

Chapter 20

Interactive Learning System for Primary Schools using Tablet PC

Asghar Ali Chandio

Quaid-e-Awam University, Pakistan

Muhammad Saleem Vighio

Quaid-e-Awam University, Pakistan

Zahid Hussain

Quaid-e-Awam University, Pakistan

Mehwish Leghari

Quaid-e-Awam University, Pakistan

ABSTRACT

The rapid development in technology has facilitated human beings in many ways such as automated home appliances, smart vehicles, smart mobile phones, and tablet computers. The uses of these tools and techniques are increasing in our daily lives to facilitate day to day work. The new trends in technology have focused on finding approaches towards improved learning techniques. Various tools are being used to integrate Information and Communication Technology in education. Tablet Personal Computers (PCs) are one of the new and innovative tools used in education for enhancing learning skills. This research has been conducted in five primary schools, where students of class nursery to class three were taught basic lessons using Tablet PC. In this research an application has been developed on android platform with easy to use interface, where the students were able to perform simple arithmetic calculations and learned alphabet of Sindhi and English languages in visual form. During the experiment, it was observed that with visual aids students understood lessons more clearly and easily.

INTRODUCTION

The use of technology-oriented tools such as Tablet PC and smart devices in education sector has increased at rapid pace since last few years. Johnson et al. (2013) have forecasted the common use of Tablet PC and other interactive tools in higher educational institutes of developed countries in next one or two years because of their ease of use and increased learning. However, interactive

tools have already been adopted in few schools and colleges of the developed countries in order to transform their educational system.

It has been witnessed that the use of technology is not only aimed for engaging students and making learning a fun but it also enhances technical and information literacy skills of students (Enriquez, 2010). Recently, the use of mobile devices with internet access has increased vastly in education for providing contextual motivation and information

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gathering at any time. Interactive learning applications can be used to transform learning process from traditional paper-pencil based methods to digital tools (Dundar and Akcayır, 2014).

Majority of schools in Europe, Thailand, Malaysia, Singapore, Japan and Korea are integrating Tablet PCs and other smart devices into their educational systems and nowadays much emphasis has been put to create innovative skills among students than ever (Koh and Lee, 2008; Hyo Jeong, 2012). Majority of the researchers think that schools should develop creative skills for students using interactive learning tools (Roblin et al., 2013). Various interactive learning projects using Tablet PCs have been implemented at the primary school level in the mentioned countries, which aim to provide quality education to the deprived groups of children such as those living in the impoverished rural areas (Mario and Domingo, 2012). The US and Turkish governments have initiated interactive and technology oriented projects with a large amount of budget in their educational system in order to provide equal learning opportunities to students of all regions (Crompton & Keane, 2012; Lewin & Luckin, 2010; Eren & Izmirli, 2012; Fri-tic, 2012). However, majority of public sector schools in the Sindh Province of Pakistan have shortage of resources and lack access to the quality education. Moreover, the existing learning resources implemented in educational system of Sindh province don't provide any interactive mode of learning i.e., books cannot produce any sound when the finger is moved or touched on particular text or image. There is also shortage of technology-oriented resources such as computers at primary schools of Sindh Province.

Keeping in view the use of technological tools in developed countries, if Tablet PCs and other interactive tools are incorporated into the Education System of Pakistan, particularly in Sindh province, then they may enhance the learning skills of students.

1.1 Objectives of the Research

The most important objective of this research is to introduce new mode of learning in the primary schools of Sindh province using Tablet PCs. Tablet PC is said to be a digital slate or white board which is nowadays most commonly used tool in educational systems of developed and many other countries. Further objective of this research is to make learning as a fun by developing interactive user friendly application including Sindhi, English alphabet letters, number counting and mathematical calculation lessons and measure the effectiveness of the technological use by students.

1.2 Scope and Limitations of Study

Students of primary level can use this application in order to learn in easier way. Non-enrolled students can utilize this application at their homes for enhancing their learning skills. Even illiterate adults, particularly the girls who cannot attend the schools due to various reasons may utilize this application at their homes for getting/enhancing education. Government organizations or NGOs who are working for enhancing the literacy ratio in Pakistan can also use the findings of this research. This research study was conducted only in five primary schools, where 269 students and 22 teachers participated. Also this research study is focusing only on students of primary level.

1.3 Research Questions

The research questions to be answered under this study are: What effects the Tablet PC will have on the learning of primary school students? What are the perceptions and attitudes of students and teachers for the implementation of Tablet PC as a learning tool? How learning techniques can be made easier for primary school students?

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