

Exploring Faculty Learning Communities: Building Connections among Teaching, Learning, and Technology

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Faculty learning communities (FLCs) provide their members with both information and support as they move toward utilizing digital technology tools, learn new skills, and share meaningful instructional practices. This paper emerges from the initial year of an FLC established in a large urban research university with a focus on integrating digital technology and instruction. Key aspects of an FLC are addressed, including the effectiveness of the FLC in reshaping the nature of members' engagement in the academy, the challenges and opportunities of creating an FLC, and the power of FLCs to enhance the way faculty learn about technology.

Digital technology plays a significant role in shaping the teaching and learning landscape in higher education. Indeed, it is expected that digital technology will play an increasingly significant role in higher education as members of the millennial and digital generations enter college, bringing with them new approaches to learning and consequent expectations of the classroom instructor (Caruso & Kvavik, 2005; Caruso & Salaway, 2007; Howe & Strauss, 2003; Levin & Arafeh, 2002; Oblinger & Oblinger, 2005; Prensky, 2001). The vast array of digital technologies with the potential to impact the teaching/learning process includes learning management systems, personal response system technologies, discussion boards, blogs, wikis, social networking sites, podcasts, and a plethora of web-based tools.

The pervasiveness of information technology in today's world complicates the multiple demands on faculty by adding expectations of technological proficiency that far exceed the days of index card library catalogs that more senior faculty experienced as undergraduates. For example, many faculty grapple with the demands of learning new software to prepare digital course materials (Hanna, 1998; Twigg, 2003). The temptation for higher education faculty who must struggle to satisfy the customary triple requirements of research, teaching, and service is to relieve the pressure on themselves in the teaching area by teaching in a manner that reflects both their own learning experiences and preferences. Thereby, they give themselves more intellectual space for the research endeavor (Ouellett, 2004) but arguably fail to keep their teaching abreast of current understandings of what constitutes pedagogical best practice for their students.

Student Expectations

Digital educational technology is poised to play a significant role in the lives and work of both students and faculty in higher education (New Media

Consortium [NMC] & EDUCAUSE Learning Initiative [ELI], 2008). Current college students, members of the millennial and digital generations (Howe & Strauss, 2003; Oblinger & Oblinger, 2005), bring with them the expectation of being engaged with new digitally mediated approaches to learning (Caruso & Kvavik, 2005; Caruso & Salaway, 2007; Levin & Arafeh, 2002; Prensky, 2001, 2005). By the time our current kindergartners enter college, they are likely to have amassed considerable exposure to such digitally mediated learning. For instance, Oblinger and Oblinger (2005) noted that among the "Net Generation (NetGen)" students, 20% began using computers between five and eight years of age.

Ouellett (2004) suggested that, in contrast to the dominant teaching modality when faculty themselves were students, today's students prefer to learn in an environment that favors activity and experience and fosters immediate engagement. Today's college students have highly formed perspectives and expectations about the role technology should play in their learning (Oblinger & Oblinger, 2005; Salaway, Katz, Caruso, Kvavik, & Nelson, 2006). Consequently, faculty who are not prepared to adjust their classes and curricula to the demands of an increasingly diverse and digitally aware student population may well marginalize the relevance of their fields (Howe & Strauss, 2003; Levin & Arafeh, 2001). Kuh and Hu (2001) noted the connection with prior technological experience in their finding that older first-year college students were less likely to use digital technologies to complete assignments or discuss course topics with peers and instructors than their younger academic peers.

Today's students expect to find ubiquitous access to technology in the colleges to which they apply (e.g., Caruso & Salaway, 2007), and the cost of providing such penetration has been a concern for some time at both the school and college levels (e.g., Dugan, 2002; Johnstone & Poulin, 2002). Simkins (2006) and Pitler (2006) claimed that U.S. schools spend millions of

dollars each year on various forms of technology. It is understandable that the graduates of these schools expect to find the expensive infrastructure to support mobile computing devices through wireless Internet access, classroom response systems, access to multiple web-based or web-distributed software applications and learning management systems when they reach college campuses (NMC & ELI, 2007). These technologies have made “anywhere, anytime” communication and access to information a central feature of the modern learning landscape, and colleges have to be continually on the lookout for ingenious ways to pare back the cost of supporting academic technologies, while still providing other facilities that sustain their attractiveness to students (e.g., Gose, 2006).

