The Professional Learning Model (PLM™)

David E. Leasure
Colorado Technical University, USA

Amy Peterson
Career Education Corporation, USA

Richard Kettner-Polley
Colorado Technical University, USA

Scott Van Tonningen
Colorado Technical University, USA

INTRODUCTION

Late in 2003, Colorado Technical University prepared to develop a large number of programs for online delivery. As part of the planning, the university developed its professional learning model (PLM™) to ensure online and face-to-face courses would address student motivation, employ proven teaching techniques, integrate theory with practice, teach real-world knowledge and skills, and support assessment of student learning. PLM™ courses focus on mastery of professional knowledge and skills by applying what is taught in the course to the construction of authentic deliverables that are produced in the professional environment, such as project plans, software programs, or electronic devices.

CTU PLM™ engages the student in complex, real-world projects and scenarios that require them to organize, research, and solve problems. Essentially, it allows students to practice skills in real world situations. Professional learning naturally answers the student question, "How will I use this in the real world?" It allows students to easily establish the connection between what they learn in the classroom and real world issues and practices.

This learning method encourages students to use higher levels of thinking skills by having them look critically and creatively at problems that don't have one right answer. Students learn about information in situations that are similar to the professional situations in which they will use the information in the future.

PLM™ has been used extensively within CTU and exclusively within CTU Online. The number of online students has grown from approximately 300 in 2003 to over 16,000 in mid-2008. PLM™-based courses support 30 online academic programs and/or program concentrations. The original goals outlined above have been achieved. CTU's experience over the last four years has shown that students are motivated by the real-world nature of courses, students develop professional knowledge and skills, and students can apply theory to the solution of practical problems. These results are demonstrated through assessment of student deliverables. In many programs all course outcomes could be integrated into a single or small number of deliverables. A side benefit to students is that they are able to demonstrate their knowledge and skills to potential employers through a portfolio of deliverables.

BACKGROUND

PLM™ integrates theoretically diverse concepts of "context" to create a learning environment that is multi-dimensional. A number of theories are incorporated into this "context of learning" including Gagné's Conditions of Learning (Gagné, 1965); the importance of structuring and sequencing of instruction (Reigeluth, Merrill, Wilson, & Spiller, 1980); the socially mediated aspects of learning (Brown, Collins, & Duguid, 1989; Lave & Wenger, 1991; Vygotsky, 1978); constructivism, the individual construction of knowledge through experience and external constraints (Piaget, 1952); and respecting the experiential knowledge resident

within and among adult learners (Pea, 1993; Rogers & Freiberg, 1994).

By focusing on authentic deliverables constructed by students, PLM™ employs constructionism (Harel & Papert, 1991). Using constructionism makes it likely that students form new knowledge and skills through the construction of authentic deliverables (Papert, 1984; Stager, 2001). Through deliverable development and aided by course design, students individually and collaboratively reflect on their learning (Papert, 1993) which leads to enculturation into their chosen field (Lave & Wenger, 1991; Hay & Barab, 2001; Stager, 2001) and a smoother transition into a community of practice (Wenger, 1999; Barab & Duffy, 2000).

By tying courses closely to student desires to be successful in the workplace and allowing students to apply their resident knowledge, andragogical principles are incorporated to keep students engaged (Knowles, 1973, 1984). The aspects of andragogy incorporated into PLM™ are

- Students have a high status in the learning environment
- The learning environment is engaging
- Concepts are immediately connected to real-world and personal experiences
- The subject matter is of immediate value to working professionals
- The instructor and students engage in an active dialog to reflect on knowledge and skills through construction of deliverables.

A technical report (Leasure, 2004) describes CTU's instructional approach to using PLM™.

IMPLEMENTATION OF THE PROFESSIONAL LEARNING MODEL (PLM™)

CTU has implemented PLM™ systematically across the university. It is strongly encouraged in face-to-face learning and used for all online programs. The system consists of

- Curriculum
- Instructional Delivery
- Support from the Learning Environment and Technology
- Support from Learning Partnerships
- Improvement through Authentic Assessment of Learning
- Career Placement

This comprehensive approach is taken to consistently support learners in the development of professional skills and knowledge. The discussion in this article focuses on the use of the system for online learning.

Curriculum

Curriculum is both the objectives to be learned and the plan for a set of experiences to achieve the learning. Objectives within PLM™ incorporate higher levels of objectives along the lines of Bloom's Taxonomy (Bloom, 1956) as degree level increases:

- Bachelors programs provide the foundation; all programs emphasize direct application of learning to the challenging problems encountered in the workplace.
- Masters programs add depth and complexity while maintaining a real-world focus that allows students to develop critical-thinking skills to solve problems at work while strengthening their professional knowledge base.
- Doctoral programs give students the tools they need to contribute new knowledge to their fields of study by conducting and publishing research and applying theory to solve original technical and complex organizational problems.

To provide students with an educational background that enables them to adapt to a dynamic environment and to continue their education and training in response to their changing needs and those of the fields listed above, the model requires current and relevant objectives for each degree program gained by interacting with industry advisory boards. These objectives identify authentic deliverables that drive instructional design and enable learning assessment.

Each program is defined by a set of professional objectives coupled with more general objectives expected by all employers and characterizing the higher