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Croquet, Anyone? Designing a more Responsive Online Learning Environment

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In January, nearly fifty women's studies professors from thirteen UW System campuses gathered together in Madison to talk about teaching and technology. The three-day workshop organized by the UW System Women's Studies Consortium revolved around a question raised by presenters Pamela Whitehouse and Susan Ressler: "How can we, and why should we teach Women's Studies courses online?" I would think the same question resonates with faculty from across the arts and humanities, particularly those who are involved in interdisciplinary programs. Simply put, packaged content management systems, with their narrow, course-bound, and disciplinary frameworks, are not designed to support programs that actively challenge traditional subject-area boundaries.

On the UW-Madison campus, increasing numbers of interdisciplinary faculty appointments in the humanities, social sciences, and research have been made to "revitalize the university's intellectual talent," an obvious sign of administrative commitment to a trend that some might say began with programs in women's studies. Asian-American Studies, Afro-American Studies, International Studies, among others, are humanities programs that actively encourage students to situate their educational concerns within larger social and professional communities of practice that extend far beyond the individual classroom. Significantly, interdisciplinary programs that draw their faculty from a variety of departments often face the problem of providing their students with a physical "home" on campus – a reading room, a lounge, a center of some kind where students and faculty can come together informally to create a peer-based support system. For this reason, faculty working in programs such as these may be even more sensitive to the failures of online learning environments when it comes to fostering a vital sense of "group awareness" among teachers and learners.

Dislocation and disembodiment are features of the current online learning experience that women's studies faculty find particularly incompatible with the goals and objectives of their pedagogy. After all, a women's studies pedagogy is meant to foster reflection on experience grounded in "our bodies, ourselves." The women's studies classroom, with its roots in 1970s consciousness-raising support groups, becomes a creative, shared space. Within this common context, students gain a critical perspective on our inherited body of knowledge, those cultural traditions that have marked women's bodies in particular ways. In response to that inherited body of knowledge, students construct a counter-story, an understanding that is negotiated among them. They are asked to take responsibility for the positions they assume and become active creators of knowledge rather than passive recipients. Ultimately, the women's studies instructor does not accept the burden of serving as the sole creator and "master" of course content. That role is distributed across the classroom community.

I could hear frustration in the voices of the Women's Studies Consortium workshop participants as they talked about their experiences with online learning environments, a frustration aimed primarily at the basic design of content management systems. Who were these software designers? Why hadn't faculty members been consulted during the design process? Without a complete grasp of what was technologically possible, faculty were left feeling helpless, forced to accept what was handed to them. Desire2Learn, like Blackboard, WebCT, and every other packaged product on the market today, is essentially a corporate training system modified slightly to reflect the institutional structure and administrative categories of higher education. As such, Desire2Learn supports self-directed learning far more effectively than it supports the simultaneous and collaborative activities associated with student-centered, project-based instruction.

Listening to the concerns of women's studies faculty, I was reminded of an observation made back in 1999 by Janet Murray, a literature professor turned interface designer: "the healthiest programs [in online learning environment design] will be those that draw equally on the empirical bent of engineers and social scientists and on the cultural knowledge and expressiveness of humanists and artists . . . We do not need designers who can produce more attractive interfaces with the same formats of communication. We need designers who can rethink the processes of communication, exploiting the capacity of the digital environment to be more responsive to human needs."

I've been studying these design issues for quite a number of years, first as a longtime women's studies professor and program director and then as the co-founder of an information technology company that specialized in advanced visualization technologies. Now that I manage strategic new media initiatives for UW-Madison's Division of Information Technology, I'm in a position to involve faculty directly in the design of a new generation digital learning environment, one that will be more responsive to their needs.

During my presentation, I introduced workshop participants to "Croquet," a multi-institutional initiative under development at the University of Wisconsin-Madison, the University of Minnesota, the University of Kyoto, and the Hewlett Packard Research Labs. One of the driving forces behind the project is Alan Kay, the developer of the "overlapping windows" computer interface and this year's winner of the Draper Prize (essentially, the Nobel Prize for engineers). Croquet represents the next step beyond the familiar desktop computer interface metaphor, a step made possible by Kay's open-source programming language and the advanced networking capabilities available on university campuses. Borrowing a phrase from the world of online gaming technologies, Croquet is "a massively multi-user three-dimensional environment." We consider this common context to be the necessary pre-condition in any learning ecology for the spontaneous emergence of cross-disciplinary and cross-institutional communities of practice. Within the Croquet virtual environment, the faculty, staff, and students of the University of Wisconsin-Madison, the University of Minnesota-Twin Cities, and all other participating institutions of higher learning, will be visible to one another (in the guise of digital avatars) and be able to move quickly and flexibly among multi-media learning resources (3D models, whiteboards, web pages, video footage, flash animation, simulations, streaming video, television broadcasts, slide presentations, etc.). Just as they do in the non-computerized traditional classroom, learners will see one another "handling" these resources and be able to support one another with immediate feedback.

The Croquet initiative is dedicated specifically to the special goals and objectives of higher education. It is meant to place the familiar personal information management activities (Internet browsing, Google-based searching, word processing, emailing, calendaring, etc.) within their proper context, e.g. the much richer and broader social context in which learning and scholarly collaborations take place. Croquet will provide a secure and collegial way for faculty, students, and staff from multiple campuses to accomplish their fairly autonomous online tasks while building a sense of group awareness that stretches across disciplinary and institutional boundaries. Within the open-source model adopted by the Croquet architects, all participants are part of a multi-institutional community in which levels of expertise vary and there is a willingness to share knowledge and resources. Whenever a member of this larger community creates a new learning resource for display within the shared environment, the resource is credited to its author and stored in a central digital repository so that it can be re-used by other participants. The open-source model provides a built-in mechanism for maintaining a standard of quality since members of the community can immediately see and review all submitted materials. In place of the anonymity that characterizes interactions over the commercial Internet, the Croquet environment draws on each university's institutional identification systems to ensure that every user of the environment is identifiable, trusted, and authorized to participate in academic collaborations. This is one networked environment where everyone knows your name.

Network-based telephoning technology built into the Croquet virtual environment will make it possible for a person to speak spontaneously and naturally with anyone in his or her immediate vicinity. Instant messaging and asynchronous text-based forms of online communication will also be available. Faculty will be able to simulate the simultaneity we take for granted in the traditional face-to-face classroom by gathering their students together to witness a live demonstration in real-time and accompanied by a synchronized question-and-answer session. Small groups of learners and researchers can work together on a shared document, brainstorm on a whiteboard, set group goals, explore websites together, and explore nearby disciplinary and interdisciplinary materials, extending their network of professional contacts outward beyond their department, their chosen field, even their campus, to reach colleagues a world away.

Ultimately, the social dimensions of learning and research are the most difficult to capture online, and yet they are arguably the most valuable aspects of campus life. I'd like to thank the UW System's Women's Studies Consortium for giving me the chance to speak with faculty in the arts, the humanities, and the social sciences, whose perspective is so critical to the future of online learning.

