Teachers’ Perception about Learning with Information and Communication Technologies: Usage & Challenges

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Abstract
We are living in an era of technology where everything demands knowledge, understanding, and handling of digital technology. Technology has renewed all spheres of social and professional lives and in this regard teaching and communication are not exceptional. Effective use of technology for real Communication is widely followed in teaching and teachers need to know the use of ICTs in classrooms for delivering lessons to inculcate sound knowledge and understanding of concepts. It is found that despite the significant impacts of ICTs on teaching and learning teachers are reluctant to use technical aids in the classroom. They report various issues that hamper them to use technology in their day-to-day teaching practices; moreover, a majority of teaching professionals are not convinced that they can make their teaching more and more effective by using technology. The paper aims to find out the challenges the teachers face to use ICTs in classrooms and perceptions of teachers about the same. A qualitative research method was used to carry out the study. A well-designed questionnaire comprising of open-ended questions was served to randomly selected serving teachers from government schools of District Khairpur. The responses of the participants were analyzed to identify the challenges faced by the teachers while using ICT during the teaching and learning process. The collected data was analyzed and it was found out that teachers find it difficult to use technology in classrooms because they are not provided appropriate computers, technical support, and professional training to learn to use technology. It was also identified that because of time constraints teachers are unable to use ICTs in their teaching practices. Further, it was explored that teachers believe that teachers have limited perceptions about technology as they hold the view that technology just wastage their time. Based on findings, it was concluded that the integration of ICT tools is highly effective as it makes students more creative, productive, and hard-working as compared to traditionally managed classrooms. Schools administrations should provide not only the technology but also technical assistance to the teachers. Schools administrations need to help teachers to know the importance of ICTs and to use it for a meaningful purpose to improve the standard of education.

Keywords: Teachers’ Perception; Learning; Information and Communication Technology; Usage; and Challenges

1. Introduction
We cannot deny the important role played by education in individuals' well-being and their successful survival in societies they are connected with. It is a well-accepted fact that the best investment is the investment in education because education gives people the power to cope with their day to day challenges. Moreover, education serves as a key to change for betterment, social welfare, and individuals' success as the future of nations depends on the quality of education people are provided by the educationists. This is the reason that all nations of the world stress education and educational scientists make their endeavors to find out the ways that could be used to facilitate learners to maximize their potential and come out with the best achievements not only for themselves but their national causes. Researches, in the field of education, have unveiled multiple areas that need to be reconsidered to plan more and more effective strategies for better education for the individuals so that they can contribute to national causes. We are living in an era of technology that demands changes for more and more improvements and excellence. This is obvious from the changes modern age has experienced since the last decades like the replacement of blackboard with smart boards, the use of technology for teaching, etc. The use of technology in
education has become an essential teaching practice and nowadays we cannot imagine a classroom with technology.

The researches by social scientists and educationalists have laid the foundation of information and communication technology as a separate entity that is based on the use of technology for communication. Zhang and Aikman (2007) declared that information and communication technology is an unavoidable area in an era of fast techno cultured world we are a part of. As different educational scientists, educational researches are putting their remarkable efforts to improve education and ensure the best quality education, various researchers worldwide are working on different domains, they are equally concerned with the drawbacks of their educational institutions and have engaged themselves to study, explore and find out the factors that restrict learners to learn and excel. They are also working for improvement and excellence that is indeed not possible without finding out the flaws and weak areas in the system. As ICT is a very important tool in teaching and learning and is used to have the best teaching/learning outcomes, the same is effectively used to measure, find out, explore and identify the possible barriers and barriers for improving the quality of learning. ICT is an amazing tool for change and improvement and teachers to agree that they need to do the maximum use of various technologies for effective teaching, meanwhile, it is also the reality that it is not easy to handle technology as teachers often find themselves like fish out of water when they are assigned any task related to technology (Balanskat, Blamire & Kefala, 2006).

Objectives of the Study
- To explore the barriers faced by school teachers in using ICT tools for classroom learning.
- To identify school teacher perception in implementing ICT tools for learning in the classroom.

