The Online Water Cooler: Inviting Faculty into Professional Development through the Entry Point Framework

Toby De Loght
University of Antwerp, Belgium
toby.deloght@ua.ac.be

Benay Dara-Abrams, Ph. D.
University of San Francisco and BrainJolt, United States
benay@dara-abrams.com

Ann M. Shortridge, Ed.D.
University of Oklahoma, Schusterman Center, United States
ann-shortridge@ouhsc.edu

Abstract: Today many University systems are adopting policies that require faculty to create technology-based educational opportunities. However, faculty members often lack the skills and resources to engage in such endeavors. Further, evidence can be found in many studies that current modes of professional development have not effectively addressed the individual needs of faculty. Therefore, the primary goal of this paper is to showcase a new research-based professional development prototype tool. Employing the Entry Point Framework to address different ways that individual faculty members learn, process information, and manage innovation, the professional development prototype tool is designed to engage various faculty members and invite them into a professional community of practice.

Introduction

The prototype described in this paper was designed to provide a more effective approach for teaching faculty how to integrate educational technologies into their curricula. The prototype was developed by several members of an ongoing international collaboration that has focused on innovative action research and development projects in e-learning, faculty development, and change management for the past three years. Each member of the collaboration has contributed his or her specific expertise to this project. Mr. Toby De Loght is a staff member of the Department of Education, University of Antwerp (UA). His work supports the goals set by the management and provision counsel for the university's educational innovation projects. Dr. Benay Dara-Abrams is a Principal at BrainJolt and an adjunct faculty member in Information Systems at the University of San Francisco (USF). Offering multi-intelligent frameworks for teamwork, innovation, and learning, her work focuses on virtual team development, e-learning, action research, and faculty development. Dr. Ann Shortridge is an instructional designer for the University of Oklahoma, Schusterman Center in Tulsa Oklahoma (OUHSC). Her work centers upon applying existing research evidence from phenomenography and psychological theories and strategies for learning and cognition to the development of technology-based learning environments.

Evaluating Faculty Needs

In the late 1980's a growing body of literature was emerging that assigned poor quality ratings to multi-media learning environments. In response to this in 1996, McNeil conducted a Delphi study in order to develop a practitioner-validated list of competencies needed by educators to author these types of instructional products. The data from her study identified ten critical skills of which seven were specific to instructional design and three specific to different types of technical production. In 2001, McNeil's results were validated by another study that sought to establish a viable multi-media courseware evaluation matrix (Gibbs, Grave & Bernas 2001). However,

evidence continues to emerge in new studies that these research findings have not yet been well integrated into professional development activities for faculty. For example, in 2000, Mioduser, Nachmias, Lahav and Oren conducted a seminal study to evaluate teaching practices within educational websites and concluded that use of the web caused teachers to choose ineffective teaching methods. Of the 486 courses sampled in this study only 5.0% provided students with opportunities for problem solving, only 4.6% provided opportunities for creation and invention, whereas 52.5% left students with few options other than rote memorization (Mioduser, Nachmias, Lahav and Oren 2000).

Engaging Faculty through the Entry Point Framework

In 1983, Howard Gardner's seminal work, *Frames of Mind: The Theory of Multiple Intelligences* presented the cognitive theory that each individual possesses multiple intelligences rather than one single intelligence (Gardner 1983/1993). Gardner defines an intelligence to be a biopsychological potential for processing information, solving problems, and developing products valued by the culture in which the person resides (Gardner 1999). Gardner delineates eight specific human intelligences: Linguistic, Logical-Mathematical, Musical, Bodily-Kinesthetic, Spatial, Interpersonal, Intrapersonal, and Naturalist. Based on Multiple Intelligence Theory, the Entry Point Framework accommodates individuals by engaging them in multiple ways. The Entry Point Framework describes various approaches and pathways through which the construction of meaning and subsequent learning can occur (Davis 1996). While the Theory of Multiple Intelligences applies to the learners themselves, describing the skills and faculties of those who are engaged in the learning process, the Entry Point Framework considers the aspects and presentation of the subject matter being learned.

