

With a Little Help from Your Students: A New Model for Faculty Development and Online Course Design

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Abstract: We describe an approach to faculty development that brings together senior education faculty and graduate students to design online learning environments. This approach forces course designers to confront beliefs about what constitutes good teaching, in conjunction with the roles of technology in effective pedagogy. Our experiences, supported by observation and interview data, show that faculty have explicitly considered pedagogical, technical, and practical aspects of course development; learned new technologies and their application to good education; considered the perspective of graduate students in ways they often do not in traditional courses; and to reconciled their views of education in traditional classrooms with what they would be doing online. Likewise, graduate student co-designers learned new technologies; gained insights into how faculty design courses; and considered how pedagogical ideals get translated into specific features of the course.

Introduction

In order to prepare university faculty to meet the demands of teaching and learning in an online environment, institutions of higher education must find ways to develop the expertise needed to teach in the online world, while meeting several very real constraints (e.g., limited faculty time, limited college budgets, fear of technology, etc.). Faculty members who are to teach these courses are key to the successful implementation of these online courses. However, faculty development is often a difficult task particularly when it comes to technology. Research in the area of faculty development indicates that attitudinal issues, such as how people perceive and react to technologies are far more important than structural and technical obstacles in influencing the use of technology in higher education (Dillon & Walsh, 1992; Clark 1993). As one of the faculty members who was to develop an online course said:

“I don’t know a lot about the technical stuff of the computer. I don’t feel like I want to know that, or need to know that... other people can do that. That’s not what I want to do. I don’t know how the telephone works either. Nor do I care.”

Other obstacles include extensive investments of time for course preparation and development something most faculty find burdensome (Harris & DiPaolo, 1999; Loeding & Winn, 1999).

The standard approach to confronting these problems is to separate roles i.e. enlist the help of technical experts (e.g., web-programmers and designers) for the technical aspects of online course development, while leaving the development of course content to the faculty. The technology experts develop suites of tools, templates for course layouts, and then apply them to the content they receive from the instructors.

We see a variety of problems with this separation of roles approach. Most importantly faculty members do not have any ownership over the design of the course and the technology being used particularly if they are not intrinsically interested in learning technical stuff. This is in direct contrast with every day faculty experience with face-to-face courses where they have far greater ownership and control over the design of the course materials. In addition, the faculty members’ lack of knowledge about the technology and its possibilities limit their ideas to those offered to them by the technology experts. Since form and function are intimately related, leaving these design decisions to technical experts can have a significant impact on pedagogy. Faculty members need to be the ones making these decisions rather than leave it to the technical experts, who may not have any background or expertise in instructional design and education. Ironically, the fact that faculty do not need to learn any technology is often touted as being the main value of this separation of roles approach.

Another consequence of this strategy is that it often leads to uniformity and an one-size-fits-all approach towards course development. In other words most online courses begin to look like clones of each other. Institutional practices get stabilized as producers present incoming faculty members with existing online

course designs and since the faculty do not know better, they continue to replicate what they have been told “worked before.” This, once again, is in sharp contrast to the immense diversity we see in regular face-to-face courses. Courses taught face-to-face often differ drastically from each other when taught by different faculty members and even when taught by the same faculty member at different times. Instructors bring their personality, their individuality to the course, its presentation and its execution. However, in online instruction, the individual faculty member is often missing from the presentation of the course, or at the best delegated to a corner of the web site (the corner that contains the mandatory instructor’s picture and bio).

Finally, the separation of roles approach treats faculty development as being the last stage in the process, i.e., faculty use the technology only when they get to teach it. First time is real-time, and this denies faculty members an opportunity to reflect on the process of online instruction prior to teaching it.

Our Design-based Approach

There are many different strategies that have been used for faculty development in higher education. Menges (1994) lists the different approaches that have been found to be successful. These are (a) workshops and seminars; (b) individual consultation; (c) grants for instructional improvements; (c) resource materials, such as books and newsletters; and (d) colleagues helping colleagues. Rather than use any single of these approaches our strategy of learning by design, incorporates all of the above and more. The design approach attempts to avoid the problems we listed above by developing the technical and pedagogical skills needed by the faculty members within the context of designing the online course. Instead of handing web-programmers a set of materials that worked in the face-to-face classroom, we advocate that expert teachers take a hand in the design of the technology to support the learning. We rely on the process of design to develop the necessary skills and relationships for understanding the nuances of integrating technology and pedagogy. Our emphasis on design has been informed by long-standing research on the use of design for learning complex and interrelated ideas (Dewey, 1910; Perkins, 1989; Blumenfeld et. al. 1991; Harel & Papert; 1990; Kafai, 1996; Mishra, Zhao, & Tan, 1999; Vyas & Mishra, in press). Design-based activities not only provide a rich context for learning, they also lend themselves to sustained inquiry and revision that we hope will help designers to come away with the deep understanding needed to apply knowledge in the complex domains of real world practice (Mishra & Koehler, in press).

