Chapter 1.6
The Use of Personal Digital Assistants in Nursing Education

Nina Godson
Coventry University, UK

Adrian Bromage
Coventry University, UK

ABSTRACT

The use of Personal Digital Assistants (PDAs) and smartphones (combined mobile telephone and PDA) in Nurse Education is a relatively new development, in its infancy. The use of mobile technologies by health care professionals is increasing, and it seems likely to accelerate, as mobile information and communication technologies become more ubiquitous in wider society. The chapter reports on a small-scale feasibility study to evaluate the practicalities of supporting student nurses on their first clinical placements with PDAs that have been pre-loaded with reusable e-learning objects. The student nurses generally found the PDA easy to use and carry on their person, valued the availability of the reusable e-learning object on their clinical placements and called for more of them to be made available to learners.

INTRODUCTION

Clinical Nurse Tutors face the challenge of managing large numbers of students in clinical skills sessions, when demonstrating and practising skills acquisition, including interprofessional working. This involves maintaining accurate and fair assessments of individual performance that may later serve as evidence of safe practice for their

clinical placements. There needs to be a means of continuing this supportive learning environment, in the transition from simulation to reality, to ensure the bridge from theory to practice is strong.

Ideally, to enhance learning and support development of decision-making skills, students should have access to information at the moment and the physical location where it is needed. In relation to this, a major aim of pre registration nursing programs is to assist students to attain competencies for practice, for example, in the use of the tools and technology associated with nursing. Healthcare professionals need to continually update knowledge and skills, in order to enhance their clinical practice and professional development. Similarly, student nurses in any speciality must get into the habit of continually becoming familiar with the latest practice recommendations, such as guidelines for preventing the spread of infection and standards from regulatory agencies.

Using the world wide web can help meet these needs, given that anyone can publish web-pages that are then available instantly across the globe. Information published on line offers advantages compared to text books and journal articles, which are often outdated by the time they reach publication and distribution. However, up to 2003, connection to the internet was typically on either a desktop or laptop personal computer. Since that time, pocket-sized personal digital assistants (PDAs), also known as palmtop computers, with wireless access to the World Wide Web have become available.

The first PDA, the Apple Newton MessagePad, was launched in 1993. In 1996, Nokia introduced the first mobile telephone with full PDA functionality (a genre known as 'smartphones'). However, early PDAs relied on wired connection to networked desktop or laptop PCs, until the launch in 2003 of the Hewlett-Packard iPAQ H5450. This was the first PDA featuring built-in Wi-Fi for connecting to wireless computer networks and the World Wide Web. In 2009, the majority of PDAs sold are Wi-Fi enabled smartphones, for

example, the RIM Blackberry, the Apple iPhone and the Nokia N-Series. It is argued in this chapter that the Personal digital assistants (PDAs) and smartphones can enable nurse educators can incorporate into the curriculum opportunities for students to develop critical approaches, and also introduce information technology as a tool in clinical decision making. This will serve as a foundation for using mobile computing technologies later in their careers.

This chapter describes a small-scale feasibility study in which the practicalities of using smartphones to support the undergraduate nursing curriculum programme at a UK University were evaluated. The students who participated were drawn from all branches of nursing, and were in their first year of nurse training.

BACKGROUND

In the mid-1990's the World Wide Web radically changed the possibilities of our information landscape, and simultaneously became available to users of pocket-sized hand held computing devices such as Personal Digital Assistants (PDAs) (Murphy 2005). Even so, the use of PDAs in nursing was rare until comparatively recently. The Cumulative Index to Nursing and Allied Health Literature (CINAHL) has had a subject heading for PDAs ("Computers, Hand-Held") since 1997, while the National Library of Medicine first used the term "Computers, Handheld" in the Medical Subject Headings (MeSH) in 2003.

Discussions in the early articles focused on theories of informatics and technology. More recent articles indicate that PDAs are in wider use (De Groote, 2004), for example in nursing practice and student education. Interestingly, the Medical professions have written most of the literature on PDA use in health care, and it is clear that as a group they are very interested in this. Members of other health care disciplines also demonstrate interest in using PDAs (De Groote, 2004). The

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