Help! I Need Somebody: Faculty Perspectives on Transitioning from WebCT to a Sakai-based Learning Management System

Ariana Eichelberger
Department of Educational Technology
University of Hawaii at Manoa
Honolulu, HI, USA
ariana@hawaii.edu

Abstract: This paper describes a qualitative study investigating the change process and impacts of technology introduction on faculty. At the time of this study, the University of Hawaii (UH) was transitioning from a proprietary Learning Management System (LMS), WebCT, to Laulima, its Sakai-based, open source LMS. UH faculty were asked via open-ended interview questions to reflect on their previous approaches to technological change and their expectations of the new LMS. Results found that participants felt resistance to change, but generally expected increased personal productivity and a richer student experience. Institutional support was reported as key to previous and predicted success. Implications for faculty and administrators are discussed.

Introduction

Technology is a constantly changing medium that is becoming increasingly pervasive in every aspect of modern society, including education. As institutions of higher education strive to enhance the teaching and learning experience and modernize administrational functions with technology, change will be constant. With continuous technological changes come challenges and opportunities. This is a qualitative study examining the specific change process of faculty at the University of Hawaii's Manoa campus as it transitions from a proprietary Learning Management System (LMS), WebCT, to Laulima, its Sakai-based, open source LMS. While this study looks at a particular institution, its results may be helpful to any institution experiencing technological change.

Background

Learning management systems are online software systems that facilitate e-learning through their content delivery, communication and assessment tools. They are crucial for online and hybrid course facilitation and are becoming increasingly important for face-to-face course delivery. While LMSs have often been adopted due a perceived cost savings, because more students are able to access online courses, many institutions are now adopting an LMS due to increased student services, student demand and pedagogical advantage (Masi & Winer, 2005).

The University of Hawaii (UH) has traditionally used a proprietary LMS, WebCT, and at the time of this study was transitioning to a Sakai-based, open source LMS. The reasons to move to an open source system are both financial and functional. Because the source code of open source software is developed, improved upon and freely shared among its users, it is not purchased from a software vendor and is merely downloaded. This is financially appealing for an institution accustomed to paying expensive software licensing fees and pedagogically appealing due to the inherent flexibility and ability for local control (Beatty & Ulasewicz, 2006). In addition, the nature of the software creates a supportive community sharing user-generated improvements. Open source options will undoubtedly become increasingly common as institutions seek out affordable software systems to meet their changing pedagogical, administrative and financial needs.

In order to successfully implement change, all stakeholders need to be included in the process (Havelock, 1973; Klein, 1994; Rogers, 2003; Witkin & Altschuld, 1995). Because change associated with technology is perceived to be more disruptive than change without technology (Owen & Demb, 2004), including key stakeholders becomes particularly important. In the case of technological change in institutions of higher education, faculty are key, and provide an important pedagogical perspective (Beatty & Ulasewicz, 2006; Klein, 1994; Morris, 2004; Owen & Demb, 2004; Van Rooij, 2007).

Faculty perspectives on technological change are defined in part by the distinct barriers faculty face to successful technology integration. Faculty initially integrating technology may intellectually acknowledge benefits but resist due to fears of appearing incompetent, not knowing where to start, making bad choices and "techno failure" (Rutherford & Grana, 1995). While those experienced with technology may have overcome these particular hurdles, they will undoubtedly encounter the additional barriers of pressures of research agendas (Hannan, 2005), the excessive amounts of time needed to develop electronic resources and strategies (Bongalos, Bulaon, Celedonio, de Guzman, & Ogarte, 2006; Hannan, 2005; Masi & Winer, 2005; Phelps, 2006), and the lack of institutional reward structures accounting for the extra time and effort spent on technology integration (Santilli & Beck, 2005).

Because faculty will continue to be faced with the challenge of technology integration, this study examines the change process and impacts of technology introduction on technologically successful faculty at a particular institution in order to develop recommendations for faculty at any institution. Four questions guided this study.
- How have individual faculty members handled technical change in the past?
- How do faculty members' previous experiences compare to their expected future technical change?
- Are there common factors in faculty members' successful approaches to change?
- What are faculty members' expectations of a new open source tool?

Method

Because this study looked at unquantifiable factors such as opinions, feelings and expectations, a qualitative approach to inquiry was expected to yield the most in depth

and relevant information. Open-ended questions were asked of UH faculty via email interviews.

