Chapter I

RAPAD:
A Reflective and Participatory Methodology for E-learning and Lifelong Learning

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ABSTRACT

This chapter introduces RAPAD, a reflective and participatory methodology for e-learning and lifelong learning. It argues that by engaging in a reflective and participatory design process for a personalized e-learning environment, individual students can attain a conceptual change in understanding the learning and e-learning process, especially their own. Students use a framework provided by the concept of a personal cognitive or learning profile and the design and development of a personalized e-learning environment (PELE) to engage with key aspects of their learning. This results in Flexible Student Alignment, a process by which students are better able to match their learning and e-learning characteristics and requirements to the practices, resources, and structures of universities in the emerging knowledge society. The use of Web-based technologies and personal reflection ensure that RAPAD is well-placed to be an adaptive methodology which continues to enhance the process of lifelong learning.

INTRODUCTION

This chapter describes a reflective and participatory methodology for the design of personalized virtual e-learning environments—reflective and participatory approach to design (RAPAD) (Webster, 2005). With RAPAD, students and users reflect and participate with peers, developers, teachers, and trainers to think about their learning, discuss it, and apply their thoughts to the design and development of Web sites which can serve as personalized e-learning environments (PELE). This process, RAPAD, is a methodology for enhancing e-learning and lifelong learning because it promotes a deep understanding of learning on a metacognitive and personal level. The metacognitive and self-regulatory improvements brought about by using RAPAD causes a
conceptual shift in the understanding and application of each individual’s attitudes to personalized learning. Enabling this conceptual shift is seen as a necessary prerequisite for improving the quality of student learning (Vermetten, Vermunt, & Lodewijks, 2002). The quality of student learning is of central importance in the transition to a knowledge-based economy. Because of the strong links between education, training, and the needs of knowledge workers in industry and commerce, participatory methodologies like RAPAD can become very important mechanisms for developing e-learners and lifelong learners for the Knowledge Society.

As a reflective and participatory methodology, RAPAD provides a framework and set of procedures to enable each individual to understand his or her learning preferences and thus enhances e-learning and lifelong learning. Two core mechanisms are used within RAPAD to strengthen the reflective and participatory process. These are the cognitive profile and the personalised e-learning environment (PELE). Using the concept of a cognitive profile enables the personalisation of the PELE by structured reflection on individual learning related characteristics. The cognitive profile, as used here, consists of measures of each student’s cognitive style, learning style, and personality type. This reflects the assertion that it is the combination of these three measures which best reflects each “individual’s combination of aptitude/trait strengths and weaknesses” in terms of learning (Jonassen & Grabowski, 1993, pxii). Students undertake a series of profile associated tests at the start of the exercise and are given their results. They then discuss, reflect, and comment on those results before using them in designing their PELE. Designing and developing the PELE with specific reference to the personal learning profile gives both a context and a focus to the development of the e-learning support system that the PELE represents.

The structure of the chapter is as follows. Several definitions and key terms, as used in this chapter, are introduced. This is followed by a background section which discusses the need for new and personalised approaches for supporting e-learning. The next sections consider the changing conceptions of learning, discuss the complexity of learning, and, in order to provide a coherent overview of the work, offer a systems perspective of the student, methodology, and PELE as learning system. The concept of Flexible Student Alignment (Webster, 2005), which is partially enabled by taking a systems perspective, is then introduced before the need for human-centred e-learning systems design and participatory design (as an example of a human-centred design methodology) are outlined.

The development of RAPAD as a participatory methodology is then summarized. This is followed by a broad description of the research phases and empirical work which comprised the development of RAPAD as an e-learning methodology. Future trends are then suggested before conclusions are drawn and the chapter is summarized.

**Definitions**

The reflective and participatory approach to design is an iterative process in which key elements include the student as a codesigner in the production of a system or PELE. The method is used as a mechanism to help each student acquire the self-regulatory skills associated with autonomous learning. The methodology provides a conceptual framework of structure and process for the student to function within.

The next section briefly introduces some key terms. The terms are defined with reference to RAPAD and their use in that context is explained.

**Reflective**

The term “reflective” as used here derives from Schön’s (1983, 1991) use of the term in both the phrase and the sense of “a reflective practitioner.” Schön considered that many professionals