Faculty Capacity

Against this background of financial commitment on the part of college administrations and growing expectations on the part of college students for the use of digital technology in learning and teaching, individual faculty members must contribute to making informed decisions about the role of digital technology in supporting teaching and learning in their courses. Some have suggested that digital technology has missed the mark in terms of supporting teaching and learning (Christensen, Horn, & Curtis, 2008; Cuban, 2001; Dynarski et al., 2007). At the pre-college level, for example, Becker (2001) reported findings from a 1998 national survey of more than 4,000 teachers of students from grades 4 through 12, which asked teachers to provide information “about their teaching philosophy and actual teaching practices in one specific class, [and] their access to and use of computers as a classroom teaching resource [as well as] in their own professional work” (p. 1).

Becker (2001) found that student experience with computers occurred primarily in four contexts: “separate courses in computer education, pre-occupational preparation in business and vocational education, various exploratory uses in elementary school classes, and the use of word processing software for students to present work to their teachers” (p. 2). Becker went on to comment that the more academic use of computers in the context of “acquiring information, analyzing ideas, and demonstrating and communicating content understanding” (p. 2) occurred in only a small minority of secondary school academic classes. Along the same lines, Cuban (2001) characterized digital technology as oversold and underutilized.

At the postsecondary level, Kuh, Kinzie, Buckley, Bridges, and Hayek (2006) asserted that “widespread use of effective pedagogical practices must be at the core of any agenda to promote student success” (p. 66). They focused on the role of instructional technology in

“restructuring the teaching and learning environment [to shift the emphasis] from faculty teaching to student learning” (p. 66). Twigg (2005) suggested that courses redesigned to incorporate digital technology make teaching and learning a more active and learner-centered exercise. In a finding that supports the value added to learning by access to digital technology, Nelson Laird and Kuh (2005) found that first-year students who frequently used information technology for classroom-related purposes saw their courses as emphasizing higher-order thinking skills. Further, contact with the faculty was apparently enhanced by these same students’ interaction online with their academic peers.

Such findings suggest that there are signs that the potential of digital technologies may be being realized in higher education, but there also has been much concern about the growth of a gap between what students expect from today’s college faculty in terms of digital technology integration and the capability of the faculty to achieve such integration (Levin & Arafah, 2002). Faculty members not only need support and training in how to use digital technology tools, they also need to be able to select those tools that are best suited to their learning goals—those that seamlessly integrate with and complement the subject matter they are teaching.

Addressing these needs involves empowering (Gordon, 2004) faculty members to share in the discussion of how technology is re-shaping the expectations for what constitutes engagement in the academy. Faculty need opportunities to engage in discussion with each other about enlightened instructional practices in the digital age and how digital technology can enhance such practices. While stand-alone workshops provide necessary introductions to the uses of specific tools and some insight into their potential, the likelihood that a stand-alone workshop will effect lasting change in behavior is minimal (Glickman, Gordon, & Ross-Gordon, 2007). The stand-alone workshop has long been a staple of professional development in education but has also long been regarded as ineffective, leading Glickman et al. to cite Wood and Thompson’s reference to staff development as “the slum of American education” (p. 352). Gordon (2004) characterized much educational professional development as “well meaning, of some short-term benefit to some teachers, but ultimately unsuccessful” (p. 6). In a brief introduction, such as can typically be delivered in a stand-alone workshop, considerations of effective pedagogy and critiques of the digital tools themselves can receive only a passing glance. This leaves faculty in a position where, if they accept the digital technology at its face value, they are left to sort out the details of its instructional integration in their field outside the context of professional development.

The Faculty Learning Community

The belief that learning occurs most effectively in a community is not a new one. Notably, Dewey (1916/2004) placed a high value on the role of shared inquiry in education. He commented that “setting up conditions which stimulate certain visible and tangible ways of acting is the first step. Making the individual a sharer or partner in the associated activity...is the completing step” (p. 14). More recently, DuFour, DuFour, Eaker, and Many (2006) reviewed efforts since 1998 to delineate and advocate the role of professional learning communities in schools. They proposed that a learning community is focused on enhancing the learning of each student, and guided by a vision of what the organization must become to facilitate this, in particular, that the individuals in the organization must also be continually learning.

Cox (2001) discussed the concept of a faculty learning community (FLC) in the college context and defined the nature, role, and processes of successful faculty learning community programs. Findings emerging from Cox’s work suggest that faculty participation in FLCs can increase interest in teaching and learning, as well as provide a supportive space for faculty to explore, evaluate, and adopt new instructional practices and tools.

