

A Review on Information Communication Technology (ICT) Assisted Teaching in Pakistan

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ABSTRACT

This paper highlights the constraints in the way of information communication technology (ICT) assisted teaching in Pakistan. This study reviews the literature on the importance of ICT in the teaching and learning process. This paper also present the meta- analysis of the related literature that intend to present the constraints to ICT assisted teaching in Pakistan This study found that the use of computers is the most important feature of the change in the field of education. Teachers are hardly coping with the task of incorporating the use of new technology in their teaching and learning. Teachers report many barriers and obstacles in using new technology and the most important barriers identified in this study are the lack of computers, available resources, lack of teachers' ICT competency, lack of training, shortage of time and examination-centered learning. The paper ends with endorsements on future research to find the gaps in the implication of ICT based teaching and training. This paper also suggests some important solutions to the problem.

Keywords: Information and Communication Technologies (ICTs), learning, integration, barriers Time Constraint

INTRODUCTION

Humans are the inhabitant of continuously expanding digital world where ICT has widely influenced on every sphere of life whether it is social, academic or entertainment. Digital era has transformed the pursuit of life, particularly the younger generation, how do they communicate, indulge in networking and get access to information. Therefore it must be realized that younger generation is now online population also computer, mobile, TV are the means of access. ICT's growth and potentialities change delivery methods of education and make it more crucial today than ever before (Pajo and Wallace 2007). In spite of the fact that ICT has the capability of enhancing educational methods and the standard of teaching and learning but the benefits of ICT are often misconstrue (Surry and Farquhar 1997). In the learning process, teacher and students should use ICT that is helpful in the evolution of skills and high order thinking and prepare students to meet the future challenges (Spencer 1999). For the methods of better instructional delivery, styles ICT propose remarkable opportunity (Jategaonkar and Babu 1995). ICT in education came out as a combination of actually powerful tools for the improvement, reform and change. The usage of ICT in education helps in changing teaching and learning in to dynamic, captivating, entertaining and active process that is associated with daily life routine.

Pakistan is officially the Islamic State, with the population size of approximately 200 million. According to Khalid and Khan (2006) education in Pakistan is a mixture of complex cross cultural elements. The educational structure has many similar attributes with western countries education systems. In Pakistan educational procedure starts from pre-school level aged three to five year old followed by five-year education of primary school and afterwards

secondary education of five year. Students then enter that is termed 2 year intermediate or higher secondary education. After grade 12 tertiary education starts. Unlike UK degree programs in Pakistan first degree contains on two years duration, and typically Master degree also contains similar duration (Saeed 2007). Structural dimension of tertiary education are complex and continue to expand (Saeed 2007). Therefore, it is essential to study the need of ICT in education sector in Pakistan. Keeping in view the above-mentioned details, this paper aims to reviews the information, communication based teaching in Pakistan, and barriers in the way of ICT assisted teaching. Current study based on extensive literature review, newspaper reports, and personal communication with experts via telephone and website visits.

USE OF INFORMATION COMMUNICATION TECHNOLOGY IN TEACHING

In teaching profession, there are a plenty of opportunities to advance the academic career of students. ICT in teaching can improve lesson plans and pave the way towards additional learning for the students. By using ICT in teaching techniques works like a bridge to lessen the gap between the diverse learners. Implementation of ICT in teaching is to provide the vision and drift of integrating ICT in to general teaching activities. Information and communication has been expanding immensely nowadays. Therefore, with regard to it, the overall teaching and learning process should be reshaped and integrate ICT in to teaching and learning activities. In the field of research and administration technology is frequently used but in teaching point of view frequency of its use is not that constant (Sahin and Thompson 2006). Schrum, Skeele et al. (2002) emphasized the importance ICT for teachers to use ICT in the teaching methods several years back but still developing countries are far behind in using ICT in teaching methods (UNESCO 2014). ICT assisted teaching methods play a key role in the promotion of joint activities and evolution of skills along with student centered instruction (Haddad 2003). ICT provide platform which is full of opportunities in any field (King, Bond et al. 2002). The integration of ICT in teaching is significant to improve and assist the pedagogical application (Hennessy, Ruthven et al. 2005). ICT as a potential tool many countries invested in education to get the achievement of transmutation and inventiveness (Pépin 2001).

