

Chapter 5.5

Personal Knowledge Management Skills in Web 2.0–Based Learning

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ABSTRACT

At present, many Web 2.0 activities are being integrated into the e-learning spaces designed for learners. We need to analyze and learn from these activities to derive insights about their effectiveness, in order to promote the systematic application of technology in post-compulsory educational contexts, from undergraduate to post-graduate levels and also in professional training. This chapter deals with one aspect of “E-learning 2.0” (Downes, 2005) practices, specifically the importance of acquiring and mastering a set of personal knowledge management (PKM) skills to perform successfully in the Web 2.0 environment for learning in tertiary education. The authors first

present a PKM skills model based around a division into (1) basic PKM competencies associated with the social software web practices of Create–Organize–Share; and (2) higher-order skills focusing on the advanced management of one’s personal knowledge. A learning design model and related examples are presented, aimed at inspiring and guiding tertiary educators in designing and implementing activities consistent with the goal of developing students’ PKM skills.

INTRODUCTION

The traditional approaches to e-learning in tertiary education have so far been dominated by the use of virtual learning environments (VLEs), with

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teaching and learning structured around courses, timetables, and assessments. This approach has been criticized as being mainly driven by the needs of the institution rather than by those of the learner (Wallace, 1999; EDUCAUSE Learning Initiative, 2006). Recent developments in web-based technologies offer new opportunities to experiment with e-learning, where formal and informal activities merge and spaces for knowledge management can be created—all drawing on people and their ability to network and learn naturally and informally (McFedries, 2007). Learning is seen as the integration of formal, informal, and non-formal activities occurring in both online and real-world contexts.

The development of “Web 2.0” (O’Reilly, 2005; see also McFedries, 2005) services and technologies is paving the way for a new era of e-learning. Downes (2005) has coined the term “E-learning 2.0” to refer to these new developments, and to describe the increasing use of Web 2.0 tools in e-learning, along with other emerging trends. E-learning 2.0 involves digital learning spaces in which students create content, collaborate with peers to form learning networks for knowledge sharing and exchange, and engage in activities that take advantage of multiple sources of aggregated content, immersing themselves in rich learning experiences that utilize various tools including but not limited to online references, courseware, knowledge management applications, collaborative and search tools. Many innovative Web 2.0 activities are beginning to emerge as e-learning practices evolve and change (Alexander, 2006).

This chapter deals with one aspect of new and emerging e-learning practices, highlighting the need for learners to develop a set of personal knowledge management (PKM) skills (Frاند & Hixon, 1999; Avery, Brooks, Brown, Dorsey, & O’Connor, 2000; Barth, 2005; Dorsey, 2001; Wright, 2005; Grey, 2006; Pollard, 2005) in order to perform successfully in the Web 2.0 environment and knowledge society. Learning to use any new technology effectively necessitates acquiring

a set of abilities and skills, but in order to help tertiary students fully benefit from the developments in Web 2.0-based tools and services, there is a need to devise strategies to assist them in developing particular skills in the use and application of these digital tools to achieve their own learning outcomes. In this chapter, the authors define such a core set of skills as PKM skills. They also propose an instructional approach to developing resources that support the development of these skills among learners. The chapter provides a list of PKM skills, divided into basic and higher-order PKM skills. It also offers a learning design model conceived to support the acquisition of both types of PKM skills, together with guidelines and scenarios to demonstrate the application of the model.

BACKGROUND

The continuous and radical changes underway as a result of the widespread diffusion of information and communication technologies (ICTs) is affecting the way we come to know and learn using tools, and our social relations and interactions, both as individuals and in groups (Laurillard, 2002). There is a strong case for recognizing PKM skills as a critical asset in today’s professions, in which digital/online and face-to-face actions and interactions are inextricably intertwined.

The term “PKM” (Frاند & Hixon, 1999; Dorsey, 2001; Sorrentino & Paganelli, 2006) refers to a collection of processes that an individual undertakes to gain and share knowledge in his or her daily activities, and how these processes support work activities and the management of personal knowledge acquired through ICTs. The set of abilities first identified by Dorsey (2001) and Pollard (2005) hinges around seven main competencies: retrieving information, evaluating information, organizing information, analyzing information, presenting information, securing information, and collaborating around information.

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