The International Asian Research Journal 04(01): pp.18-23, 2016
ISSN: 2310-337X

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ICT BASED EDUCATION IN PAKISTAN: A CRITICAL REVIEW AND IMPLICATIONS

[1]Dur-e-Najaf Zaibi, [2]Dr Azidah Abu Ziden and [3]Durr-e-Nayab

[1&2] PhD Scholar, School of Educational Studies, University Sains Malaysia.

[3]Lecturer, Department of English, The Women University Multan, Pakistan.

ABSTRACT: *Within the last two decades, Information and communication has tremendously transformed the educational system and promote dramatic changes in educational process. ICT in education is more crucial today than ever before. ICT growing demand and capabilities are consider essential in the learning environment.ICT allow teachers and students to work more efficiently than in the past, but the teacher's role in present time is more demanding. The aim of this paper is to elaborate the barriers in the way of ICT assisted education in Pakistan and also present the solutions and future endorsements to overcome on these barriers and acquire more benefits from the ICT assisted education.*

Keyword: Information and Communication Technology, Transformed, Barriers, Assisted

I. INTRODUCTION

Information and Communication Technologies (ICT) have transformed all aspects of our lives and offer tremendous opportunities and challenges for education. In all educational institutions in the world it is compulsory to provide every citizen with the knowledge and skills and also upgrade the delivery methods of this knowledge that are required for living and working in increasingly technology rich environment. The International Conference on ICT and Post-2015 Education highlighted the significance of Information and Communication Technologies that education system should ensure that they are fully equipped with all the tools in order to enhance the quality and relevance of teaching and learning. The recent technological change, including internet, cloud computing, mobile technologies as well as the development of open education resources, all

Corresponding Author : Dur-e-Najaf Zaibi, School of Educational Studies, University Sains Malaysia.

these changes transform the ways of teaching and learning and also reshape the conventional ways of education. ICT is an umbrella term that comprises on any communication application or device encompassing television, computer, cellular phones and network software and hardware satellite system and so on, and also the various services and applications related to them, such as distance learning and conferencing. ICT are often spoken in particular context, such as ICT in health, education or libraries. This study aims to present a comprehensive literature of international articles relating to barriers faced when introducing ICT in to education.

This review will help to identify the factors that influence the implementation of ICT in education in Pakistan. It is hoped that this study will be beneficial for the educators, policymaker's educationists and other decision makers who are involved in the educational process.

Officially Pakistan is a Islamic state and the population size is 200 million. Pakistan's education system have cross culture blended elements (Khalid and Khan 2006) . The educational system of Pakistan has same attributes like western world. The procedure of education starts from the age three to five year that is called pre-school and primary school phase starts and this followed by 5 year secondary education. After this students entered in intermediate or higher secondary and then next tertiary education begins. Unlike western degree program Pakistan's master degree also based on two year period. According to Saeed (2007) Pakistan's educational structure is complex, therefore it is a dire need to expand it.

II. ICT FOR EDUCATION

There are various kinds of educational relevance ICT products, such as teleconferencing, audio conferencing, email, television lessons, interactive radio counseling audio cassettes and CD ROMs etc. These ICTs products have been used for various purposes. Bhasin (2012) Suggested that the use of Information and communication can enhance performance of teaching and learning, positively influenced the education as a whole, and also helpful in developing skills in the disadvantaged communities. According to (UNESCO 2014) Information and communication technology can support and promote international networking and collaboration in educational development. In fact ICT will be capable to provide more effective and flexible ways in teaching and learning. From the last two decades, the implication of Information and communication in education has become a

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significant topic in research on educational reforms (Whitehead, Jensen et al. 2013, Zedan, Yusoff et al. 2015).

III. BARRIERS TO THE IMPLEMENTATION OF ICT IN EDUCATION IN PAKISTAN

Although the Government of Pakistan is committed to implementing ICT in education but there are a lot of barriers that create hindrance in the successful integration of ICT in education. There are external and internal factors that are considered to be the hurdle in the implementation of ICT in education. According to (Jef Peeraer 2011, Nawaz 2013), fist order constraints include lack of resources, unreliability of equipments, lack of technical assistance. Second order hurdles include school level factors, such as organizational and teacher level factors, such as attitude about technology usage in education and also technology competency. How these barriers influence the use of ICT in education are described below.