The Entry Point Framework offers seven points of entry into a learning experience, which activate a combination of the eight different intelligences:

- The *Narrative Entry Point* invites people into a learning experience through relating a story.
- The *Quantitative Entry Point* provides an introduction through measuring, counting, listing, or determining statistical attributes.
- The *Logical Entry Point* offers the opportunity to understand relationships among different factors by applying deductive reasoning.
- The *Aesthetic Entry point* engages the senses through an examination and discussion of the visual and aesthetic properties of concepts.
- The *Experiential ("Hands-On") Entry Point* allows learners to construct their own experiments with physical materials or through computer simulations.
- The *Existential/Foundational Entry Point* allows individuals to consider a subject based on its fundamental characteristics and underlying principles.
- The *Interpersonal/Collaborative Entry Point* engages learners in interactive, cooperative, and collaborative projects with others, or in situations in which they can debate or argue with each other (Gardner 1999).

With increasing demands on their time, faculty members may be reluctant to participate in professional development activities. A professional development environment offering multiple entry points can entice faculty members to participate despite the fact that they have their own individual profiles of intellectual faculties and their own individual approaches to processing information, solving problems, and incorporating technology into their teaching.

Fostering Learning & Innovation Through Professional Exchange

Aside from providing alternative ways for individuals to enter a learning experience, creating opportunities for dynamic exchange among colleagues is one of the best ways to foster learning and innovation. In order for the endeavor to be successful however, it is of utmost importance for the exchange to exist outside the control of the organization. The ability to freely share expertise and ideas generates a collective will to act outside of organization-determined boundaries. Further, the strength of group support and its enabling impact stimulates people to look for the "next level" of expertise. For an organization to grow to the next level, available knowledge has to be captured and used as the basis for building new expertise (De Loght & Van Petegem 2005; Schlager, Fusco, & Schank 2002).

So how can a community of practice accomplish these goals? Essentially all of the members need to move beyond the level of exchanging ideas by the water cooler (Schlager, Fusco, & Schank 2002) and replace isolated

learning with a combination of personal persuasion/motivation and peer-supported professional development (Wiske, Sick, & Wirsig 2001; Kowch & Schwier 1997). The following phenomena further illustrate the negative consequences of working alone and the benefits that derive from participating in a good community of practice. These phenomena use different entry points to engage faculty members and invite them into a community of practice.

Phenomenon #1: The Isolated Water Cooler

In the case of the isolated water cooler, people working on projects never meet each other because there is no central water cooler…different department, different floor: different water cooler. This phenomenon is compounded further by the fact that even when people with similar interests actually do meet in a classroom-based professional development session, once the sessions are over they once again return to working in isolation. Further, such sessions are usually made available to faculty members with divergent interests and different levels of experience; this often results in individual participants not knowing how to apply what they have learned to their own courses or curricula.

Phenomenon #2: The Sound Board & Experimental Music

Common interests, questions, concerns, and joint knowledge building create a rich learning experience as well as a strong bond among people. Building a community through the Narrative and Interpersonal Entry Points, provides members with enough critical mass to solve problems and construct best practices. A community with strong ties and open communication allows participants to present ideas to equals where mistakes are not punished. A motivated group that is eager to share gives novices access to expert knowledge for solving problems. Therefore, no one is left alone to figure things out by him/herself. A strong community can boost interest in and involvement of faculty in educational innovation.

Phenomenon #3: Washing Machines with Email Functionality

By participating in a community as well as in regular professional development activities, professionals use the Interpersonal/Collaborative Entry Point to make adjustments for individual differences as they help each other learn new skills. The target group for the community has little time and does not want to "reinvent the wheel." A community offers a body of collected expert knowledge that allows members to build on prior knowledge, ideas, and individual goals. With growth in the number of experts as well as in the level of expertise in using technologies and novel teaching approaches, a community has the opportunity to develop along with its members, who learn to embrace new developments with an increasing degree of flexibility.

About the Prototype Learning Environment

Building & Sustaining Community

Our prototype has been built to engage participants in a community that consists of several different components (see Fig.1) each of which plays an important role in building and sustaining community dynamics. These dynamics stem from spontaneous communication among community members in an informal environment. This informality is strengthened by the use of metaphors for each component, which are linked to leisure activities rather than to classroom stereotypes.

The Notice board component is a standard part of most courses in a managed Learning Management System (LMS) environment and is used to communicate both face-to-face and online events related to the community. In addition, electronic mail functionality in the respective LMS is used for notification of activities and further development of new content.

