

Cost-Saving Collaboration: Purchasing and Deploying a Statewide Learning Management System

by Ed Klonoski

Higher education is working to integrate next-generation education technology into its learning activities and is struggling to find cost-effective approaches. The learning management systems ([LMSs](#)) that evolved to provide support for distance education efforts have been adopted for use by the larger learning community, but the expense of operating 7 x 24 x 365 enterprise-level technology is daunting for many institutions. Given the financial pressures under which higher education currently struggles, improving the technical landscape for the learning enterprise will require that institutions do more, do it better, and do it for less. Sharing costs, services, and technology—collaboration—is emerging as a key means of achieving these ends. Citing a recent EDUCAUSE Center for Applied Research report on information technology funding in higher education, Hawkins observes that "nearly two-thirds of all campuses are facing budget cuts of some form or another. . . . For cost-reduction strategies, the survey respondents listed joining consortia and making shared purchases as the number-one method being considered" ([2005](#), paragraphs 1, 3).

This article offers the rationale behind such collaborative efforts and describes the process that led to Connecticut's statewide license for [WebCT Vista](#), breaking the process down into its strategic elements: timing, drivers, audience, convener, and return on investment (ROI). These elements are critical to the success of any collaborative activity and cover the politics (timing and drivers), the money (return on investment), and the agent (convener) involved. Similar multi-institution collaborations are under way across the nation, and they represent a promising solution to the cost and complexity questions associated with LMS technology.

Timing: When Is the Right Time to Collaborate?

The simple answer is now. Higher education is facing the perfect storm of higher enrollments, reduced state support, and technology-driven change. Technology is increasing not only in cost, but also in importance and ubiquity; in particular, technologies such as the LMS are no longer mere accessories to teaching and learning, but have become vital tools for the educational process. Once a technology becomes common in the classroom, it takes its place beside the lights and the heat as an essential infrastructure element and becomes a necessity or basic operating expense. The time is right for collaborative action because the time is wrong for any approach other than cost-sensitive, resource-smart deployments.

Across the higher education landscape, a number of states and systems are grappling with collaborative deployments of various enterprise applications (Bielec and Biros [2002](#), 62-65). Once Connecticut's statewide license was announced, my coworkers at the Connecticut Distance Learning Consortium ([CTDLC](#))—the convener of Connecticut's collaboration discussion—and I were contacted by representatives of New Jersey, Ohio, North Dakota, Massachusetts, California, Texas, New Mexico, Oklahoma, and Ontario for information about how we built our collaborative. As various states and systems consider ways to work together, multiple approaches to technology cost sharing are emerging. These include not only consortia, but also commercial application service providers (ASPs) like [SunGard Collegis](#) and [Embanet](#) as well as shareware collaboratives like the [Sakai Project](#).

State legislatures often see financial proposals for various academic technology systems at similar institutions, each of which is buying and deploying its system independently. I have listened to Connecticut legislators ask why these expensive systems cannot serve multiple institutions. The legislative assumption is

that computer systems should be purchased and deployed like sewers, dorms, and power. For legislators, who must approve commodity purchases across a wide landscape of state service providers, the argument that an enterprise resource planning (ERP) system or an LMS is boutique software is belied by its price and ubiquity. Like Connecticut, many state governments are trying to implement their own ERP systems, and legislators are developing a deeper understanding of how such systems operate and the policy restructuring they require. As states deploy ERP systems and work to create a single chart of accounts and a single source of employee information across their many agencies, legislators have lost patience with the old argument that a software system is unique because the institution deploying it is unique.

The current financial pressure that is topic number one in the public sector is leading these same legislatures to pressure their state schools to stop emphasizing their differences when they are purchasing what are essentially expensive commodities. In the end, an ERP system or an LMS exists to solve the same set of problems at whatever institution it is deployed. While the various *products* are not identical (even though the competitive bidding process assumes that they are), the *service* to which they will be put is very similar from institution to institution. It is no longer possible to explain to a legislator that [WebCT Vista](#) or [Blackboard](#) will be used in different ways at campus X and campus Y—and therefore require two deployments—especially when both schools are part of the same education system.

Background: 21st-Century Learning in Connecticut

Connecticut has made a commitment to providing its students with the educational technologies necessary to empower 21st-century learning. A key element of this investment is the Connecticut Education Network ([CEN](#)), which provides the broadband backbone upon which K-20 institutions can deliver a wide variety of educational applications and services. In higher education, LMSs are one of the key services requiring the CEN. An LMS extends the classroom and its activities online, thereby connecting students to each other and their instructors; empowering Web-based sharing of research materials, library resources, and even textbooks; and integrating learning activities with administrative systems. Through LMS technology faculty members can now amplify their teaching with powerful online tools, and students can use these tools to increase their contact with teachers, fellow students, and information. By adopting such technology across various educational sectors, the state can thus prepare the next generation for a workplace that is growing more wired by the day.

