Building Collaborative Programs for Instructional Technology

Collaboration leverages financial, physical, and human resources for liberal arts colleges incorporating technology into teaching and learning

By **Nancy Millichap**

The liberal arts college represents the founding model of undergraduate education in the United States: a community of scholars and students, sharing a commitment to the life-transforming value of face-to-face residential education. In part because of the very qualities that make them distinctive, liberal arts colleges face challenges unique among higher education as they incorporate technology into teaching and learning. In an initiative known as the National Institute for Technology and Liberal Education (NITLE), 81 liberal arts colleges throughout the Northeast, mid-Atlantic, Midwest, and South are working together to develop a coordinated set of responses to these challenges, supported by the Andrew W. Mellon Foundation.

Today's liberal arts undergraduates have grown up in environments intensively mediated by technology. Those environments shaped their conceptions of knowledge, information, and communication. They are as likely as their peers in other kinds of colleges and universities to begin research on Google on the networked laptops in their dorm rooms rather than in the library, e-mail questions to their professors in preference to visiting their offices, and send their fellow students instant messages rather than phoning them or dropping by their rooms.

The leaders of the colleges these students attend, meanwhile, face multiple challenges:

- Meeting the costs of implementing and managing the technology that enables all these activities
- Helping faculty members find appropriate ways of using technology in instruction in a liberal arts context
- Realizing the potential of institutional investments in technology
- Balancing their commitment to the values of a liberal arts education with the potential of technology to improve the processes of teaching and learning

Reasons for Collaboration

Increasing numbers of liberal arts colleges find "going it alone" to meet such challenges both inefficient and unaffordable. First, there is the problem of scale. Solutions routinely implemented by larger institutions do not reduce well to the proportions of the small college, either pedagogically or fiscally. A vendor's charges for a commercial course management system that integrates seamlessly with a student information system and with a campus portal are, for campuses with 1,000 or 2,000 students, exorbitant—especially since the use of such tools strikes many faculty and staff members as inappropriate to the liberal arts college's core commitment to personal faculty-student interchange.

Second, there is the problem of professional isolation. In the small information technology organizations on liberal arts college campuses, individuals rather than groups tend to support the specific technology areas that are the domain of entire staff units elsewhere. The lone Web specialist, instructional technologist, or network manager is called upon to solve problems without the support of colleagues who share his or her interest and responsibility, which can lead to inefficiency or to reinvention of already existing solutions.

Faculty members may suffer from a similar isolation when it comes to professional development for instructional technologies appropriate within the liberal arts context, such as learning to work with new applications that could enhance their teaching. The opportunities taken for granted in larger institutions—workshops to learn specific technologies, conferences at which faculty peers demonstrate their innovations, informal discussions with peers of emerging technologies especially appropriate within a discipline—might be infrequent or might not exist at all on the local campus.

Leaders of national liberal arts colleges and of their consortia have developed a collaborative response to these issues, which we refer to as the "Centers Strategy." The Andrew W. Mellon Foundation has provided support for four years' development of this strategy. This move to share programs and planning builds on a history of support for instructional technology among Mellon-supported liberal arts colleges and an increasing interest on the part of the foundation in helping colleges work together successfully on issues they face in common. Centers are now operating in three regions of the country. NITLE,

the national coordinating organization, and these regional centers (see the sidebar) perform several functions:

- They offer workshops for faculty members, technologists, and librarians of participating colleges, either in a center or at distributed locations.
- They provide professional development by organizing conferences and seminars.
- They engage in research and development activities, such as the creation of new educational applications.
- They create products useful across institutional boundaries, such as the Arab Cultures Web site (http://www.nitle.org/arabworld/).
- They offer consultations and opportunities for member colleges to share expertise.
- They provide for shared infrastructure, such as shared server support and joint licensing.
- They support inter-institutional collaborative projects, such as the development of curricular materials for inter-institutional courses.
- They convene informational meetings for campus decision makers struggling with the implementation and management challenges of instructional technology.