FLCs can be either cohort-based or topic-based. Cohort-based FLCs tend to address the identified needs of a specific group of faculty, for example, departmental chairs or graduate students preparing to be future faculty. Topic-based FLCs tend to address shared teaching and learning needs or issues among an interdisciplinary group of faculty members (Cox, 2004). This paper explores the impact of a topic-based FLC at a large urban research university. The faculty involved explored the topic of how using technology could enhance teaching and learning.

Building the FLC

The impetus for starting the Using Technology to Enhance Teaching and Learning FLC was generated by unease concerning answers to the following questions:

1. What opportunities exist for faculty members to learn about using digital technologies in instructionally appropriate ways?
2. Where can faculty members go to participate in learning communities that explore and examine digital technologies that have potential to enhance teaching and learning?
3. How can faculty members be empowered to be knowledgeable stakeholders in determining how instructional technologies shape their

work (as opposed to being shaped by those technologies)?

Beginning in the summer of 2006, faculty members from across the university were invited to apply to be part of the Using Technology to Enhance Teaching and Learning FLC. Participants were invited to consider this one-year commitment to explore using technology as an instructional tool that supports learning in the classroom, regardless of prior capability or experience. Eight faculty members were invited to join the FLC, with representatives from the Schools of Education, Nursing, and Chemistry, and from the Departments of Art Education and Art History in the School of Arts and Sciences. The advertised purpose of the FLC was to offer members the opportunity to investigate, discuss, implement, and critique the integration of digital technology into their teaching as a means of enhancing student learning. Key outcomes were identified as including (a) identifying the strengths and weaknesses of particular technology tools, (b) determining the appropriate use of technology, and (c) considering methods for assessing the impact of technology on learning outcomes.

FLC participants determined the selection of topics for seminars and workshops and set the agenda for the activities of the FLC throughout the academic year. Meeting bi-weekly for the duration of the academic year, FLC members explored a wide range of possibilities for integrating technology into teaching, including social networking tools, blogs, wikis, podcasting, web literacy, and the growth of web 2.0 tools and techniques. During the spring 2007 semester, participants built on the knowledge and insights gained during the fall semester to propose projects aimed at using digital technology to enhance student learning. Faculty projects varied across the members’ fields of expertise and included exploring podcasting of lectures and course material, continuing engagement with an online learning technology, and expanding the functionality of a blog on assistive technology by adding audio and video podcasts and real simple syndication (RSS) feeds.

Facilitating the FLC

The Using Technology to Enhance Teaching and Learning FLC was facilitated by a staff member from the university’s Center for Teaching Excellence, whose academic field spanned pedagogy and the integration of technology with instruction. The primary role of the facilitator was to provide training and resources to assist the FLC members in their exploration of identified topics and tools. Many sessions (particularly in fall 2006) began with focused input and explanation

from the FLC leader. Topics included podcasting (both accessing and creating), blogs, wikis, web literacy, Web 2.0, RSS feeds, social bookmarking, distributed networks, and shared/reusable resources. All sessions invariably included individual faculty reflection and sharing of the on-going exploration of discussion topics from the previous meeting and tentative classroom applications. Each meeting uncovered new layers of meaning for effectively using technology in teaching, inspired not only by the functionality of the tools but also by their perceived value to support learning.

Funding, Support, and Expectations

Each FLC member received up to \$1,000 to support the integration of technology into teaching and learning in his or her field. As will be discussed later, this monetary incentive was definitely a factor at the outset of the FLC. It was a large enough sum to validate the time commitment required of faculty. Some FLC members purchased hardware and software, and others attended and presented at conferences that featured sessions on the instructional integration of technology. A portion of the funds were distributed at the beginning of the FLC, with the balance being remitted to the members' schools/departments for disbursement in full by the close of the 2006-07 academic year.

FLC members were expected to attend the bi-weekly meetings and discern ways in which the familiarity they developed with the digital technologies could be used to enhance their own pedagogical practices. While the exigencies of unscheduled demands ensured that not all FLC meetings were fully attended, absent members were kept apprised of progress by meeting minutes and resources posted online in an FLC Blackboard space. In addition, FLC members who were absent for some particular aspect of the meeting were frequently brought "up to speed" by personally contacting the facilitator before the following meeting. The expectation that the knowledge gained would impact the FLC members' pedagogical practice was also taken seriously. Time was set aside during meetings for members to "float" ideas and benefit from feedback from their colleagues. Three FLC members instituted readily identifiable innovations (for example, creating podcasts of lectures, using wikis as class collaboration tools), with others making adjustments to their practice to accommodate their new learning (for example, adding a blog to an existing website providing assistance for educators working with children with special needs).