The Rationale of the Study
Education is important for people in general and nations in particular. Without education, people cannot cope with the challenges of their life and they cannot contribute to national well-being and development. As far as developing countries are concerned, they need to focus on their educational policies to compete with the developed nations and maintain their position in the world. These nations cannot be economically empowered unless they educate themselves. According to the Legatum Prosperity index 2017 India ranked 92 among 142 countries and is still going through different barriers to providing quality education at a different level. The same situation exists in Pakistan and other developing countries. Though the governments have taken various initiatives to enhance the quality of education for their people, there is still room for improvement. This improvement is not possible without technology as we are living in an era of technology and nations need to make themselves more and more technologically and economically powerful to cope with the emerging challenges of the world. The current study focuses on identifying barriers teachers face in using ICT tools in classrooms and perceptions of teachers in implementing ICT tools in the classroom for learning. The study aims to bring to light the issues so the policymakers and curriculum designers can work on the existing teachers' training curriculum and worked out the strategic ways to overcome the barriers.
2. Literature Review

New technologies are playing a dynamic role in the field of teaching, education, training, and development, but these are also affecting the lives of teachers because they need to learn to use these innovations in their practices. Without knowing the proper handling and use of different technological tools, they cannot enjoy their successful survival in the fastest-changing world. Schoepp (2005) in his study concluded that integration of ICT into teaching and learning is a complex process and people may find it difficult to deal with the “barriers” they may encounter in their day to day professional lives. Different barriers have been identified by the educational researchers, of all these some of the key obstructions are discussed here:

2.1. Network related Issues

Limited accessibility and network connectivity trouble are some of the commonest barriers that all teachers go through and this hurdle doesn't let them complete their task on time. Mostly teachers face extreme embarrassments because of network issues as they fail to deal with technical issues they come across. All teachers are not good at solving these issues they have their expertise that they cannot usefully because of internet issues. Here, we cannot deny the fact that in various areas people have no availability of the internet at all and they cannot use any software or application that needs the internet.

The experts have identified various reasons for limited accessibility and internet connection errors. Some of them express that the biggest reason for the inaccessibility of ICT resources is not always non-availability of the hardware and software or other ICT materials within the schools as it is often quoted. In many schools, there are a host of latest technological tools but teachers cannot use these tools because of the mentioned barrier. Another issue is organizational disorder and mismanagement that hampers the achievement of set goals and targets. Schools must ensure the availability and accessibility of all tools that can be used for effective teaching and learning. Empirica (2006) commented that inappropriate access is one of the key barriers for ICT equipped learning, lack of access includes many things such as lack of access, and lack of adequate material, means in some schools’ technology is available but teachers are not allowed to use. Pelgrum (2001) went on to explore the views of the practitioners from 26 countries and identified the main obstacles to ICT implementation in schools. Toprakci (2006) also expressed the different hurdles that hamper teachers in their work. He mentioned an insufficient number of software, insufficient units, slow speed of systems, old systems, and insufficient access to the internet as the main barriers. Albirini (2006) added that insufficient computer resources slow down to use of technology in the classrooms and teachers cannot continue their class and often fail to communicate efficiently. That’s why it is one of the greatest barriers to integrating ICT into the learning process.