The welcome/reception component is fundamental for newcomers; it provides a friendly welcome message, as well as an explanation or tour of the environment. The tour demonstrates how existing community members can use the content and tools to their advantage.

The cocktail bar component provides communication tools, such as discussion forums, which are linked to the content in the library and the wine cellar. Just as in a cocktail bar, people are free to communicate their ideas and give each other feedback. In order to provide a cohesive structure, these discussions have been and will be moderated by the prototype authors.

The wine cellar component is a place for sharing “ripened” ideas, materials under development, course prototypes, etc. The University of Antwerp also includes an overview of past and current educational innovation projects within this component. This overview creates a valuable base for discussion of possible approaches to course design and makes available contact details for various spokespeople.

The library component brings together condensed learning content for developing innovative course setups using learning technologies. This component gradually grows as materials are collected in the wine cellar along with ideas, questions, and issues that are raised and best practices that are shared in topic-oriented discussion forums. This component requires specific attention in the startup phase of the community. Making this content available in the Library supports the creation of a common vocabulary and frame of reference for community members, which extends over time based on interactions within the environment.

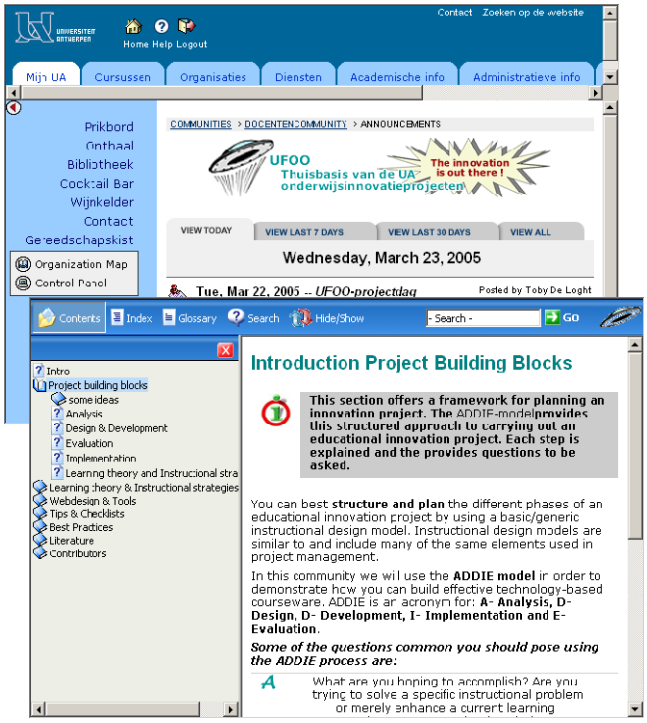

Figure 1: Sample of professional development content in community

Using the Strength of Entry Points to Support Learning

The community design that we have chosen provides multiple entry points to a growing knowledge base (Shortridge & De Loght 2004). Community members have different backgrounds and start on different paths when drafting new approaches, thereby entering the community through different entry points. This design allows faculty to start from an Experiential Entry Point to gain ideas from best practices, improve their current practice through a Narrative Entry Point offering lessons learned and tips, or ask advice from colleagues through an Interpersonal Entry Point. Others, who have a clear vision of how their materials or approach should “look” may find an Aesthetic Entry Point useful, while those who know what it should do “technically” may engage through a Quantitative or Experiential Entry Point. For faculty who are interested in theories related to their questions, the Existential/Foundational Entry Point provides a way to start thinking about the issues before they begin exchanging ideas. In this way, community members can gradually construct their own frame of reference, using the Experiential Entry Point to build concrete applications based on their interests. In addition, through the Interpersonal Entry Point, community members profit from the support of a number of motivated professionals who act as a sounding board for new ideas. Fig. 2 and the descriptive list below it illustrate these various Entry Points.