Connecticut's discussion of a statewide LMS was sparked by a series of factors, including the arrival of an LMS product that supports [consortial delivery](#), the price and complexity of that product, the existence of statewide implementation plans in other states, the positive experience Connecticut has had with other consortial arrangements, and the fact that [WebCT Campus Edition](#) is the current LMS of choice for a large segment of the Connecticut higher education community (more than 75,000 full-time equivalents, or FTEs). As these factors provided the foundation for cost-saving collaboration, a working group was established to develop a plan for the collective purchase and implementation of LMS technology. Representation on the LMS working group included the University of Connecticut, the Connecticut State University System, the Connecticut Community College System, Charter Oak State College, the Independent Colleges, K-12 school systems, the Connecticut Commission for Educational Technology, the State of Connecticut Office of Policy and Management, and the State of Connecticut Department of Information Technology.

Drivers: What Supports a Statewide Technology Discussion?

Any state or higher education system that is considering the advantages and costs of the collaborative deployment of technology is driven primarily by the costs of that system. These costs can be described in three dimensions: purchase (license), operation (implementation planning, infrastructure, central services, integration, and data center personnel), and user support (help desk and faculty training). In this context, collaboration ideally allows for a realignment of costs and benefits that can work to the shared advantage of

different educational sectors. For example, enterprise-level software is not an option for small or even mid-size institutions because the data center and technical infrastructure required to operate such systems are daunting. For this reason, such institutions may find greater value in sharing the same software system with larger institutions and drawing upon the resources, support, and/or infrastructure offered by those larger institutions. Conversely, larger schools may see a substantial benefit from the revenue stream they draw from the smaller schools they serve.

In addition, once a cross-section of the community is in the same room, equity quickly emerges as one of the key drivers of collective action. Larger schools are already preparing for migration to the newer products, but smaller schools will be left behind if there is not an approach that lets them access next-generation software for a cost close to their current investment. So a real question emerges about whether advanced LMS systems should be a hallmark of academic distinction for select campuses or institutions; to many, it seems that this would be the equivalent of offering central heating at only the wealthy schools. Next-generation LMSs offer [student information system](#) integration, learning object repositories, branding, content sharing, and an improved user interface. The equity question is this: Are these features that only some schools need to deploy, or are these standard tools required by every 21st-century educational institution?

We also discovered that chief information officers (CIOs) have learned that choosing and deploying enterprise-level software is fraught with career danger. Consequently, there is a real advantage to making such choices in tandem with other systems and users because those choices "belong" to the group, not to individuals. In addition, the collaborative deployment of the chosen technology offers opportunities for staff sharing, knowledge transfer, and even data center sharing. For example, as Connecticut deployed WebCT Vista, the staff members responsible for the technical infrastructure met to discuss hardware, load balancers, application nodes, backups, and other issues; these conversations helped everyone involved make smarter, more cost-effective decisions.

Audience: Who Should Be in the Room?

Organizing a collaborative discussion of any technology requires a thoughtful participant list, a product list (both vendor applications and open source solutions), and a return-on-investment argument (see, for example, [Connecticut's ROI statement](#)). Organizers should invite a diverse group of participants to the discussion in order to elicit an equally diverse group of ideas and to interest as many institutions as possible.

The CTDLIC invited all state institutions of higher education (public and private), K-12 institutions, other statewide technology groups, and several representatives from state government (the Department of Information Technology and the governor's budget office). Not all of these groups chose to be part of the final contract, but such inclusiveness can yield surprises as to who wants to participate, and it set up the foundation for further collaborative opportunities in the future. We pared this large audience down to a "working group" of a dozen people from various organizations who rolled up their sleeves, crafted a serious proposal, and then reported back to their respective governing boards. Participants in the working group were highly placed in their organizations (some were CIOs and provosts), and they understood how to evaluate the upside of a deal for their institutions. These were the people who would explain the value proposition to their supervisors, the ultimate decision-makers. It was critical that they had direct access to the supervisors and were comfortable presenting the argument. It also helped if they were open to looking at the arrangement in the broader context of the state's limited resources, the politics of collective action, and national trends in technology management.

Convener: Who Should Lead the Group?

The convener should be a visionary, trusted broker with a track record of collaboration, political access, and a positive relationship with the vendors. Bringing institutions together to collaborate, especially when serious money and substantial educational impact are involved, is not for the faint of heart. At least initially, the

reward for such daring is a lot of work—meetings, minutes, budgets, private phone calls, contract negotiations, and endless discussions with lawyers. So the person or group that takes on this task must be experienced at such complex interactions.

The convener also should have something to gain. In our case, the CTDLC is an organization with collaboration as its mission. Creating a statewide approach to an LMS was a natural outgrowth of that mission and our previous activities. We have led projects that produced a 25-institution financial aid exchange, a multi-institution ePortfolio, and a 15-institution eTutoring collaborative. We are expected to bring together institutions around collaborative, cost-saving projects. As the convener of this conversation, the CTDLC raised its profile with such an ambitious planning exercise, and that status increase represented what we had to gain. For us, just calling the question was a home run; succeeding at producing a statewide license was the ultimate win.