At Michigan State University, this design approach is represented in an educational technology Master’s level course taught by the authors. In this course, master’s students design technology to help solve a problem of educational practice. That is, participants learn education technology in the context of real world problems. To accomplish our goals for developing skills in faculty members responsible for the development of online courses, we extended the course in design to include faculty members. During the Spring 2001 offering of the course, six tenured faculty were enrolled as “students” in the design course. Teams consisting of one faculty member and three or four master’s students worked on designing an online course that would be taught by the faculty member in the following year.

There were various motivations for faculty and student participation. The faculty received a laptop computer and \$1000 for developing the course. Graduate students were attracted to the opportunity to work with faculty members on an authentic project, as well as to learn about educational technology, specifically as it applied to online learning and teaching. For us, the faculty members teaching this course it was an opportunity to build on our research agenda on learning through design. It allowed us to take our ideas about technology proficiency and what teachers need to know and actually apply it (Mishra & Koehler, in press; Mishra, Zhao & Tan, 1999). This was also an important service that we offered to our college and university.

The major activities of the course consisted of readings, explorations with technology, prototyping of the online course, online and in-class discussions, and peer review and feedback. A typical class period had a whole class component that was used to discuss readings and issues that applied to all groups, and a working group component in which the design teams worked on their projects.

Data Sources

For this study we collected a range of data. We interviewed the faculty members about their experience. The average length of the interviews was around one hour. We also collected the final papers written by the students. In this paper students were asked to describe their learning and experience in this course. We also conducted a student email survey (after the grades were handed out). We combined this with our observations in class, postings made by faculty and students to the discussion groups as well as the artifacts created by the groups during the design process.

Outcomes for Faculty Members

Each of the six groups successfully designed an online course. Five of the courses have already been taught, and one will be taught during the Spring 2002 semester. More importantly, we believe that faculty members have learned a lot about designing online courses that they would not have using the traditional approach. First, faculty took control of over design decisions about when, why, and how to use technology. No longer were decisions about technology made by programmers who did not realized the pedagogical impact of those decisions. Also, faculty development happened *before* they taught the course – instructors thought about and used the technology before the class went live. Finally, the faculty learned about technology and developed skills that they would not have had they simply left the details to the technology experts.

Through an analysis of the interviews conducted after the course was over, postings to the online threaded discussion, statements in the class, and the courses developed by the design teams, we found that the faculty developed in a number of ways. First, because faculty had to talk out loud to their design team, faculty had to explicitly confront pedagogical issues in ways they have not had to in traditional courses.

“One of the most challenging and confrontive (sic) groups I ever worked with and that’s been very healthy and refreshing. I’ve confronted them about the way I want to do things and they’ve confronted me like ‘you can’t do it that way,’ or ‘it doesn’t make sense to do it that way,’ so that’s been very refreshing. It hasn’t been personal at all, ... not challenging in a negative way but it’s been stimulating the group process”

Designing courses for a face-to-face environment was something that all faculty members had a lot of experience with. However, like most experts, firmly established work activities were characterized by automatic routines and tacit knowledge and practices. However, the introduction of a new context for course design, where the rules of face to face teaching do not necessarily apply, presented new challenges to established practices. It required the development of new procedures, new tools, and new artifacts to represent and teach content in new contexts. The faculty participants quickly realized this and sought new forms of support and collaboration required to support their solutions to these new problems. For example, a major concern of all faculty members was how to engage students with the text online. Faculty used their student group members to test out their ideas and make revisions as needed. One faculty noted:

“I was shocked because I had given everybody a sample chapter. I boxed it, bolded it, the things that I wanted to be salient. They still didn’t see it. So that told me it was only when we sat face to face and I said okay, here is a little pretest I’m thinking about, answer that one question and they couldn’t. And they didn’t even know they’d read it and they didn’t even know where it was. That was a very poignant test for me, it said, we have to think much more carefully about how we’re going to signal the students relative to what is really salient here.”

However, the struggle was not without merit – the instructors were able, through their experiences in the class, to successfully reconcile these differences between their past teaching experiences and the challenges posed by the new online environments.

Faculty also developed a broader understanding of technology. Teaching online courses requires a level of familiarity and comfort with technology that many faculty members lacked. Although faculty members were the “content experts” they typically were not the technology experts. Consequently, developing an online course required collaboration with individuals who are experts in technology (the course instructors and knowledgeable graduate students). Accordingly they not only became more knowledgeable about various technologies, their understanding of technology became realistic, and was more likely to inform the relationship between technical decisions and the impact on pedagogy. For example, one faculty member mentioned how the class discussions increased her knowledge of what is possible with technology: “I think there were applications I hadn’t seen before. I’d seen streaming video but I’d seen how it could be linked... used in a course so I kinda thought about them concretely for the first time. We spent some time almost every week talking about something technical and those were very interesting to me.”

