Chapter XV
The Alliance of Problem-Based Learning, Technology, and Leadership

Timo Portimojärvi
University of Tampere, Finland

Pirjo Vuoskoski
Mikkeli University of Applied Sciences, Finland

ABSTRACT

This chapter will illustrate a combination of problem-based learning (PBL), information and communication technologies (ICT), and leadership in the context of health care education. It is argued that they form a coherent alliance that meets the challenges of education and leadership in health care. The topic and the research questions have emerged from expanding criticism against traditional educational programmes, and our own experiences of the research and development work in the context of problem-based pedagogy and the use of information and communication technologies in Finnish higher education.

INTRODUCTION

Recently there has been a growing interest in problem-based learning (PBL) and ICT among educational researchers. The relationship between PBL and ICT (Dennis, 2003; Donnelly, 2004, 2005; Donnelly & Portimojärvi, in press; Portimojärvi, 2006) or PBL and leadership (Bridges & Hallinger, 1997; Palmer & Major, 2004) has been previously studied by several researchers. Furthermore, traditional educational programmes and methods of instruction have been criticised for not proving effective in helping students to develop leadership skills and abilities (Bridges & Hallinger; Costello, Brunner, & Hasty, 2002; Palmer & Major). However, to date, there has been little in the way of research on the integration of all three perspectives.

Copyright © 2009, IGI Global, distributing in print or electronic forms without written permission of IGI Global is prohibited.

This chapter is positioned in the context of higher education, pedagogical innovations, and the use of information and communication technologies in learning and teaching. The research project at the heart of this chapter took place in two undergraduate-level leadership courses offered to second-year health care students at Mikkeli University of Applied Sciences in Savonlinna, Finland.

The goal of the study is to provide teachers and educational developers with a model of developing and exploring pedagogy, technology, and subject disciplines in parallel. Proceeding this way, e-learning and e-teaching cannot be driven only by technology, or any of its aspects, but by challenging the pedagogical practices and the technological solutions.

BACKGROUND

This study is positioned in the context of a changing information and network society, where globalization, digitalization, and new sociocultural phenomena co-occur (Castells, 2000). Dispersed teams and organizations, the rich use of information and communication technologies, and a growing demand for pedagogical innovations such as PBL are realizations of this broad process of change.

Problem-based learning has been described as one of the most important pedagogical innovations in higher education in the last few decades. It was thought to have started in the 1960s in medical education in Canada. Since then, it has spread throughout the world in different variations whilst still preserving its foundations (Boud & Feletti, 1997). The context for this research is in Finnish higher education, where PBL was first adopted in medical and physiotherapy education in the 1990s (Poikela & Nummenmaa, 2006).

PBL is a comprehensive approach to learning environments, curriculum, learning, studying, and teaching. It is grounded in experiential, collaborative, contextual, and constructivist theories of learning, and it has a clear point of convergence with informal learning and action processes. PBL aims at the integration of different subjects and branches of knowledge so that it is possible for the student to achieve the necessary professional competence and growth during his or her education (Savin-Baden & Major, 2004).

It has been described as a transformative educational process that aims at student empowerment (see Costello et al., 2002). The role of a traditional teacher is replaced by the role of a tutor and group leader. Group-intensive learning activities utilize taking turns at roles such as discussion leader, recorder, and observer. The action among the group forms joint responsibility. Learning is seen as a participative, creative, collaborative but also individual process (Boud & Feletti, 1997; Poikela & Poikela, 2006a; Savin-Baden, 2000).

PBL in health care education aims to produce reflective professionals who often work as team members, leaders, and managers (Abrandt, 1997; Broberg et al., 2003; Paukkala, Pelkonen, Olkkonen, Jaroma, & Tossavainen, 2001; Solomon 2005). The learning activities and continuous process assessment in PBL can be seen as tools to develop the skills needed for leadership in the health care profession and practice. Self-management and team leadership are needed for effective and evidence-based work (Lorensen et al., 2001). Contemporary health care aims at patient empowerment and participation, which can be achieved with a communicative, collaborative, and reflective approach to treatment and counseling. The whole chain of links—from the work of tutors and the activities of students to the work of health professionals and the actions of patients—forms a coherent process of continuous empowerment.

ICT in education, especially in online learning, has been one of the most studied perspectives during the last decade. However, online learning is based on more common pedagogical contexts such as views of student-, knowledge-, and assessment-

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/alliance-problem-based-learning-technology/5167

Related Content

The MOOCs: Characteristics, Benefits, and Challenges to Both Industry and Higher Education
John F. LeCounteand Detra Johnson (2015). *Handbook of Research on Innovative Technology Integration in Higher Education (pp. 228-247).*
www.irma-international.org/chapter/the-moocs/125116

Crossing the Digital Divide: Online Portfolios in a Diverse Student Environment
Catherine E. Stoicovyand John Sanchez (2007). *Technology and Diversity in Higher Education: New Challenges (pp. 65-80).*
www.irma-international.org/chapter/crossing-digital-divide/30142

Digital Partnerships for Professional Development: Rethinking University–Public School Collaborations
William P. Banksand Terri Van Sickle (2011). *Higher Education, Emerging Technologies, and Community Partnerships: Concepts, Models and Practices (pp. 153-163).*
www.irma-international.org/chapter/digital-partnerships-professional-development/54306

Applying Technology in a Classroom Setting, where Procedural Learning is the Focus
Elliott Currie (2013). *Cases on Quality Teaching Practices in Higher Education (pp. 96-105).*
www.irma-international.org/chapter/applying-technology-classroom-setting-procedural/75491

The Music Room: Translating Curricula into Real-World Professional Experience
Di Challis (2006). *Authentic Learning Environments in Higher Education (pp. 34-47).*
www.irma-international.org/chapter/music-room-translating-curricula-into/5421