aspects of technology can help them increase their confidence in using technology and thereby change their negative attitude. Further, teachers new to technology-based learning and teaching need to

understand their changed roles and responsibilities in the new modality of learning and teaching (Lorenzetti 2004).

At the same time, teachers need to bear in mind that it is pedagogy, not technology that determines learning effectiveness (Appana 2008).

To make a successful transition from traditional pedagogy to technology-enriched instruction, teachers need to alter their teaching approaches

to achieve effective teaching (Grosse 2004; Maguire 2005).

M Rajesh (2003, p.4) states that "There are many problems that hinder the growth of new ICTs in Developing countries. The lack of appropriate infrastructure for enabling the use of ICT is a serious bottleneck; also the perceptions and attitudes of a political system greatly affect the acceptance and growth of technology in any society. In addition to Economic Factors; cost is an important factor that guides the adoption and growth of Communication Technology in a country, Thomas (1987) states that there are four major factors that can affect the growth of Communication Technologies in a Country. They are:

- Financial Strength of the society
- Attitude of policy makers
- Budget Allocation for the technology
- Cost-efficiency of the technology.

Cultural Factors is another problem. Contractor, et al (1986) state that culture is a complex whole that includes knowledge, beliefs, arts, morals, laws, customs and any other capability and habit acquired by a human being as a member of the society

(IGNOU, "Growth of Communication Technology", Communication

Technology for Distance Education, ES-318, pp.36). Language is one of the major factors that hinder the easy assimilation of ICTs by many developing countries.

Technological Factors: Very often, technology becomes the determining factor in the growth of ICT in any society.

Ibid p.14 lay out some suggestions and recommendations may be given for facilitating greater growth and adaptation of ICTs in Developing countries.

-It is as important to empower people with technologies as to make technologies accessible to them. Access without empowerment will stunt the growth of technologies.

- The government of these countries should invest at least a percentage of their GDP in research and adoption of new ICT.

-Venture capitalist projects should be encouraged to make break through in the field of ICTs for educational purposes.

Conclusion

Researchers agree that the potential of the new ICT for improving learning and teaching will not be realized unless teachers are well trained in the pedagogical use of technology in the classroom. Also students are supported to acquire information literacy and critical awareness so that they can productively engage with the digital and knowledge society within the teaching and learning context.

In addition to that, lecturers are supported to acquire the necessary digital literacy skills (technology and pedagogy) to facilitate learning in the digital knowledge society, moreover the University should facilitate the availability of connectivity, Internet-enabled devices, software and electronic education resources for all staff and students, on and off campus.

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