Faculty Learning Community Reflections

FLC members were highly complimentary of their experience. A large part of the success of the FLC was

the expertise of the facilitator, both in terms of the digital technologies themselves and in terms of the practical application of adult learning principles. Some of the FLC members could be described as "early adopters;" whereas others, although not neo-Luddites, were well-removed from the cutting edge use of instructional technology. The diversity of disciplines added to the richness of dialogue during the FLC meetings on the questions that arose around digital technology and pedagogical practice. In some cases, considerable time outside the meeting was needed to reposition some members on the FLC learning curve.

One of the co-authors of this paper, in commenting favorably on the format of the FLC, noted that "I have been safely conducted so far out of the box that it is difficult for me to even see that container any more!" This co-author valued the approach to learning which was employed in the FLC and felt that personal barriers to learning were respectfully demolished while respecting the participants' personal autonomy.

This co-author's comment highlighted the way in which the regular meeting schedule contributed to the continuing viability of the FLC and implied that meeting in the context of the FLC provided stimulus for change while helping sustain a belief in the value of integrating digital technology in teaching and learning. Much more time was involved in the FLC meetings than would have been consumed by just learning a digital technology application, but the comment suggested that the application to learning and teaching may not have been as effective in the absence of group support, engagement, and collaboration. This reflects a perspective held by several FLC members of the importance of establishing a safe environment for taking risks and the value of engaging in meaningful dialogue with colleagues about experimental instructional practice.

Expanding further on the impact of the interactive aspect of learning in the FLC, another co-author reflected that "this experience [has added] depth to my understanding of the socially constructed nature of learning and the co-construction of meaning. We [were] participants engaged in redefining the art and practice of teaching."

This co-author reflected on the value added to the discussion as a result of the diversity of academic disciplines represented in the FLC. For this participant, the dialogic context of the FLC was supportive of her already established epistemological beliefs, and she spoke with enthusiasm about the significance of the experience.

A third co-author commented that, for her, the digital technologies that the FLC investigated had great potential for impacting not only "how courses are taught on the university campus but [also] the ways that humans interact." From her perspective as someone

nearing retirement, she saw the potential for digital technologies in enabling the current senior population to stay engaged with life even as increasing age limits both “physical dexterity and mobility.” Even more importantly, this faculty member arrived at a crucial realization about herself and her students: “One of the first things I learned in our FLC was that everyone is technologically illiterate in one way or another. Even my students who may be proficient at text-messaging, or downloading files from iTunes and other web sites may not be proficient at understanding how to evaluate the quality of their sources or how to be critical consumers of Internet content.” For many seasoned faculty members, the assumption that today’s students are technologically savvy often serves as a barrier to risk taking and exploration of new educational uses of technology. Shifting this perspective may be an important step for faculty members who are at the early stages of exploring how they will adopt and use technology in their teaching. Participation in the FLC crucially supported the development of perspectives that encouraged risk taking, increased confidence, and resulted in a strengthening of self-efficacy related to teaching with technology.

The third co-author’s response above dovetails nicely with the following final co-author’s response in that it focused on the role of digital technologies in empowering those who can be given access to them. This final reflection combines with the preceding one in highlighting many of the overarching themes addressed over the course of the approximately twenty meetings of the FLC throughout 2006-07. Some of these themes involved the relevance of social networking tools to the lives of present-day students and the educational promise of tools like blogs and wikis in the hands of innovative and skilled educators. For example, this co-author is heavily engaged with a grant project and commented that she had “experienced much success with [a blog] that provides a quick and simple interface for keeping our educators apprised of new developments in the field.” That blog has become a major communication tool for her grant project, and she indicated that “a recent review of our web statistics indicated we had over 50,000 hits to this information portal,” indicating that the blog has achieved a high level of credibility in her field.

Next Steps and Future Directions

Evidence of Effectiveness

The reflections recorded above attest to the value placed by the members of the FLC on their experience. No formal assessment of the impact on teaching and learning was envisaged or conducted. As mentioned above, three of the eight FLC members made readily

identifiable enhancements to their teaching repertoire. One FLC member has documented his experience for publication (Reardon, 2008). At the end of the 2006-07 academic year, the majority of the FLC members opted to extend their involvement through the 2007-08 academic year to collaborate in conducting a university-wide survey of the expectations of undergraduates concerning digital technology integration in their courses and the ability of the faculty to implement such integration. All of these are evidence of the effectiveness of the FLC as “the completing step” (Dewey, 1916/2004, p. 14) of shared inquiry.