Participants

Four UH faculty members and instructional designers were individually asked by the researcher by phone or in person to participate in the study; all agreed. Participants were specifically chosen based on their experience with WebCT, UH's current LMS. Only those who specifically relied on the tool for teaching online or hybrid courses, or those extensively assisting faculty with WebCT, were asked to participate. Familiarity with UH's Sakai-based LMS was not a requirement.

Procedure

In fall of 2007, participants were sent the two interview questions via email and asked to respond within a week. When responses were received, the final two questions were sent. Questions (see appendix) asked participants to recall their previous approaches to technological change and to envision how they would approach the upcoming LMS change. They were asked for their expectations of the new system and to predict if particular features of the new system would be useful to them.

Data were analyzed using common qualitative coding methods. Themes were developed based on codes related to the research questions and information reoccurring in the data.

Results

All participants responded to the four questions within the suggested time frame and without reported problems. Responses to individual questions ranged from short paragraphs to multiple pages. Coding of the data revealed three main themes:
 1) approaches to change, 2) the importance of institutional support and 3) expectations.

Approaches to Change

Much research has shown that most individuals will initially resist change (Gioia & Chittipeddi, 1991; Havelock, 1973; Klein, 1994; Rogers, 2003; Van Wagoner, 2004; Witkin & Altschuld, 1995). The results of this study also support these findings. Although all participants were veteran technology users and had experienced many technological changes in their professional lives, three of the four mentioned their previous resistance to technology changes and their current feelings of resistance to the upcoming LMS transition.
- "Upon reflection on my past job-related technology changes I know that I resisted change initially. I would procrastinate making the change until I had no choice."
- "I am very resistant to change despite having a technology job."
- "I am fairly comfortable with WebCT at this point so I am a bit hesitant for the change."

The one participant who did not specifically mention personal resistance did however describe technology changes as being imposed upon them and of subsequently not being in control with regard to the continuous cycle of technology changes saying:

- "My experience is that technology change comes in spurs from others (usually as a mandate) and that as an instructor, I have little time to adapt or adjust…I always feel like I'm fixing the car while driving it. Not a very pleasant thought!"

Importance of Support

While participants reported that they were hesitant about the upcoming change, their prior experiences led them to believe that the assistance of institutional support would make the process go more smoothly. Many institutions have found that technical support is a key factor contributing to faculty success with technology integration (Hannan, 2005; Masi & Winer, 2005; Owen & Demb, 2004). Although most participants mentioned general university-wide support services, those who received assistance from the College of Education's support program emphasized its significant role in their success. The College offers one-on-one technology mentoring to faculty, in which graduate students are paired with individual faculty over a semester to work specifically on technology integration in a particular course. Participants in this program cited it as being crucial to their past and predicted success.

- "Individual mentoring has been key to my acquisition of skills."
- "I believe that I won't have anxiety or feel hesitation to try a new system if we continue to have the great one to one support (readily available consultation of tech folks) from our technology mentors."
- "I feel there are folks with the technology savvy…or support from the COE tech folks that would make it easier for all of us."

Expectations

Participants expected support would ease them through the transition and also had positive expectations of the new system itself. Despite complaints about WebCT, the current LMS, participants were reluctant to reject it completely and hoped the new LMS would contain the WebCT features they had come to rely on for course delivery. In addition, participants also wanted the new LMS to include features not available in WebCT such as audio conferencing and increased video capacity. When presented with Sakai's file sharing and online community features, participants expected positive outcomes for their teaching, professional work, and students as well as for increased community involvement in their courses.

- "It will be easier for course instructors to learn and remember how to modify the course's content."
- "I think this feature could encourage collaboration between instructors as well as an easy way to share documents (not necessarily course-related). I can see my using this feature to share documents for committee work and collaboration"
- "reduce duplication of files & work"
- "Sakai should provide a greater sense of social presence"

- "It may also be useful to the educational community at large to have access to materials from courses that we are teaching"
- "Yes, this feature could be useful to allow collaboration with individuals outside of the UH system."

Discussion and Conclusion

In order to offer a rich educational experience, institutions will continue to adopt new technologies and expect their faculty to embrace them. In order for faculty to accept this change process they must be involved in the decision-making process from the beginning (Havelock, 1973; Klein, 1994; Rogers, 2003; Witkin & Altschuld, 1995). In taking the faculty perspective into consideration, technology changes are perceived to be especially disruptive due to their pervasive nature (Owen & Demb, 2004) and distinct barriers to technology integration are commonly felt (Bongalos et al., 2006; Hannan, 2005; Masi & Winer, 2005; Phelps, 2006; Santilli & Beck, 2005).