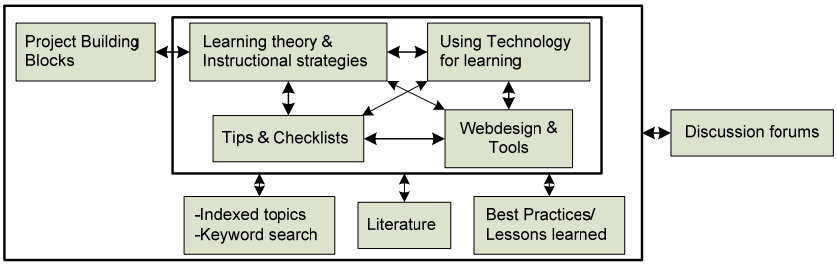

Figure 2: Community content building blocks

1. *Project Building Blocks:* At UA, OUHSC, and USF, faculty interested in developing innovative course designs face similar problems. We chose a generic instructional design model (ADDIE – Analyze, Design, Develop, Implement, Evaluate) that is also tightly linked to project management and engages faculty through a Logical Entry Point. This way we hope to provide faculty with a structured approach to dividing a large course project into small manageable chunks by offering a basic set of reflection and design questions to ask themselves. With lots of ideas, teaching staff often put all their energy and effort into choosing a technology or focusing on other details. At UA, this tool provides a means for attaching faculty ideas to a particular development phase and eases the counseling process. At OUHSC, this means that the instructional design team can more easily set targets, communicate and organize the course design process in collaboration with faculty. At USF, different faculty members teaching the same course are able to share a systematic design process, which supports a common syllabus for their classes.
2. *Learning Theory & Instructional strategies:* Most people interested in building innovative courses are not in the field of education. When they are looking for theoretical background material, they often cannot locate information to assist them with their course development efforts. Based on questions from people in the field, using the Narrative Entry Point, a number of approaches are offered to improve technology use for learning. Accompanying these approaches, community designers provide background on related instructional design theories.
3. *Using Technology for Learning:* As most institutions use an LMS (Blackboard or WebCT), this section engages faculty through an Experiential Entry Point by offering a number of roadmaps to effectively use the technologies available in an LMS. These approaches are a translation of instructional strategies into a technical approach or technically efficient course organization.
4. *Tips & Checklists:* A number of tips are gathered regarding specific (instructional) design choices or uses of technology, which engage faculty through the Logical Entry Point. These are either tools for planning or practical guides that help people avoid making mistakes that other people have already experienced.
5. *Web design & Tools:* Engaging faculty through the Experiential Entry Point, this component offers guidance on such hands-on topics as the use of colors and writing style. This section contains additional information on tools that resolve limitations in available LMSs or that contribute to a richer learning experience for students. In addition, a number of general web design tips also apply to content organization in an LMS.
6. *Literature:* Through the Narrative Entry Point, a knowledge base offers overviews of relevant literature, giving teaching staff a jump-start and providing them with guidance as they further explore their interests.
7. *Best Practices:* The goal for this section is to gradually compile an archive of exemplary course setups. This resource provides newcomers with ideas on where to start or what to do. Further, it confers expert status on those who provide examples to illustrate a specific approach. Anyone in the community can build on these experiences, provide feedback, and create new insights. These insights may eventually wind up in the tips section, for instance, or lead to new initiatives that improve on existing approaches.
8. *Index & Keyword search, glossary:* The Logical Entry Point allows faculty to search for specific topics when they try to link different topics together, moving beyond available structures.
9. *Discussion Forums:* The discussion forums extend the reach of existing professional development initiatives. Using the Interpersonal Entry Point, discussion forums provide a safe environment to launch new and creative ideas and to obtain advice from participating colleagues as they implement their projects (Kahn 2005). In addition, the forums give faculty the opportunity to gain insight into the benefits and drawbacks of online communication and collaboration that they are then able to apply to future discussions with and between their students (Kaplan 2002). Further, since connecting a name and a face is a necessary

condition for successful online interaction (Hew & Cheung 2003), moderators organize face-to-face meetings for forum participants. In addition, all faculty who add content on topics to the knowledge base receive full credit in the contributors' section.

Future Directions

Building and sustaining a professional development community requires ongoing support and fine-tuning to maintain the dynamics and vitality of the community. The authors are in the process of defining specific initiatives and instruments to support this effort. The current challenge lies in defining an instrument based on the authors' research, which constructs a profile of community members and matches this profile to the characteristics and components of each individual community. In this way, community managers will have a valuable tool to fine-tune interactions and learning effects, monitoring and coordinating specific roles, and managing the dynamic characteristics of the community to accommodate an ever changing group of members.

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