



## Journey with the students towards exploring the potential of Tablet PCs in learning

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This paper discusses the ways Tablet PCs were used for in and out of class activities in undergraduate courses. Examples from different subject areas and different types of activities are quoted. Two case studies are discussed to demonstrate different ways of recording students' learning journey. This paper includes excerpts from students' reflections and students' blog entries as authentic evidences of the effectiveness of Tablet PCs for learning.

Keywords: Tablet PCs, learning journey, blogs, collaborative learning, self reflection, technology for learning.

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### Introduction

Complex set of 21st century skills could be acquired through integration and synthesis of various types of activities and by putting students in a challenging environment where students have opportunities to: collaborate and communicate, take responsibilities of their own learning, interact in a diverse environment and incorporate technologies in their learning.

This paper reports on two selected case studies conducted in 2007 and 2008 for two different cohorts of undergraduate students from College of Education and College of Sciences respectively. Two different format of introduction of Tablet PCs for learning were introduced in these two case studies. Participating students were provided training by the researcher and research assistants working under the project to introduce different features of Tablet PCs. These training sessions were conducted in small groups and various uses of Tablet PCs were discussed with relevant examples.

### Case studies

Case study 1: In this study we have introduced Tablet PCs in an undergraduate course in primary teacher education program. We started with the research question: how the use of Tablet PC could facilitate and/or enhance students learning in collaborative groups.

Collaborative activities such as developing collaborative concept maps, recording thinking and decision making events in a problem based learning environment becomes difficult at times due to non availability of suitable tools. It is possible to exchange files among group members and work collaboratively using Tablet PCs, and therefore we found that using Tablet PCs facilitate group activities in problem based learning (PBL) environment for an undergraduate class of Science and Technology Education.

Students were engaged in collaborative activities in small groups of three students each while working towards the solution of problem for five weeks. Activities included electronic presentation of students work midway through and at the end of five weeks for peer and faculty review and feedback. Students were also required to keep a record of their learning journey and submit self-reflection of their experience of the PBL process. Students used Tablet PCs to interact with each other and to collate the information for final presentation. The findings of the study show that introduction of the technology and embedding it in the curriculum enhances students' performance (Bhattacharya, 2008).

Case study 2: In another study we concentrated on how wireless technology and social networking tools facilitate individual student learning. Students were given the Tablet PCs to use for a semester in and out of classroom for all the courses they were studying during that semester. These students were majoring in Computer Science and Engineering Education. Students were supposed to put weekly blog postings on their experience of using Tablet PCs for learning. This study revealed the usefulness and hurdles faced by the students in using Tablet PCs. Students' blogs were a useful source of information to evaluate the technology introduced in education.

In this case study blog entries gave an opportunity for the researcher and students to visualize the learning journey. Qualitative and quantitative analysis of the data revealed the effectiveness of Tablet PCs in facilitating students' learning (Bhattacharya, 2009). Although this study was not consisted of group assignments rather students were free to read each other's blog postings and comment on those. This approach was successful in using social networking tools to enrich students' individual learning experiences through peer and expert feedback and comments.

## **Some excerpts from record of students learning journey**

From Case Study 1:

We were able to immediately show representations of our ideas, and the work was more shared by having the tablet there with us there was not one person who had to return home and type it up. We were also able to use all three tablets at the same time, so we could get through work quicker by designating jobs.

The pc helped because we did not have to crowd around it, one person could draw on the pc and then swivel it round to show the others. Drawing ideas was much easier on the pc as was putting ideas in context because we could draw our slide to scale on the pictures of the actual area and see which was best.

From Case Study 2:

A useful toolbar I found in One Note is drawing tools. I have found them handy for drawing neat axes for graphs quickly and handy for other geometric objects. Another function that is also useful is the lasso tool, being able to move handwritten text around is a big advantage as what the lecturer writes on the board is not always in the most logical position for a nice flow of notes.

I have found the tablet really useful for tutoring and using it as a tool to explain concepts to other students and scribbling down examples or working. I often find the swivel screen really useful when I have to explain something or show somebody something who is sitting opposite me or next to me without having to move the laptop. One problem I found was that often somebody was on my right and it is not possible to swivel the screen in that direction.

## **Conclusions**

Students' and teachers' feedback and reflection on the use of the technology have been considered for future improvement in the courses. Mobile technologies and wireless technologies like Tablet PCs allow students to work in collaborative groups, use internet and other software tools for productive, creative and efficient output. The novelty of the present day sophisticated technologies motivate and engage students in creative endeavours.

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