Despite the barriers, numerous faculty are technologically successful and therefore the factors contributing to these successes are important to consider. While it was expected that the technologically experienced participants would be more tolerant of change, having experienced it frequently, this was not the case. All reported resistance to technological change in the past as well as current resistance to the upcoming change. Despite the reported resistance, however, attitudes and assistance emerged as important factors influencing success.

Attitudes lead individuals to support or resist change (Klein, 1994). In this case, participants had positive attitudes about the change and were highly optimistic, easily envisioning the benefits of the new system for themselves and their students. Obviously, these are the attitudes an institution would appreciate its faculty to have regarding technological changes. It therefore is important to point out that a majority of the participants reported that their ability to embrace change was due to the institutional support they had received in the past and the continued support they expected in the future. Those who had received one-on-one technology mentoring particularly stressed this point. The emphasis on support leading to success was especially striking as it was self-reported and not specifically mentioned in the interview questions.

These findings suggest that intensive models of institutional support are highly effective in providing faculty with the skills and confidence needed to make continuous technology changes. The findings also serve as a reminder to institutional administrators to consider these models of support despite their costs, and as a reminder to faculty to keep a positive attitude toward technology changes and to seek out assistance when available.

References

Beatty, B., & Ulasewicz, C. (2006). Faculty perspectives on moving from Blackboard to the Moodle learning management system. *Tech Trends, 50*(4), 36-45.

Bongalos, Y. Q., Bulaon, D. D. R., Celedonio, L. P., de Guzman, A. B., & Ogarte, C. J. F. (2006). University teachers' experiences in courseware development. *British Journal of Educational Technology, 37*(5), 695-704.

Gioia, D. A., & Chittipeddi, K. (1991). Sensemaking and sensegiving in strategic change initiation. *Strategic Management Journal, 12*(6), 433-448.

Hannan, A. (2005). Innovating in higher education: Contexts for change in learning technology. *British Journal of Educational Technology, 36*(6), 975-985.

Havelock, R. G. (1973). *The change agent's guide to innovation in education*. Englewood Cliffs, New Jersey: Educational Technology Publications.

Klein, S. M. (1994). Communication strategies for successful organizational change. *Industrial Management, 36*(1), 26-30.

Masi, A. C., & Winer, L. R. (2005). A university-wide vision of teaching and learning with information technologies. *Innovations in Education and Teaching International, 42*(2), 147-155.

Morris, J. (2004). Features and functions are merely trifles in the selection of a course management system. *T.H.E. Journal, 31*(11).

Owen, P. S., & Demb, A. (2004). Change dynamics and leadership in technology implementation. *Journal of Higher Education, 75*(6), 636-666.

Phelps, M. R. (2006). *A case study. Production and use of open source education resources*: Tufts University, Organization for Economic Cooperation and Development.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York: Free Press.

Rutherford, L. H., & Grana, S. J. (1995). Retrofitting academe: Adapting faculty attitudes and practices to technology. *T.H.E. Journal, 23*(2), 82.

Santilli, S., & Beck, V. (2005). Graduate faculty perceptions of online teaching. *Quarterly Review of Distance Education, 6*(2), 155-160.

Van Rooij, S. W. (2007). Perceptions of open source versus commercial software: Is higher education still on the fence? *Journal of Research on Technology in Education, 39*(4), 433-453

Van Wagoner, R. J. (2004). Influencing the perception of organizational change in community colleges. *Community College Journal of Research and Practice, 28*, 715-727.

Witkin, B. R., & Altschuld, J. W. (1995). *Planning and conducting needs assessments: A practical guide*. Thousand Oaks: Sage Publications.

APPENDIX

Interview Questions

1. When job-related technology changes have happened to you in the past, for example, having to move to using new hardware or software, how have you handled them? How have you felt about that change? What was your personal process of changing?

2. What are your expectations for the upcoming process of changing from WebCT, UH's current online Learning Management System, to Sakai, a new open source system? If you are not specifically familiar with Sakai how do you predict you might handle a system change?

3. Knowing what you currently know about WebCT, what are your hopes or expectations for a new course management system?

4. Sakai has a number of features that have not been part of WebCT, for example: 1) A common "workspace" which enables one to share files among multiple courses 2) the ability to set levels of permission on files, allowing some files to be available only to members of a course and allowing other files to be freely available to anyone online 3) the ability to include individuals in your courses that are not part of the UH system. Do you foresee that these features will be useful to you? How and why?