Regional Centers

- The Center for Educational Technology (CET) at Middlebury College in Middlebury, Vermont (http://cet.middlebury.edu/), serves the 37 Mellon-supported colleges in the northeast and mid-Atlantic states. Founded originally to focus on technology used in the teaching and learning of modern foreign languages, CET currently develops tools and services that facilitate the incorporation of technology in a variety of academic disciplines.
- The Associated Colleges of the South Technology Center (ACS TC) at Southwestern University in Georgetown, Texas (http://www.colleges.org/techcenter/), serves the 16 members of the ACS and two additional colleges in the southern region. A facility for faculty, staff, and student development in the use of technology, it provides a focal point for collaborative teaching and research initiatives.
- The Midwest Instructional Technology Center (MITC) in Ann Arbor, Michigan (http://www.midwest-itc.org/), is co-located with the Great Lakes Colleges Association, serving 12 colleges in Michigan, Ohio, and Indiana, as well as the 14 colleges of the Associated Colleges of the Midwest, located in Colorado, Illinois, Iowa, Minnesota, and Wisconsin. Designed for flexibility, MITC encourages experimentation and responds to shifting constellations of interest within participating institutions. It is unique among the regional centers in delivering its programs on member campuses rather than at a central location.
- The National Institute for Technology and Liberal Education (NITLE, pronounced "nightly"), in Burlington, Vermont (http://www.nitle.org/), works with the regional centers. NITLE serves as a catalyst for innovation and collaboration for 81 national liberal arts colleges as they seek to effectively use technology to enhance teaching, learning, scholarship, and information management.

Advice on Collaboration

The four-year grants that set the Centers Strategy in motion were made in September 2001. As of this writing, the regional centers and NITLE are not quite a third of the way through the grant period. Despite the relative newness of the concept, the initiative has gathered momentum. While "lessons learned" may be premature at this point, those involved have some good ideas about what makes for successful collaborations for advancing technology in the service of teaching and learning among liberal arts colleges that they can't wait to share.

1. Start Small and Evolve

In liberal arts colleges, workable ideas for collaborations emerge most reliably from the small-scale gatherings or interactions where camaraderie develops among people with shared interests or responsibilities. This grassroots generation of collaborative projects ensures a sense of ownership: participants see their ideas take shape as projects and accordingly have a stake in their success. Several of the centers' most successful programs began with a discussion among fewer than a dozen people who met at a center event and found that they shared a passionate interest in a specific instructional technology issue.

A collaboration around teaching music emerged in the South in this way. Music faculty members from eight Southern colleges met in July 2000 at an Associated Colleges of the South Technology Center (ACS TC) workshop to explore various types of music software. They began to consider ways of sharing resources. Their ideas led to the creation of the Orpheus Alliance, in which up to 40 faculty members from 15 colleges now collaborate to bring new musical experiences to students, including opportunities to take part in an inter-institutional composition contest.

The first of an expected series of annual events, the Midwestern center's conference for instructional technologists began with a similar meeting of minds at the symposium launching the Midwest Instructional Technology Center (MITC) in February 2002. Despite differing professional responsibilities, five people from five colleges who met for the first time at this large event discovered a shared conviction: that instructional technologists

in small liberal arts colleges belong to a profession still being defined and could benefit greatly from a network of peers to whom they might turn for practical support. With support from MITC staff, they identified those individuals (regardless of title) with responsibilities for instructional technology at member campuses. They launched an online discussion list for the instructional technologists identified, sought a small grant to plan a conference, and inaugurated the event in February 2003, with 75 attendees representing 25 of 26 MITC campuses. The attendees shared experiences, problems, and successes. Some 35 poster sessions showcased approaches to instructional technology issues at the campuses represented. The attendees participated in professional development workshops and began planning future collaborations.

2. Pitch a Big Tent

Inclusion of multiple institutions and constituencies (technologists, librarians, faculty members, administrators, and students) strengthens programs. Technologists, librarians, and faculty members have differing priorities and cultures and might not have established effective ways of collaborating, even on small campuses. Yet meeting the challenge of integrating technology into teaching and learning requires coordination among all of a college's professional groups. To encourage this kind of coordination and collaboration, participation by "cross-functional teams" is a key component of the centers' programming.

Workshops. In technology workshops, a faculty member and a teammate—a technologist or librarian from the same campus—who can attend together are given preference. For example, when the ASC TC hosts several week-long workshops on specific applications each summer, cross-functional teams have priority over individuals for participation.

As a faculty member works with a particular application to enhance his or her curricular material, his or her partner from IT or the library can ask questions that will help in integrating and supporting the new tool back on the home campus. Not only does this team approach ensure that each faculty member will work with a colleague during the course of the workshop, it also helps ensure that what attendees bring back to campus will actually be used.

