Chapter 15
Formal and Informal Use of Handhelds by Australian and British Students: A Comparative Case Study

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ABSTRACT

In this chapter, we discuss the capacity of mobile technology in facilitating young people’s ubiquitous learning and socializing, both formally and informally. We report on a study of how young adolescents (12-13 year olds) in Australia and UK use handheld computers in formal (school) and informal (home) situations and their perceptions of the usefulness of these devices for their learning. The data show that entertainment activities with the handhelds dominate both school and home for both groups of students and that there is little continuity between the activities carried out in the school and activities in the home. We argue that schools have a responsibility to bridge the home-school learning and to support these students to become self-directed learners for lifelong learning.

INTRODUCTION

The mobile device that is the focus of this chapter is the handheld computer. The chapter presents a comparative study of how Year 7 (12 year old) students in Australia and UK with personal ownership of handheld computers used them formally in the classrooms and informally at home. According to the manufacturers’ labels and specifications of the devices used, the Australian students referred to the handheld computers as pocket PCs (Personal Computer) or PDAs (Personal Digital Assistance) while their UK counterparts called them EDAs (Educational Digital Assistance). In this chapter, we will refer to them as handheld computers or just handhelds.

Handheld computers are ubiquitous tools that have the potential to contribute to an individual’s seamless learning and social lives. They are not as powerful as laptops or tablet PCs but their...
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small size means that they can be easily carried around in the pocket, school- or hand-bags. In educational institutions, wireless technology enables the handhelds to access information on the Internet anytime for students’ research purposes. Reference and other learning materials such as simulations, lecture notes, e-books, encyclopedia and worksheets could be installed in the students’ handhelds or they could be transferred via Bluetooth from the teacher’s computer to the students’ handhelds. At the school level, handhelds alleviate the necessity to book computer laboratories or queue up to get access to technology resources such as the Internet and other learning materials.

Schools with handheld programs where students purchase and own their own handhelds will be aiming at the integration of these devices into the students’ education and other aspects of their daily lives. For example, they are able to replace their notebooks and diaries by using the calendar and Note functions on their handhelds to manage learning and social schedules as well as their learning tasks (Sharples, 2003). Nicholas and Ng (2009, p.2174) have suggested that ‘having access to a handheld all the time is like having the pens, text books, camera, calculator, voice recorder, clock and Internet access all in one’. They have identified a list of uses that personalised handhelds could offer that provides ‘immediacy’ to learning (Ogata and Yano, 2004) and learning in context. These uses include: (i) accessing the Internet via wireless technology to research for information, access emails and social networks (ii) organising their daily activities and time management using the calendar, the clock and alarm (iii) record keeping and writing, for example, by taking notes, audio recording and drawing figures using the Note function; writing short paragraphs or keeping reflective logs using Word Mobile where students either transcribe (the writing recognition software will change the writing to text) or tap on the keyboard with the stylus (iv) communicating and collaborating with peers via Bluetooth in class for the exchange of files or via the Internet to access emails and other social networking websites such as Facebook, Flickr and blogs (v) learning from software packages e.g. foreign languages, dictionary and encyclopedia, Periodic Tables and other subject-related software (vi) collecting data with handheld sensors and probewares or taking pictures and video recording (v) displaying, calculating and analyzing data using Excel Mobile and the calculator (vi) accessing educational resources and software such as e-documents, simulations and multimedia materials, movies with Media Player, interactive worksheets exercises e.g. those created with Hot Potatoes software (vii) creating PowerPoint presentations using Pocket Slides and (viii) self-education and entertaining with installed or downloaded games, music, podcasts, lectures and interviews.

The integral access to a wide ranging set of applications that support ubiquitous learning enables the handheld to become a natural and immersed part of the student’s learning to learn seamlessly where the boundaries of time and place are blurred. In this regard, learning with handhelds is blended learning that takes place both formally in classrooms and informally outside of school and on the move, for example, in buses or trains.

The aim of this chapter is to present an investigative study on the attitudes of Year 7 students in Australia and the UK toward personal ownership of handhelds, how they made use of their handhelds in formal (school) and informal (home) situations and their perceptions of the usefulness of these devices for their learning. The broad research question is: How do Year 7 Australian and UK students with ownership of handheld computers make use of them in schools and at home? Underlying this question are the sub-questions of:

1. What are the similarities and differences in trends between Australian and UK students’ usage of their handhelds at home and in school?
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