Transitions with Technology: Information Specialists at California Lutheran University

Information specialists work in many different library and information center environments. Whether they work in the corporate world or a special library they, like other information professionals, are forced to contend with the exponential growth of technology in the workplace. At California Lutheran University (CLU), an early embrace of technology led to campus-wide networking and the transformation of the academic librarian to the academic information specialist, a position that incorporates traditional librarianship with technology training for the campus community.

Just as technology has crept into the stacks of the academic library, it is now finding its way into lecture halls and classrooms. This emergence of technology in the classroom presents many issues. For example, how does one systematically train every student with the skills to use online information retrieval systems for research? How can software application training (e.g., Microsoft Office) and web page development find their way into the classroom curriculum? At CLU, one answer to these questions can be found in the Center for Teaching and Technology (CTT), which was funded by a Culpeper Foundation Grant. This grant allowed for the formation of the CTT lab and the genesis of a faculty-development program called Teaching, Technology, and Teamwork (TTT).

The Team Structure: Information Specialists, Students, and Faculty

Within the TTT, a four-person team collaborates on redesigning a course to integrate technology into the curriculum. This team is comprised of a faculty member, an information specialist, an educational technologist, and a student majoring in multimedia studies. All CLU faculty are invited to submit proposals that will effectively incorporate technology with a faculty member's already successful teaching methods. Since the inception of this project, which was presented at the 1999 American Library Association's annual conference, nine projects have been completed in such varied disciplines as biology, computer science, education, accounting, history, and religion.

The information specialist on each team works to identify information resources (print, electronic, and web-based) to enrich course materials; counsel on copyright issues; and consult with team members on design, content, and training issues. Faculty revise the curriculum and oversee the design of the project, the educational technologist coordinates the CTT and its resources, and the students create the end product using various applications which they have learned through their coursework.

Every faculty member brings a different skill set to the team-based course redesign project. Unlike other technology-to-curriculum projects, there is no resistance to change in pedagogy because the projects are faculty-driven. Some faculty members have experience with using technology in their curricula already, while others are making their first venture. This disparity in technology experience leads to a varied array of technological approaches and the applications used to carry them to fruition. In the current model, the students are doing the majority of the labor-intensive development needed to complete the projects. Some revisions of curricula result in the creation of course-based web sites, while some are more lecture-driven and use applications such as Microsoft PowerPoint.

Technology Driven Tools to Make it Happen

Most course re-design projects take advantage of web-based technologies. Web site course management software is gaining popularity on our campus through the CTT's usage of WebCT. "WebCT combines state-of-the-art web application technology with educational content supplied by major publishers or instructors themselves. The result is a fully integrated easy-to-use, web-based, [password protected] network learning environment, which offers instructors and students the ability to easily access and create content and interactive web-based learning experiences." Some of the ways that CLU faculty members have used WebCT incorporate the product's built-in functions for chat discussion groups, private e-mail, course bulletin boards, uploading of student projects and course documents (syllabi, lectures, Microsoft PowerPoint presentations, etc.), organization of web links, grading tools, online timed quiz format. 

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Looking toward the Horizon

Many of the CLU faculty who have yet to apply for a TTT project have been excited by the web sites and WebCT-organized courses they have seen demonstrated at faculty meetings. Across the campus community, interest in obtaining training and support for using WebCT and the Macromedia applications is high. Whether you work at a university or as a solo librarian for a corporation, getting the users to embrace and demand new technologies and training is typically one of the main roadblocks which information specialists have to overcome. This first hurdle has been cleared. Clearly projects similar to CLU's TTT program will inspire interest and lead to the completion of successful projects.

However, the move toward integrating technology into campus curricula presents new challenges and concerns. For instance, how can we ensure that faculty continue to update their TTT projects and, more importantly, seek out new, and possibly more effective, technologies that will undoubtedly emerge? As information specialists, we sometimes forget that we are in the unique position of constantly looking at the horizon of emerging trends in technologies. Typically, this is not the role of faculty, except for technologies particular to their disciplines. Having a proactive Center for Teaching and Technology will be an important step to ensuring the continual growth and adoption of technology in information-rich environments. The much-needed next step is to provide continual training for and communication with faculty about emerging technologies that can assist them in the classroom. When campuses and businesses strive to meet this model, the attainment of information literacy cannot be far behind.

Author's notes
This article is a follow-up to a poster board session presented at the annual American Library Association conference held in New Orleans in June of 1999. For more information view the presentation online at http://www.clunet.edu/iss/lib/culpep/culpepmain.html.

The Center for Teaching and Technology at CLU can be found at http://www.callutheran.edu/CTT/

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and more. Typically, the type of interface and active learning environment that WebCT employs would require faculty to acquire “webmaster” skills in HTML coding and CGI scripts. Since the majority of CLU faculty do not have these skills at present, WebCT has provided the campus with the cutting edge, web-based applications and presentations that typify a technology-rich higher education environment.

In instances where WebCT is not the stand-alone vehicle for project dissemination, other web-based multimedia publishing tools are used. At CLU, our campus has adopted Macromedia applications, such as Fireworks, Dreamweaver, and Director, for the design of course web sites. Brief descriptions of these applications help to understand how they benefit the TTT program. Fireworks offers course designers the ability to create web sites that present information through image maps, imageslicing, and Java enhancements such as rollovers. Web images created using Fireworks have a professional quality featuring texture, shadows, and overlays similar to those produced by Adobe Photoshop.

Fireworks also helps novice web authors pay attention to the details of file size and browser limitations needed for seamless web design and effective access.

Dreamweaver is more of a web editor and site management tool. Many web designers use Dreamweaver to develop dynamic web sites, streamline production, and enhance site efficiency. TTT members who are not hard-coding HTML authors appreciate Dreamweaver’s WYSIWYG interface, server uploading tools, and HTML Quick Tag window editor. With all of the tools that Dreamweaver offers to enhance ease of production, only basic HTML authoring skills are required to produce a workable web site.

Use of Macromedia's Director 7 Shockwave Internet Studio has helped to produce some of the TTT's most dynamic web projects. Director 7 is quickly becoming a standard bearer of web tools for creating and delivering powerful multimedia presentations for the Internet. Director allows designs that effectively combine graphics, sound, animation, text, and video to produce high tech web venues.

Some Concerns and Drawbacks

With these dynamic tools in place, it seems difficult to imagine drawbacks to using web-authoring products of this caliber. However, the drawbacks come into play on the human side of the creation process, since in many instances only one team member knows how to effectively use these new technologies. Under the current model CLU employs, the student member of the team is responsible for the actual construction—and much of the design—of the TTT projects. If they are not already, they quickly become experts in WebCT and the Macromedia applications.

Some faculty members have expressed concern over this. They are worried that in the future, when they wish to make changes to their projects or start new ones, they will not have the necessary skills to do so. The students do a Herculean job of project design and construction, but a sound plan to train faculty with these new resources has not yet been adopted. This would be the logical next step.