Replicability

Some of the continuing members of the FLC recently spent time reflecting together to identify key aspects of the success of this venture. The most obvious factor they identified was the sponsorship of the FLC by the Center for Teaching Excellence. By maintaining and appropriately resourcing the Center for Teaching Excellence, the university continues to send a strong message to the academic community about the value of high quality teaching and learning. Another key factor they identified was the effective leadership of a non-judgmental expert in the field. Without the “safety net” of ready access to such expertise, the incentive for FLC members to try something different would have been significantly lessened.

In addition, the time commitment itself was a factor in the success of this venture. William (2007) discussed the role of teacher learning communities in developing skill in using formative assessment and commented on the key role of regular meeting times. In William’s case, the suggestion was to meet for at least 75 minutes on a monthly basis. Contrary to William’s suggestion that “meetings every two to three weeks are too frequent” (p. 39), the FLC members suggested that the commitment to meeting for two hours every two weeks was a significant factor in the success of this venture. Without overstating this point, such a time commitment made it individually unacceptable for there to be no outcomes.

As mentioned earlier, the remuneration offered to FLC participants was also a significant factor. For some, the ability to purchase hardware and software to facilitate those individuals to follow through with their ideas was strong incentive for innovation. Other FLC members took advantage of the remuneration to travel to conferences to present papers and to learn more about effective implementations of educational technology, with consequent renewed determination to make a difference to their practice.

Looking at the initial year of the FLC in retrospect, it was clear to the continuing FLC members that they had been engaged with an adult learning model which

closely approximated what Spear and Mocker (1984) referred to as an organizing circumstance. While the FLC structure did not invoke self-directed learning in a strict sense, there was no compulsion for members to pursue any one line of investigation, and the topics discussed by the leader were presented as a smorgasbord of ideas from which the participants could take as they pleased. Hence, the projects with which individuals engaged derived their structure and direction from the resources which the FLC environment provided. This emergent insight into the success of the FLC is the focus of the members' reflection in this second year.

Ultimately, it is important to note that peer interaction and discussion about the role of technology in education, critiques of specific tools, and sharing the success and failure with implementation in the classroom were central to the learning of the FLC members. As the members wrestled with using technology and resultant changes in their instructional practice, their participation in the group took on increased importance. We believe that engagement with technology in a supportive collegial environment over an extended period of time has equipped us for the meaningful and deliberate use of technology tools to support teaching and learning. We encourage the broad range IT stakeholders, as they share their expectations for use of technology in teaching, to take into account the experiences of this FLC as future plans are made to support university faculty in this endeavor.

Impact on the University

Although the experience of being a member of the FLC on Using Technology to Enhance Teaching and Learning was sufficiently positive that the majority of the members returned for a second year, the influence of the FLC in terms of university policy could be compared to a ripple on the surface of the academic pond. Certainly, there are now more satisfactory answers to the three questions that provided initial impetus for the FLC. There is now a structure in place whereby faculty members can learn about using digital technologies in instructionally appropriate ways by participating in a learning community that supports the exploration of digital technologies and their integration into teaching and learning.

In addition, the commitment among the FLC members to collaborate in conducting a university-wide survey of the expectations of undergraduates concerning digital technology integration in their courses and the ability of the faculty to implement such integration (mentioned above) opened up a conversation about "how faculty members can be empowered to be knowledgeable stakeholders in determining how instructional technologies shape their

work" (stimulus question #3). In the technology survey, freshmen, undergraduates with significant university experience, and all teaching faculty were invited to respond to a series of questions designed to elicit their views on the role of digital technology in teaching and learning. This survey generated some unexpectedly vigorous responses, and the FLC will continue to explore the implications of the survey.

Finally, in the summer of 2007, the ripple reached the edge of the pond when the university announced the creation of three new FLCs under the auspices of the Center for Teaching Excellence (Developing Engaged Online Learners, Problem-Based Learning, and Fostering Adjunct Faculty Success). By broadening its support for the FLC concept, the university is giving tangible evidence of its continued commitment to promoting the professional development of faculty and the enhancement of teaching and learning.

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