Faculty Training for Web Enhanced Learning

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Editors

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PREFACE

The pedagogy of faculty members is usually characterised by spontaneity, developed first as a student and later as a teacher. Teachers, especially those at higher education level, hardly ever have the opportunity to approach instructional design methodologies. While in the case of traditional classroom activities this limit can be ignored, it cannot when a teacher chooses to adopt Web-Enhanced Learning (WEL) strategies.

WEL provides students with access to electronic resources and learning activities that would not be available to them in traditional classroom-based study. Simple forms of WEL envisage access to the Web from within the classroom, using the Web as a platform for real-time demonstration or as a digital library. More sophisticated forms of WEL blend activities in the classroom with Web-enabled learning activities that promote collaborative learning among students, even when they are distant from the classroom.

In putting together important contributions from leading international experts in the field, this book will seek to provide a valuable tool and source of knowledge for all those involved in the enhancement of learning through network technology in higher education: faculty members, researchers in the educational field, academic managers.

The main topics dealt with are:

- university teacher training on the use of WEL Design methodologies;
- models to support the acquisition of knowledge and the development of WEL competencies;
- technology-enhanced learning approaches, methods and taxonomies;
- analyses and comparative studies of teachers' attitudes towards WEL strategies;
- case studies on the adoption of WEL approaches;
- experiences in and considerations on how to embed TEL in higher education.

The underlying assumption shared by the prominent authors of this book is that faculty members' training in WEL is one of the keys to improving the quality and pedagogical sustainability of ICT use in higher education.

The book is divided into two parts. The first part consists of Chapters 1-5 which through various theoretical frameworks explore WEL sustainability and deal with critical issues that in some cases hinder WEL diffusion. The second part, consisting of the next eight chapters (Chapters 6-13), describes a series of experiences and good practices in the use of WEL approaches.

Chapter 1 - What are the conditions which favour web enhanced learning (WEL) sustainability in the academic environment? How is it possible to act so that these conditions are fulfilled? To what extent does the pedagogical training of teachers affect WEL sustainability? How is it possible to train teachers to use WEL effectively?

These are the main questions which this chapter aims to answer.

To this end, we will begin by describing a possible multidimensional model for WEL sustainability.

Then we will focus on the two dimensions which are retained to be fundamental for high-quality WEL: the pedagogical dimension and the dimension of professional growth of faculty members as concerns WEL design methods. In this regard, an example will be given of a specific faculty training approach centred on progressive construction by the teacher him/herself of a personal instructional design (ID) mental model.

Chapter 2 – This chapter examines why technology innovation at the institutional level is insufficient to transform universities and higher education institutions and presents a framework for explaining the key role of teacher preparation in achieving transformation. Starting from the claims of leading scholars that universities will need to embrace computer-supported collaborative learning(CSCL), the chapter explains the difference between organizational (university) level and individual (teacher) level innovation and shows how they are related to one another. While adoption of Web enhanced learning (WEL) technologies such as learning management systems (LMS) are organizational level innovations, teaching models such as CSCL are adopted by individual teachers. In order to explain why some teachers adopt CSCL as a strategy for teaching within the LMS environment, it is insufficient to focus on use or non-use of the LMS or its features. The focus needs to be on teaching with CSCL as a behaviour, i.e., not just the features that a teacher uses but how they use these features to design social learning experiences into their courses. This view of what teachers do with technology innovations adopted by universities is similar to information systems scholars' recent focus on post-adoption behaviour and how users choose, adopt and adapt technology in their own ways. Once teaching model adoption is characterized as a behaviour, it is possible to explain that behaviour using theories drawn from psychology. The theory of planned behaviour (TPB) is used in this chapter to differentiate teachers who adopt CSCL within an LMS environment from teachers who use non-interactive or less interactive teaching models. Teachers who adopt CSCL have more positive attitudes to online social interaction and to the value of online social learning, report fewer overt influences on their adoption of CSCL or of the LMS, and have a stronger sense of their ability to control aspects of online teaching including ability to resolve problems or shortcomings with an LMS. The complexity of teaching with online collaborative learning, which requires strong understanding of the pedagogy of social learning combined with skills in adapting technologies to support teaching and learning appropriately, demands high level pedagogical understanding and technology skills. This chapter challenges university teachers, teacher-trainers and administrators to find ways to develop the attitudes, social norms and perceived control necessary to transform teaching among teachers who do not have a background in pedagogy.

