Chapter XVII
Using Information Technology in Nursing Education

Elizabeth Rogerson
University of Dundee, UK

Linda Martindale
University of Dundee, UK

Carolyn Waltz
University of Maryland, USA

ABSTRACT

This chapter addresses issues relating to nursing informatics as used and applied in nursing education. This includes the use of information technology (IT) in delivering nursing education, as well as the teaching of IT and informatics skills to prepare nurses for practice. Drivers associated with the development and use of IT in nursing education are discussed, as well as current use of IT in nursing education and practice, including both mainstream and emerging technologies. Lastly some key issues for the future are identified. Internationalism is regarded as a consistent theme in IT development and occurs as a recurring thread throughout this chapter.

INTRODUCTION

Over the past ten years information technology (IT) has made a substantial impact on the way students learn and how they are taught (Farrell et al, 2007). This evolution has been driven by factors and events internal and external to nursing education, including how nurses practice and how educators and researchers in Higher Education (HE) work together at national and global levels. Evidence also suggests that collaboration and partnership will increasingly play a major part in the use of IT in both education and practice (McCormick et al, 2007).

The nursing profession has long recognised the need for nurses worldwide to possess a basic set of

informatics competences if they are to operate effectively in an increasingly technologically driven world (Gassert, 1998; Saranto and Leino- Kilpi, 1997). Over the coming years the use of technology will continue to change the landscape of nursing education, health care delivery and nursing practice (Repique 2007, Brooks and Scott, 2006). It is therefore incumbent on nursing education to ensure that professional registered nurses are prepared for using technology in education and a wide variety of patient care settings, including highly specialised areas of practice. (Bickford et al, 2005). Curriculum design requires to address two distinct but related dimensions of IT use: firstly, how IT can be used to support effective learning; secondly, how students and practising nurses are educationally prepared to apply information and communication technologies (ICTs) in practice.

Increasingly, the education of nurses in IT use goes beyond concerns with the technology to a consideration of pedagogical, professional, social, political and economic consequences and implications of IT integration (Morgan, Rawlinson and Weaver, 2006; Clayton, 2006; and Alexander et al, 2002). This chapter therefore seeks to address three, key, contemporary issues:

- Drivers for the development of IT in nursing education
- Current use of IT in nursing education
- Future focus for IT in nursing education.

DRIVERS FOR IT DEVELOPMENT

Early definitions of nursing informatics described its application to, "… all fields of nursing: nursing services, nurse education, and nursing research." Scholes and Barber 1980, p 73). In 2003 the Canadian Nurses Association issued a more detailed definition of nursing informatics that included the need to manage and deliver educational experiences to support lifelong learning and nursing research (CNA, 2003). Such definitions demonstrate

the increasing relevance of nursing informatics in nursing education and evidence-based practice. This is supported by other authoritative voices. According to Smith, Cronenwett and Sherwood (2007), informatics and evidence-based practice need to be intertwining threads in curriculum and programme design, alongside other priority areas such as quality care and patient safety (Cronenwett et al, 2007).

Certain drivers can be identified, which have and will continue to influence use of IT in nursing education:

- Integration of nursing education into HE;
- Increasing use of IT in health care delivery and everyday life;
- Response of the nursing profession to IT;
- Move to standardization (of the basic and specialist skill sets, classification and nursing language);
- Need for lifelong learning.

A final driver for consideration that is intertwined with the above is internationalism. Throughout this chapter internationalism is a recurring theme associated with different aspects of the integration of informatics and IT into nursing education (Killeen and King, 2007).

The collective impact of these drivers on nursing education is complex and will continue to shape the direction and infrastructure of nursing practice, nursing education and health care delivery.

The integration of traditional schools of nursing into Higher Education Institutions (HEIs) over the last four decades has gained global momentum that includes the developing countries. A major advantage of this movement is that nursing education can benefit not only academically (Glen, 1995) but also from the significant funding made available to HEIs to support IT development. In 1993 the UK government supported the creation of the Joint Information Systems Committee (JISC) to oversee networking and specialised

16 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/using-information-technology-nursing-education/27335

Related Content

The Use and Evaluations of IT in Chronic Disease Management
Julia Adler-Milsteinand Ariel Linden (2011). *Clinical Technologies: Concepts, Methodologies, Tools and Applications (pp. 1075-1092).*
www.irma-international.org/chapter/use-evaluations-chronic-disease-management/53639

Nursing Informatics History and its Contributions to Nursing Knowledge
Heather Strachan, Peter Murrayand William Scott Erdley (2011). *Evidence-Based Practice in Nursing Informatics: Concepts and Applications (pp. 78-97).*
www.irma-international.org/chapter/nursing-informatics-history-its-contributions/48924

Visualization and Modelling in Dental Implantology
Ferenc Pongracz (2011). *Clinical Technologies: Concepts, Methodologies, Tools and Applications (pp. 2143-2152).*
www.irma-international.org/chapter/visualization-modelling-dental-implantology/53703

Development of Artificial Mouths for In Vitro Studies of Aroma from Liquid and Solid Foods
Gaëlle Arvisenet, Pauline Poinotand Carole Prost (2010). *Informatics in Oral Medicine: Advanced Techniques in Clinical and Diagnostic Technologies (pp. 1-16).*
www.irma-international.org/chapter/development-artificial-mouths-vitro-studies/40435

How Human Technology Improve the Scheduling of Unplanned Surgical Cases
Janna Anneke Fitzgerald, Martin Lumand Ann Dadich (2011). *Clinical Technologies: Concepts, Methodologies, Tools and Applications (pp. 1759-1769).*
www.irma-international.org/chapter/human-technology-improve-scheduling-unplanned/53679