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Symposia. In conference or symposium settings, the presence of representatives from more than one group make it likelier that issues important across the entire range of an institution's effort will be represented. This ensures stronger subsequent projects on the individual campuses. For instance, faculty members and technologists might participate in a discussion about the implementation of a course management system or electronic portfolio project that would affect the entire campus.

A conference on digital images sponsored by MITC at DePauw University in summer 2003 encouraged participation by faculty-librarian-technologist teams. All three groups clearly play distinct roles in implementing campus projects for the collection of digital media, the development of metadata, and the uses of the media in instruction.

Planning Groups. In groups planning events or projects, the different perspectives and envisioned outcomes of a technologist and a faculty member, or a faculty member and a librarian, can ensure that the components of the project or event will meet a broad range of needs. An inter-institutional 2003 spring term project, for example, focused on creating online multimedia collaborations from students' responses to the works of other students in different media. The planning involved two pre-project meetings among faculty members and instructional technologists from the three participating campuses to design the pedagogical and technical components of the project.

Student Programs. In programs for student development, the mix of roles includes students as well as campus professional staff members. In the ACS TC software engineering program, computer science faculty, IT staff, and students have all played key roles. This nine-week summer internship for competitively selected computer science students has two equally important goals:

- to provide supplementary applied experience for the students, and
- to create software that will support the mission of member institutions.

To create the program, ACS TC staff worked with computer science faculty members, who designed the curriculum, and with instructional technology staff and librarians, who provided a sense of the kinds of applications that would be most useful for their colleges. Students and recent graduates were also important to this process, particularly those who piloted the program and advised its developers about the type of internship that would most usefully supplement their degree programs. One product of this program was the ACS Course Delivery System, a Web-based application for the facilitation of inter-campus team-taught courses.

3. Synthesize, Don't Duplicate

Successful program development in one region can inform development elsewhere. This sharing enables our colleges to identify and meet demands for learning opportunities appropriate to liberal arts colleges while preserving the autonomy and distinctiveness of each region and each institution.

Support for faculty and instructional technologists seeking to integrate instruction about geographic information systems (GIS) into their classes began with one activity in one region. It now encompasses a variety of programs across the regions and at the national level.

Early in 2001, faculty members and technologists from several northeastern

colleges interested in using GIS to enhance research and learning asked the Center for Educational Technology (CET) to help. CET hosted a pilot workshop for faculty, librarians, technologists, and students from three colleges in the summer of 2001. Based on feedback from this pilot, a more focused introductory workshop was offered for more CET colleges in the summer of 2002.

During fall 2002, regional center directors and NITLE's director researched GIS use on member campuses. The ACS TC and MITC held regional planning meetings early in 2003 to explore interest in GIS development. Working together at the national level as the NITLE program committee, the regional center directors and NITLE's director coordinated an introductory GIS workshop at the ACS TC that admitted equal numbers of participants from all three NITLE regions. The CET will host the second national workshop in the summer of 2003, while the program committee continues to develop coordinated regional and national programming for the support of more advanced GIS applications.

Solving Common Problems

Good ideas for effective ways to use technology in support of the curriculum are not in short supply at liberal arts colleges, with their particular dedication to a high quality of teaching and learning. Less common are coordinated efforts to solve common problems by working at a level beyond the individual institution.

Every sector of higher education, every distinctive group of colleges, and every aspect of operation shared among colleges and universities has its consortium or its special interest group. The collaborative practices outlined here might be worth considering not only in collaborations among liberal arts colleges but also in inter-institutional collaboration in higher education generally. To recap,

- *Start small.* Encourage, support, and find resources to forward the innovative project ideas that are sure to emerge during opportunities to meet peers from like institutions.
- *Pitch a big tent.* Engage an influential representative from each professional group in your institution, not just from the group you belong to. If the initiative has to do with teaching and learning, IT leaders can't handle it successfully without faculty members at the table. If digital resources are involved, librarians belong there, too.
- *Synthesize, don't duplicate.* Find out, in detail, what's already being done in areas of mutual interest by the institutions with which you're collaborating. Then look at what is important but is not being done and identify those next steps that it makes sense to undertake jointly. *e*

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