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Chapter XIII

Faculty Development for Web-Based Teaching: Weaving Pedagogy with Skills Training

Paulette Robinson and Ellen Yu Borkowski
University of Maryland, USA

At the institutional level, Web-based teaching focuses on faculty development. In the 1980s and 1990s, campuses invested their resources on building an infrastructure—putting computers and connective systems in place. Hand-in-hand with the development of an infrastructure is the proliferation of the World Wide Web (WWW). This near ubiquitous phenomenon has provided a common graphic based interface that campuses can use to communicate to a larger audience both internally and externally. It is not surprising then, that attention is now turning to the use of computers to deliver instruction. However, just having a technology infrastructure does not mean that faculty will use it as a part of their teaching. This chapter will examine a faculty development process focused on Web-based instruction within a major research university, faculty reactions to the process, the issues that faculty are facing in Web-based teaching, technology and instructional support, and a glimpse at the future.

CONTEXT

Our chapter examines faculty Web-based development embedded within the context of the University of Maryland (Maryland). Maryland provides support to faculty using technology in the teaching/learning process through physical facilities, faculty development opportunities, and grant opportunities. The Technology Enhanced Learning unit of the Office of Information Technology (OIT) provides support for physical facilities and faculty development. Facility support is provided at two levels – Technology Classrooms (technology-enhanced lecture halls) and Teaching/Learning Theaters (high-tech classrooms) (Shneiderman, Borkowksi, Alavi and Norman, 1998). Faculty development is provided through the Institute for Instructional Technology (IIT) which is cosponsored by the

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Technology Enhanced Learning unit and the Center for Teaching Excellence. The Center for Teaching Excellence, housed in Undergraduate Studies, offers yearly competitive instructional improvement grants. One track within the grants is use of technology in teaching/learning.

In the past, faculty development at Maryland has mainly focused on skills training of currently available tools. As faculty mastered each of these tools, their inquiries into further training has been concerned with the use of the various tools in their teaching. The IIT was created to address these needs — focusing on the instructional use of technology and combining it with skills training. A conscious effort was made to provide a training atmosphere that encouraged trust, a non-competitive environment between trainer and faculty, shared exploration of new technologies, and a place where faculty can take risks to achieve their learning goals (Cravener, 1998).

Faculty development at Maryland has been treated as a ramping up process. Each course offered in the IIT serves as a building block upon which faculty can slowly build skills to integrate technology into their teaching. Many faculty began with enhancing their lectures using a presentation graphics tool. As these faculty became more comfortable with this type of tool, they came back to the IIT for training in Web pages. Initial Web page development centered on static pages that provided access to syllabi and on-line references. Interactive sites became the next step and so on. During 1998, faculty who were attending IIT modules on Web page development began inquiring into on-line course environments where their static information could be integrated and linked into their interactive activities. A campus selection process was implemented (http://www.courses.umd.edu/webct_selection.html) that resulted in the selection of the Web-based course management tool WebCT.

DEVELOPMENT OF TRAINING

Assumptions

Preparing faculty to successfully use on-line resources in their instruction depends on several characteristics (Willis, 1994; Cravener,1998). At Maryland, these characteristics can be grouped into four basic areas: training structure, pedagogical support, faculty support and evaluation.

WebCT training at Maryland uses an integrated approach (Willis, 1994). Interested and enthusiastic faculty are targeted for campus-wide workshops as well as self-paced instruction. The structure of the training includes information lectures, skill drills, expert demonstrations, and guided practice that is cradled in close supervision and supportive feedback (Cravener, 1998). To assist faculty in using WebCT during and after the training, handbooks and take home materials are developed with step-by-step details of the process.

Skill training is only part of WebCT training. Pedagogical support is woven into the entire development process as an integral part. Since faculty have no experience as a student in a Web-based learning environment, it is difficult for them to gauge the impact of their instructional materials on students. It is therefore important for faculty to have the opportunity to experience both the student and the faculty roles in training. Instructional design becomes a crucial part of pedagogical support. On-line learning environments change the communication patterns between faculty and students and students and students