The vision for this particular collaboration arose from the CTDLC's experience as an application service provider, hosting three LMSs for two dozen institutional clients. We have first-hand experience integrating an LMS to a student information system; maintaining 24-hour access; and providing the ancillary services of a help desk, faculty training, and instructional design. We realized that the real expense of these systems was in their deployment and support, not their initial cost. Thus we considered the argument that the collaborative deployment of next-generation LMS technology would make enough economic and technical sense to overthrow the tradition of self-service with these systems.

Once the CTDLC assumed the role of convener, we were responsible for getting the right group in the room, communicating the possible advantages to a variety of stakeholders with a variety of agendas, and pressing the timid when they pulled back. The convener must be able to get the vendors to pay attention and put their best foot (deal) forward. Even if the convener behaves in the most self-effacing and nonthreatening manner possible, this is a naked act of leadership; it requires the skills of a politician or media consultant. Since the convener is responsible for administering the process, he or she also will serve as secretary, help desk, research assistant, and budget analyst and fill a variety of other roles that help drive the willing toward their ultimate prize. All of this takes energy, focus, and good humor.

On a process level, the Connecticut group met on an ad-hoc basis at a centrally located institution. The participants were encouraged to stay focused on big questions like "How do we save money?" and "What would serve Connecticut students best?" They were encouraged to avoid traditional quagmires like "What will our faculty think?" Focusing on large questions with public ramifications kept the discussions productive. In our case, two big ideas emerged as primary factors in the group's proposals: the idea of a single LMS interface serving students as they progressed from one Connecticut institution to the next, and the 75,000 installed user base for WebCT's products. These were important ideas and fairly easy to explain to the governor's financial people.

After three months of discussion, the group agreed to enter into actual negotiations with a vendor; a small subgroup of CIOs led those discussions, which were completed in 30 days. The resulting contract was returned to the larger group for approval and then distributed to the governing bodies of the participating institutions. The CTDLC handled interactions with state institutions, including the attorney general's office.

Return on Investment: What Did Connecticut Gain?

Both the price and the complexity of educational software are rising at the same time that these tools are being used more widely in traditional college classrooms, as users of LMS technology can attest. These gains in usage and complexity mean that deployments of technologies like WebCT Vista make ever larger demands on the data center—requiring 24-hour support, user help desks, real-time data backup, enterprise database products, load balancing, and other forms of assistance. In thinking about the financial value of a statewide LMS purchase, Connecticut therefore looked at volume discounts and operational efficiencies.

Educational institutions have been working for years to increase their purchasing leverage through group purchases of common products. The State of Connecticut, through its Department of Information Technology, also works to leverage its greater buying clout by negotiating statewide purchasing agreements. We assumed that if a group purchased an LMS, the collective discount would be greater than what the individual institutions could negotiate. So the planning group approached the vendor with the idea of a single contract representing in excess of 75,000 FTEs (dramatically more if K-12 eventually participates), and we succeeded in driving down the product price. Establishing a single contract that Connecticut could extend to other interested institutions allowed the CTDLG to obtain lower prices than larger buyers usually get and to extend those discounts into the future.

A secondary consideration was that a purchase of this size gives the buyer influence on the direction of the product, the secondary services required, and the level of technical support received. The Connecticut collaborative realized these additional advantages. We were added to the WebCT product advisory group, asked to speak at its annual conference, and consulted about its implementation services and technical support arrangements.

By sharing a single software license for WebCT Vista—which allowed for a greater statewide uniformity in technology architecture, administration, implementation services, and training programs, as well as the future development of a repository of learning objects such as Web pages, media clips, and curricula—the state of Connecticut reduced the costs of deployment by more than \$250,000. By acting collaboratively, we reduced the system's per-user cost, reduced implementation costs, accelerated our learning curve and thereby reduced the time to "go live," and extended opportunities to institutions that might want to join the collaborative in the future. The Connecticut implementation of WebCT Vista is expected to expand over time to include private institutions and K-12 schools in the state, all of which will be able to leverage the existing contract by participating in a consortial purchase, thereby reducing their costs.

Conclusion

Connecticut's model for collaboration involves identifying technology services that have matured to the point that they have become vital resources for diverse educational institutions across the state. Some technologies that seem ripe for this approach include learning management systems, e-mail, content management systems, and student information systems.

Once an appropriate technology is identified, a group of interested institutions should be assembled to discuss what a consortial approach to that technology might look like. The elements to be considered would include the application service provider, ancillary services, costs, special needs, and governance. If the group first imagines what a successful collaborative delivery looks like, it can work backward to uncover the implementation possibilities for them. While not every collaborative will succeed, and each will adapt to local circumstance, such discussions will increase the community's ability to think cooperatively, and that in itself will create fertile ground for future collaborations. Connecticut's advice is to start these discussions now and plan on having them with greater frequency and greater urgency in the coming years.

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