2.2. School with Limited Technical Support

Teachers must have good command on their subject so that they can inculcate sound knowledge and application of concepts among their students and for this they need access to technology with well-organized classrooms with all technical support. Usually, in schools, administrations suppose that they just need to arrange technological tools and computers for teachers and teachers will manage everything by themselves. These administrative personnel should ensure if everything is functional or not, what is the issue if a teacher is not comfortable to use it. Lewis (2003) stressed the importance of technical support for the use of ICT in teaching and said that without effective
technical resources, school and classroom organization would not be according to the ICT requirements. Therefore, unavailability and limited technical support are obstacles to effective use of ICT and should be overcome. Pelgrum (2001) also supported Lewis' point of view and commented that found that in the view of primary and secondary teachers, lack of technical assistance is one of the top barriers to ICT use in education. Sicilia (2006) also viewed technical problems as one of the major barriers for teachers. It is commonly observed that teachers have to face difficulties in accessing the internet, searching, browsing, downloading required content, having a printout, etc. It is also found that computers that are provided to them are not properly updated and they wait their precious time struggling with malfunctioning old computers. This is how teachers just waste their precious time and energy that end up in nothing. Sometimes, teachers become disappointed with technology and prefer to work without ICT. Sicilia (2006) condemned technical barriers as these hurdles hamper the smooth delivery of the lesson or the natural flow of the classroom activity (p. 43). Teachers don't feel comfortable with flawed technology that affects their professionalism. A well-trained should be available in schools to help out teachers in technological matters so that they can integrate ICT into education.

2.3. Lack of Effective Training

Lack of professional training is also one of the barriers that restrict teachers to integrate ICT in teaching/learning. Teachers must be provided with training to use effective software and technological tools so that they can use that equipment without any difficulty. Albirini (2006) viewed lack of effective training is one of the frequently found barriers as teachers are always reluctant to use a new technology or software unless they are trained to use it. Also, there were not enough training opportunities for teachers in using ICTs in a classroom environment (Pelgrum, 2001). If teachers are provided appropriate on-job training, they can use ICT in their teaching practices and can improve the classroom environment. Pelgrum (2001) was of the view teachers are not good at handling ICTs because of a lack of effective professional training. Moreover, a few training opportunities that are provided to them are not enough to serve the purpose. Therefore, to overcome this challenge there is a need to overcome review teacher training curriculum for improvement and amendments. Beggs (2000) also identified a lack of training as one of the top three barriers to teachers’ use of ICT in teaching. Indeed, teachers' training, development, and use of ICT have remained a part of initial teacher training programs to help out teachers to use technology efficiently, but different subject specialists have reported their reservations that may play a very important role in facilitating them. These reservations are very helpful for educational experts and trainers to plan out effective teachers' training programs for different subject specialists according to their demands.

It is concluded from different studies that inappropriate training is again a barrier to the integration of ICT in teaching and learning. Most teachers are not good at using computers, delivering lessons smoothly using modern technological tools, their lack of confidence in technology, etc. Teachers should understand the importance of ICT in education and the outstanding results they can achieve through ICT. Once they learn the amazing results of ICTs, they will start taking interest in grasping more and more knowledge, understanding, and command over their use. This is how this barrier can be overcome.
2.4. Limited Time

Time is an important factor in any job and when it comes to teaching, a good teacher must know the effective use of time. Teachers need to finish their tasks on time and teachers often stay anxious about the completion of the syllabus. They need to strategize their lessons as per the time allocated to them like the number of units, duration of the class, and lots more. Teachers often express that they find it difficult to use digital technology because of the limited time allocated to them that's why they shouldn't use technology and carry on without it. Recent studies have also indicated that teachers are reluctant to use ICT tools in their classrooms because of the time table. For effective teachings, they need a lot of time to review websites, to sort out appropriate material, to plan lessons, selecting of appropriate software, use of software to deliver the lesson, to prepare tests and assessments. This takes a lot of time and they can't integrate ICTs in teaching. Sicilia (2006) also supported that time is one of the major barriers that teachers face while teaching with ICTs. The integration of ICTs in teaching demands lots of time as teachers need to consult IT experts for technical support and this is how they stay dependent on them. Because of this dependency, they find it difficult to complete their task on time. Moreover, teachers also need to practice and prepare themselves to deliver lessons using ICTs and delayed on part of technical staff that affects their working. Teachers also need an assistant to help them with the handling of computers and other technical tools but schools do not have much staff and teachers are required to managed all things by themselves.