IV. LACK OF ICT SUPPORTED INFRASTRUCTURE

Pakistan is one of the developing countries. Lack of resources and inappropriate infrastructure is a one of the main hindrance in the successful implication of ICT in education. In order to effective implication of ICT there is dire need of availability of equipment, computers and technical assistance. On the other hand most of cities in Pakistan do not get enough electricity more than eight hours in a day due to lack of electric supply. The implication of ICT and ICT infrastructure in a country is dependent on the reliable electric facilities. The successful integration of ICT demands other resources, such as computers, multimedia projectors, scanners and printers etc – which are not present in all educational institutions.

V. INSUFFICIENT FUNDS

Successful implementation of ICT in to education involves considerable funding, that is very difficult to manage in developing countries like Pakistan, where most of the population is living below the poverty line. On the other hand ICT integration in education needs huge funds (Mufti 2013). (Peeraer and Van Petegem 2011, Player-Koro 2012) state that effective use of technology depends on the provision of hardware and software resources and the equality of access of ICT resources by teachers, administrative staff and students. These costs are most of the time inflated and cannot be able to provided by developing countries including Pakistan.

VI. POLITICAL FACTORS

Jef Peeraer (2011) States that the most distinguished of the barriers in the use

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of ICT in developing counties education systems seems to be the political will of the people in the corridors of power. The funds allocation is not sufficient for the educational sectors and ICT does not seem to be important to the leaders (Ogbu 2015). In the third world countries and also in Pakistan, it has been seen that most of the budgetary allocations are for the defense forces but if the political leaders give notable consideration to the technology, it will surely bloom.

VII. SOCIAL AND CULTURAL FACTORS

Pakistan's half of the population is women who have relatively less access to the advantages of technology. (UNESCO 2014) report states that one of the most influencing hurdle in the way ICT integrated education in developing countries including Pakistan is low social status of women and providing educational facilities or use of ICT to women is not consider essential. Women are stick to household activities therefore they may find less time to use ICT.

VIII. TEACHERS' ATTITUDE ABOUT ICT

Teacher's attitude is considered to be the major hurdle in the way of ICT integrated teaching in Pakistan. Hussain, Niwaz et al. (2010) States that teacher's attitude plays integral role about technology use in teaching process. Hence the successful use of ICT in to class room largely depends on teachers'. It has been suggested that teacher's attitude and belief decided to use ICT in classroom or not (Ihmeideh 2009). So most of the teachers in Pakistan stick to use traditional methods of teaching rather than using technology assisted teaching methods. In order to integrate technology in to education system it is essential to change the attitude of teacher's in to positive side to the use of ICT in teaching.

IX. LACK OF TIME

Pakistan, a developing country faces the problem of shortage of teacher in the educational institutions and the teachers are already burdened with other duties so they can not found enough time to use ICT in education process. Moreover teachers are also responsible for a administrative duties so they can not focus on the quality teaching (Mikre 2011). Several studies (Petegem 2011, Mufti 2013, Moltó Egea 2014) concluded that lack of time is one of the biggest hurdle in to ICT based education. So teachers need proper time to learn how to use ICT application and tools and also need time to collaborate with other fellow teachers.

X. CONCLUSION

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The aim of this paper was to provide information on encouraging the desired improvement in future education system of Pakistan. The finding of this study indicate that teachers have a strong desire for the integration of ICT in to education but in the successful integration of ICT there are number of barriers that create hurdle in the way of technology assisted education. The major barrier were lack of resources, lack of funds, teachers attitude, shortage of time. In order to meet 21st century challenges government should have to support ICT assisted education. A review of the literature clearly indicates that ICT in education is still a developing process, for the successful integration of ICT requires effort from government, policy makers, school administrators and teachers. This paper discussed the present situation, barriers and solution for ICT in education.

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