ICT ASSISTED TEACHING IN PAKISTAN

ICT integrated education has faced many hurdles both in developed and developing countries. Pakistan is also a developing country facing innumerable problems in all sectors including education. Pakistan's education system is still underdeveloped (Dahar and Faize 2011). Educational funds are very low and educational goals are immense. In order to achieve the targets and goals it is the need of time to multiply the growth rate. Effective use of resources can increase the growth rate. If we look back, we come to know that ICT theoretical foundation starts from 300B.C but practically modern computer era begun when Alan Turing in 1940 who had introduced a machine with a name of computer which tremendously grew. Before the independence of Pakistan in 1945 Mark, I was created. In Pakistan computer era started in mid 60's. During the last ten years, the growth rate of computer was over 35%. ICT literacy is too low. Insufficient steps taken by government in to ICT assisted teaching in Pakistan. On the other hand, whole world is practicing technology assisted teaching and learning but Pakistan is far behind in using ICT. Hence, traditional methods of teaching are still being in practice.

Barriers to the ICT Assisted Teaching in Pakistan

In teaching and learning integration of ICT is a complicated process with number of constraints. These constraints are known as "barriers" (Schoepp 2005). The definition of

barriers is “any condition that creates difficulty in order to progress or achieving an object” (Word Net, 1997 as cited in 2005, p.2). There are several barriers in the way of ICT integrated teaching in Pakistan. For instance political influence, lack of training, lack of resources, foreign pressure etc. Present study will focus on lack of training and resources as these are considered as important elements in implementing effective ICT assisted teaching.

Lack of ICT Teacher Training

Knowledge and skills of teachers are important in the successful transformation of education (Ashoka 2015). Teacher’s ability to use ICT is important in implementing the system. Lack of teacher training is most referred barriers found in the literature (Beggs 2000, Schoepp 2005, Albirini 2006, Sicilia 2006, Toprakci 2006, Özden 2007, Balanskat, Blamire et al. 2008). In developing countries like Pakistan, training opportunities for teacher are not enough to use ICT in a classroom environment (Hassan and Sajid 2013). Main hurdle in the way of integration of ICT in education is teacher’s lack of knowledge and skills that is facing by both developed and underdeveloped countries (Williams III 1995, Pelgrum 2001, Ihmeideh 2009, Hassan and Sajid 2013). Integration of ICT in teaching needs knowledge and technical expertise in order to understand the learning level of students (Morgan 1996). The distinguished predictor about the usage of computer during the teaching learning process in the classroom is faculty’s belief in their computer capability. (Berner 2003). Teachers are not familiar with the technology tools used in the ICT integrated teaching process. In order to implement ICT in educational system of Pakistan, the whole process relies on faculty including teacher and principal. It is important for both to be proficient in ICT knowledge and skills. Trained and skilled teacher are helpful in implementing ICT assisted teaching system (Afshari, Bakar et al. 2009). Special consideration needs towards the training for both in service and pre- service teachers, equipped, and train them with all the capabilities to use ICT in teaching effectively. Opportunities should be given to the teacher to use ICT practically during the training and development programs that can be find the ways in which they can be used ICT efficiently in their classroom environment (Rosenthal 1999, Hassan and Sajid 2013).