2.5. Lack of Teachers’ Competency

Teachers have no interest and time to learn the use of the latest technologies and this incompetency affects their confidence badly consequently they do not indulge in the use of ICTs and employ outdated teaching pedagogies. A majority of teachers have no or limited computer skills and this incompetency keeps them away from technology. In different countries of the world it is not possible for people to access technology and as far as developing and less developed countries are concerned, teachers find it very difficult to have the expertise to handle technological tools. Pelgrum (2001) conducted a study and concluded that teachers' limited skills and limited knowledge are the biggest barriers to integrate ICTs into education, teaching, and training. Sicilia (2006) was of the view that developing countries are technologically backward and people are not educated enough to use technology. They do not accept technology and feel comfortable with their outdated less effective teaching pedagogies. Though some people use computers their skills are limited. With limited skills and knowledge of ICTs, they cannot implement their use. Therefore, people should be boosted to learn and use technology with full confidence. Therefore, each nation needs professional trainers to help teachers to adopt ICTs and boost their confidence to learn to use technological tools efficiently.

3. Methodology

To carry out the current research study, a quantitative research methodology was used. A well-designed questionnaire was developed to know the views of the respondents. All the items in the questionnaire were meant to address research objectives concerning the barriers teachers face to use ICTs in the classroom and teachers’ perception of the use of ICT tools in schools. To check the validity of the questionnaire, a pilot run was conducted and few amendments were made to improve the tool. Experts’ views were also taken to finalize it so that relevant data could be collected from the respondents.
The random sampling method was used for the current study and the sample was the school teachers from government schools. Of all schools, 10 were selected through convenient sampling, and school teachers were selected through purposive sampling.

The well-designed questionnaire comprising of open-ended questions was served to the respondents to have their responses. The purpose of data collection was shared with the teachers and they were helped out to understand the questions so that more and more authenticated data could be obtained. The received responses were then analyzed carefully for the mentioned purpose.

4. Analysis of data

Challenges in implementing ICT tools in teaching and learning were found as follows:
- Administrators provide malfunctioning and outdated computers
- Have internet or connectivity issues
- Systems or computers are out of order, not updated, and are not repaired
- Have no computer skills.
- Are not provided any technical support
- Are not provided pedagogical support
- Are not provided a printing facility
- Lack of content in the national language
- Have limited time
- Have pressure to prepare students for exams and tests
- Find it very difficult to integrate ICT use into the curriculum
- Do not know the benefit to use ICT in the classroom

Perceptions related to the usage of ICT tools in the classroom for teaching and learning were found as follows:
- In ICT oriented classrooms students concentrate more on their learning as compared to traditional classrooms.
- Technology-based teaching makes students more hardworking by boosting their confidence
- Technology-based classrooms are more productive as students learn to be creative
- Technology helps teachers to engage students more in their work/learning
- ICT oriented classrooms help students feel more autonomous in their learning and they learn to grasp new ideas
- ICT facilitates collaborative work among the students and they learn to work together
- ICT oriented classrooms make students understand more easily what they learn as compared to traditional classrooms.

5. Discussion

The current study was aimed to identify the barriers to the use of ICT tools in teaching and learning and perceptions of teachers on the use of technology in classroom practices. The responses of the participants were then analyzed qualitatively to explore why teachers find it difficult to use ICT tools in their teaching practices and what are their views about the use of technological aids related to teaching. Based on the analysis, it was found that teachers’ beliefs about technology have an impact on their practices (Ertmer, 2005). Anxieties related to technology is the biggest hurdle in
their use, whereas their confidence on the same is their power. Using technologies helps teachers to have a conducive learning atmosphere as students and teachers interact actively that promote learning among the students. Students in technology-oriented classrooms show more interest in learning and become actively engage in classroom discussions. Teachers also expressed that integrating ICT in teaching makes students independent learners with sound knowledge of the topic and applications of the concepts.

6. Conclusion

Based on findings, it was concluded that the integration of ICT tools is highly effective as it makes students more creative and productive. Students concentrate more on their learning; they work harder when get exposure to technology. Schools administrations should provide all ICTs and technical assistance to the teachers. There should be proper professional training with incentives for them. In addition to this, managements and administrations need to work with coordination to help teachers to know the importance of ICTs and to use it for a meaningful purpose.

7. References