Finally, the faculty members benefited from their interaction with the graduate students. The graduate students proved to be a valuable source of ideas. For example, one faculty member found:

“I think It’s... going to be simpler and clearer (for students) than I thought at the beginning and one thing that a couple [of] people (in my group) recommended to me is for those discussions, don’t leave them open ended. Connect them to a text chapter and have some very

focused items or, or questions or focus points for each web talk conversation.... In the past I would have tended to be more loose and students kind of pick up indirectly and maybe that's been one of the things that hasn't worked real well for me so that's an example of being very explicit in terms of today, based on this content, we're having this discussion."

Furthermore, by bringing to bear their own experiences as students, and by imaging themselves in the online class they were developing, the graduate students were able to give faculty members feedback about the likely effect the design would have on prospective students. For example, all faculty members commented on the value of the collaborative process of course design with students. One noted, "I think that was one of the most interesting things is that what was actually produced was largely their (students) work. I mean, they, they actually did the design, the graphics and all that stuff was all their work."

Outcomes for Graduate Students

In many ways, this design course was a typical graduate class experience for the students – they read articles, discussed ideas, and were responsible for meeting course deadlines. However, there were some important differences. Like faculty members, students learned a lot about technology – they were exposed to several technologies, they assessed their usefulness, and potentially used them in the design of the online class. In more traditional technology courses, students explicitly learn target technologies as part of the course (e.g. web design, digital video, etc). In contrast, the design approach made learning about technology implicit – students learned about technologies as they needed to in order to fulfill some desired feature of the course they were designing. However despite this "implicit approach" students were exposed to a range of different technologies and managed to focus their attention on particular technologies that were most appropriate for the task at hand. For instance, one student wrote, "This course was a wonderful experience for me, and I gained a lot of new knowledge and information that I found very useful for. The best thing that I learned from this course was about FTP and Digitizing Videos."

The task of designing an online course was a unique opportunity for most students. Most of their experience in graduate education has been as students in graduate courses. For those who had some experience teaching a graduate course, their experience was mainly limited to being a teaching assistant, or enacting someone else's ideas. None of the students had previously had the opportunity to design a graduate course from scratch. Opening up the process of graduate teaching for students gave them the chance to apply their knowledge of educational theory to a real context, and to further their own development as future lecturers, instructors, and professors. As one student said, "This class has been one that I will never forget. From how much work building, maintaining, and revising an on line course is to learning how to work in a group again, this experience has been one that has reshaped many things that I have held to or thought about teaching."

Also, the chance to work with tenured faculty provided novel experiences for most of the students. Too often, graduate students' experiences with their professors seem opaque – they only get to see final products of their thought processes (e.g., research papers, courses they take, etc.). By working with expert educators, they got to interact with ideas in ways that they are seldom allowed – they worked over a whole semester with these ideas, got to influence the experts' ideas, and apply them to a real problem. As one student said, "Working with a faculty member, as a team to create an online class had been a wonderful experience to me especially in thinking about a particular course structure, it's syllabus, schedule, grading systems, forms, the layout of the web, video presentation about the course." Another said, "It was fascinating to see how the faculty thought about curricular design, teaching strategies, and student learning. As I was concurrently enrolled in HALE (Higher, Adult, and Lifelong Education) core course focused on teaching, learning, and curriculum, I learned a tremendous amount through listening to the faculty discuss their ideas and concerns." Most students reported that this course was one of the best courses they had ever had in their graduate program. Working on an authentic design problem, within a group led by a faculty member made the experience a unique one—one very different from most courses the students had been in before.

Conclusion

The design approach to faculty development has proved to be a fruitful lens for considering the many avenues of professional growth required to enter the world of online teaching and learning. Instead of turning over the development of their courses to web-programmers, the designers of these courses experienced something quite different. They worked together to design the courses themselves. Along the way, they not only

learned new technology skills, they also thoughtfully considered how the technology could be leveraged to accomplish higher-order learning goals for their potential students.

Did faculty develop? Consider the following quote we had offered at the beginning of the paper.

“I don’t know a lot about the technical stuff of the computer. I don’t feel like I want to know that, or need to know that.... other people can do that. That’s not what I want to do. I don’t know how the telephone works either. Nor do I care.”

And a quote from a web programmer helping the same faculty member as she implemented the course having gone through the course:

[She] has been changing with that stuff all semester and it’s great, it’s been nice to watch when she first started she just changed text, now she puts in links, she adds papers up to the server and then links to them, she changes different html things. One of the things that she does is she records her weekly feedback to the students and then converts that to a real audio and puts it on the server. She doesn’t have to bother about sending it to me and then worrying whether I did it right or not and she can also do it while she’s on vacation or what ever.

Clearly, this faculty member had changed her stance about her own learning about technology and indicates what is possible in the design approach. As the same faculty member summarized her experience with this course “My goal was to really give myself, force myself the luxury of thinking critically about teaching in, in this format and in any other format. That was really a luxury of the course and that’s what I wanted and that’s what I got. I made that happen for myself.”

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