Chapter 3 - Many far-reaching expectations have been echoed in the last decade as to the huge impact that the information and communication technologies might have on the academy and on the conventional ways in which professors teach and students learn. There has been a widespread belief that the new technologies will transform teaching and learning

processes from being highly teacher-dominated to student-centered. However, many studies point to the fact that the applications of the advanced technologies in higher education settings worldwide are currently quite limited in the teaching domain. This chapter analyzes five major reasons for the reluctance of academic faculty to utilize the wide spectrum of possibilities embedded in a web-enhanced teaching: (1) Unbundling of the professional responsibility; (2) Work overload and burnout; (3) Lack of ongoing support systems; (4) Add-on functions rather than substitution; (5) Intellectual property concerns. It is of tremendous importance to comprehend the reasons underlying the reluctance of academic faculty to adopt a web-enhanced teaching in order to tackle the existing obstacles and pave the way for harnessing the immense possibilities offered by the advanced technologies for the benefit of both students and teachers in higher education institutions. The chapter concludes with some recommendations for respective higher education mangers of how to enhance the effective use of the digital technologies in academia.

Chapter 4 - This chapter will address the question of how a transformation in teachers' use of information and communication technology can be achieved. There is evidence to suggest that the use of information and communication technology (ICT) in higher education can enhance and extend the learning experience. There is also evidence that although many teachers recognise this, many resist using ICT in formal education contexts, resulting in a shortfall in the adoption of technologies. An analysis of the barriers and constraints, and how they might be managed and overcome will feature during the discussion. A particular emphasis on Web Enhanced Learning (WEL) approaches will be made and strategies for university-wide adoption of social software (Web 2.0) tools and services will be presented.

Chapter 5 - Encouraging faculty's adoption of and innovation in teaching and learning with technologies continues to be a critical challenge for those responsible for faculty development in today's higher education institutions. This chapter examines current practice in Web-enhanced faculty development to promote Web-enhanced learning in university teaching. It begins by locating faculty development within the context of workplace learning and professional learning. Faculty development is seen as a continuum of formal and informal learning experiences offering a range of options. Critical questions are offered to assist the planning and implementation of faculty development to address the need for new learning models and pedagogy for the 21st century, followed by an overview of learning perspectives which dominate the design of faculty development to support adoption and widespread use of new technologies. Specific frameworks used to design faculty development to support Web-enhanced learning are explained and illustrated–technology adoption, skills acquisition, scholarly engagement, and the use of resources to support faculty learning. This chapter concludes with a summary of implications for faculty development practice.

Chapter 6 - This chapter is geared toward faculty members new to Web Enhanced Learning (WEL), as well as the seasoned faculty seeking to incorporate WEL into their traditional classroom settings. The chapter begins with the importance of community within the WEL, especially for the students that are far away from the institute of Higher Education. We discuss current research on the importance of social presence in regards to student learning, feelings of acceptance, and the retention of students at a distance as well as including tips creating a community of learners and sustain this community through the course. Essential elements of Universal Design for Learning are presented with examples provided for each of the three tenets of this approach to instruction (Multiple Means of Expression, Multiple Means of Engagement, and Multiple Means of Presentation). With one

of the daunting facets of teaching through web enhanced activities and learning environments is the amount of time needed to effectively teach, respond, and interact with students, this chapter suggests tips and strategies to assist with the time demands needed for course management. Some of these tips will include how to effectively manage emails, posting announcements for maximal effect, using tools within the system such as time and conditional releases, and methods for creating student independence within the WEL environment. Additionally, suggestions for maintaining academic integrity within course activities and work submissions are given. With the increase of students with varying abilities (e.g., visual impairments, hearing impairments, physical impairments, learning disabilities) enrolling in institutions of Higher Education, WEL environments must be accessible to all learners. The chapter closes with preplanning and course design ideas which meet the needs of a variety of learners.

Chapter 7 - This chapter describes a project that researched the use of Web Enhanced Learning (WEL) with postgraduate students from rural and remote communities who were studying through two Australian universities. We examine, in detail, the experiences of a university teacher using WEL in an off-campus course for the first time. As with many academic teachers, she was willing to use new technologies and integrate these into her teaching but required time, technical support and professional development to achieve this. Using a design-based methodological approach, the experiences and frustrations in introducing WEL are described from the teacher's perspective through her progressive reflections at stages throughout the course. The findings and their implications for university policy and leadership are detailed with conclusions about how teachers and students are best supported in their engagement with WEL.