Teachers’ Attitude

Teachers’ attitude is a major barrier in the way of ICT integrated teaching. Many research findings researcher found that teacher belief and attitude about ICT is a constraint in teaching and learning (Jalil 2012, Hassan and Sajid 2013, Mufti 2013). In order to be successful in use of technology in education it is necessary to change the teachers’ perception about the use of technology. Hence rightly stated Dawson, Cavanaugh et al. (2012) that ICT integration is largely based on teachers and their attitude affect the use of ICT in the classroom. In order to transform education method with ICT integration it is essential for teachers to change their negative attitude into positive attitude about the use of ICT. Such positive perception will develop when teachers’ will fully aware with the benefits of technology.

Lack of Resources

Effective integration of ICT mostly based on the availability of resources (Kotelnikov 2014). It is quite evident from research studies that insufficient ICT resources are a major hurdle in ICT integration (Qaisar and Khan 2010). Lack of technology resources, financial resources (Hassan and Sajid 2013) is key factor in the way of ICT integration and also reduce teacher’s use of ICT in the teaching process (Mumtaz 2000). Due to lack of resources and non-availability students and teachers do not use technologies completely (Mufti 2013). Related to this Pelgrum (2001) also found that when question asked to teacher about hurdles in the use of ICT in teaching was the inadequate provision of computers. In order to implementation

of ICT in to teaching required sufficient hardware and software but many teachers surveyed indicating that resources related to ICT in the class was insufficient (Mufti 2013). In Pakistan's educational institutions, lack of resources is another barrier to the implication of ICT. Insufficient ICT equipment and supported tools limited the usage of ICT by a teacher in the teaching process. 21st century challenges has enabled the countries to focus on education therefore policy makers in Pakistan should also oversee the priorities.

Time Constraint

Several research findings indicate that time shortage is a significant barrier and teachers' primary focus is to complete the curriculum in a specific time. In this situation, teachers do not have enough time to develop, design and implement technology in to their teaching. Prior studies also focus on the shortage of time as a barrier to ICT integration in school system (Newhouse 1999, Beggs 2000, Afshari, Bakar et al. 2009, Ihmeideh 2009). These studies found that shortage of time is among one of the hurdle to the implementation of ICT in the teaching and learning environment. Due to time shortage, teachers avoid to use IT labs in the schools(Qadir and Hameed). Teachers need appropriate time to incorporate and ICT in to their teaching methods. According to (Vannatta and Nancy 2004) found that training is the essential part of ICT integration in the teaching, however teachers should be provided appropriate time to use their technological skills in to the teaching process. They also mentioned those teachers who give time for obtaining technology skills; they have profound possibilities of implement ICT in the teaching instead of those who have not enough time to practice their newfound skills of technology. (Wetzel, Zambo et al. 2000, Hassan and Sajid 2013) also supported this because they found that provision of proper time to acquire new technology skills and practice makes them able to implement technology with ease. Another factor that can create the time shortage problem is examination centered learning. In this case, teachers and students completely focus on the exam preparation and try to get good marks in the examination so teachers spent more time on this aspect and quite reluctant to use ICT in teaching practice.

CONCLUSION

The aim of this study is to provide some information about the factors that create barriers in the way of ICT assisted teaching in Pakistan. The rapid growth of ICT has made the teaching learning process more complex. In the 21st century teachers, face many challenges in order to find the better ways of integrating ICT in to teaching and learning. The finding of this study reveals that teachers want to practice ICT in the classroom but there are some factors, which are obstacles for them to use ICT as a part of education system. They also realize the importance and need of ICT integrated teaching but many teachers today feel hesitation to use ICT in teaching practice because of some factors such as lack of resources, lack ICT based teaching training, shortage of time etc. In order to encourage the teacher to use ICT in teaching, more solid professional development training programs must be introduced so that would continuously assist the teachers and enhance their technology skills. Simply teaching basic ICT skills are insufficient so constructive steps should be essential in teacher educational training in order to enhance the ICT based learning. Government should have a policy in order to support ICT assisted teaching in the government institutions so teacher can easily adapted the contemporary methods of present time in order meet the 21st century challenges.

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