Chapter 8 - Based on a theoretical framework for the concept of eCompetence of academic staff, this chapter develops explores principles for the design of faculty development measures. It carries out a literature review that identifies key components and combines them into a model of action competence, which serves as point of departure to develop an concept for eCompetence. We define eCompetence in higher education context as the motivation and capability of faculty members to use information and communication technologies (ICT) in the classroom. This general view on eCompetence is specified by contextual factors that teachers face in eLearning scenarios. A discussion of portfolio models, which aim to increase the motivation of faculty to use learning technologies for their teaching and learning activities, is concluding this study. Main conclusion of this work is that universities have to create holistic portfolios for faculty development which extend considerably both the scope and the breadth of traditional training measures, and they have to offer institutional incentives to increase the motivation of faculty to sustainably use learning technologies for their courses.

Chapter 9 - This chapter synthesizes three data streams relating to web enhanced learning: literature on the time it takes to teach online as compared with classroom teaching, the author's original research on faculty methods teaching online and in classrooms [Whittier, 2009], and science emerging from neurobiology describing the features of face-to-face communication that bear on social intelligence [Goleman, 2006]. Principle findings are that it takes more time to teach online, that faculty are less satisfied with and less enthusiastic about teaching online as compared to classroom teaching, and that evolutionary biology has conditioned us to make decisions based on trustworthiness in the physical world. Relating these findings develops an argument for distinguishing between asynchronous online and

synchronous communications, whether online or face-to-face. A conclusion is reached that learning about and practicing synchronous online communications should be a priority in faculty training to improve web-enhanced learning.

Chapter 10 - This chapter describes an approach to faculty training and course redesign in the area of Technology Enhanced Learning (TEL) which tried to build bridges between the TEL research expertise of a research intensive university in the UK and its pedagogic practice. It describes the origins of the PREEL project (From Pedagogic Research to Embedded E-Learning) within the context of UK national initiatives of which this specific project was a part. The issues around the research-teaching divide in universities are described through a review of the literature, and the design approaches to faculty training and course redesign adopted in the PREEL project are described in relation to ways of tackling this divide suggested in the literature. An account is given of evaluations of the project at the end of the first year and then again two years later. The chapter concludes by reaffirming the value of connecting research to teaching practice as a method of faculty training and course redesign and reflecting on the limitations of the specific approach adopted and suggesting how it might be improved.

Chapter 11 - The purpose of this chapter is - at a first level - to analyze the concept of "Web-Enhanced Learning" in online education within the European Online Academic Education's context, how this concept takes shape, and how it becomes part of teaching practices within the instruction of a specific course. Subsequently, the chapter will present tools and strategies to help teachers develop self-awareness about the way they teach online and about how the cultures they belong to also have an impact on their teaching. Not only is there an increasing need of teaching methodologies able to address individuals and groups while reckoning with cultural differences, there is also a need to learn about culture itself in order to identify its rich and multi-faceted variability.

The theory discussed hereof is part of the results of a research aimed at exploring the impact of cultural differences on the design of online courses offered by several universities throughout Europe.

Chapter 12 - This chapter discusses a model for faculty development for the integration of web-enhanced learning tools to increase student engagement and active learning. Web-enhanced learning environments allow students opportunities to increase critical and creative thinking, problem solving, and inquiry and analysis (Churches, 2008). A challenge before modern colleges and universities is to facilitate widespread pedagogical shifts away from simple lecture/examination models of teaching and toward learning environments that motivate students to become actively involved in the learning process [BonwellandEison, 1991; Land andHannafin, 2000]. This chapter presents an emerging case study on the use of a faculty learning community (FLC) as an impetus for pedagogical change. The FLC provides opportunities for faculty groups to address web-enhanced active learning strategies for large enrollment courses. The discussion focuses on a rationale and implementation process for facilitating adoption of technology- and web-enhanced active learning across disciplines to increase student engagement and fluency with information technology (FITness) in ways that allow undergraduates to succeed as 21st-century professionals and citizens. Further, we examine best practices for faculty learning communities, institutional support for creating effective faculty learning communities, and provide a brief overview of several web-based tools that faculty may use.

Chapter 13 – The purpose of this chapter is analyzing the results of an innovative initiative of faculty member training in Web-Enhanced Learning (WEL). After an overview of the context, a brief review of the literature and a description of the methodology and structure of the initiative, this chapter reports qualitative findings from a survey which investigated academic staff perceptions of the use of WEL approaches at different phases of the training process.

The study explores which organizational, contextual and subjective factors affected faculty members in the choice of the WEL approaches at three key phases: at the beginning of the training, during the design process and close to delivery of their academic course.

Furthermore, focusing on the question as to whether this action has affected lecturers' teaching and learning practices and enhanced students' learning processes, the chapter reports the problems, potentialities, and benefits of the courses delivered at the end of the WEL intervention.