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Abstract

Panelists from three technology-oriented universities (Florida, Indiana, and Wake Forest) will discuss lessons learned in supporting commercial (WebCT and CourseInfo) and home-grown (Oncourse) Web course management software, along with requirements for the next generation of such software.
Panel Summary

Three universities, Florida, Indiana, and Wake Forest, have chosen to support particular Web course management software (CMS) tools. Each university differs in terms of size and organizational structure, but all faced the same issue: how to support the transition from “place” to “space,” that is, from the traditional teacher-centered classroom delivery of courses to a more student-centered learning environment utilizing the World Wide Web. Each university needed to provide a continuum of Web use, from place-bound course supplements to fully online courses, and Florida and Indiana needed also to provide for courses delivered at a distance. Important to all three universities are scalability, sustainability, flexibility, usability, and utility.

Each university came up with a different software solution to meet its needs: Florida chose WebCT, Wake Forest chose Blackboard’s CourseInfo, and Indiana University chose to use its own product, Oncourse. Each institution further developed the strategies and mechanisms required for support of its faculty, students, and staff in the way of training, delivery, documentation, and maintenance.

While their experiences differ, each university has found that its choice of CMS has provided for the needs of its faculty in developing online learning materials. Florida, for example, found that WebCT requires less support for faculty than was originally anticipated. Indiana found initially that Oncourse demand far exceeded support, which made for some short term chaos until an Online Learning Group was formed and support processes were developed. Wake Forest found that careful consideration of user preferences led to unqualified success in its selection and deployment of CourseInfo.

Outcomes at all three campuses have been positive. At Florida, there have been few unfavorable experiences with using WebCT. The primary problems are with students (and faculty) who attempt to use incorrect passwords. Requests for new accounts continue to increase. At Indiana, use and approval statistics have been very positive. In addition, Oncourse has been a key element in coordinating teaching and learning IT support and support center services across all campuses, as well as in driving creation of a unified Windows NT domain name space for all university computer user accounts. At Wake Forest, ease of use of CourseInfo has generated a significant increase in the amount of exploration being undertaken in technology mediated learning by faculty members.

Support best practices of CMS at Florida, Indiana, and Wake Forest include knowledgeable support staff with good interpersonal skills, instructional design consultation, good and current documentation of the software (both online and hardcopy), effective communication with users about changes and updates, and opportunities for user training. Most important, we have learned that including faculty in selection and implementation dramatically improves user acceptance and the creation of an online community of users that act as their own support network.

In terms of future needs, developers of CMS systems should pay close attention to three aspects of their functionality:

1. Interface design: While feature laden, most systems are less user friendly than many faculty members would prefer. The interfaces are not always intuitive; in some cases, they are downright cumbersome. Interface design is a matter of paramount importance as these tools become even more feature-packed.

2. Content portability: Faculty members grow increasingly concerned that individual publishers will align with individual CMS systems. Selection of such software by a university might then preclude use of on-line resources provided by a given publisher. Efforts like those reflected in the IMS initiative are appropriate and welcome but, in the end, content must be portable across CMS environments.

3. Conceptual flexibility: Many CMS systems limit instructor flexibility by forcing a specific framework for building and maintaining on-line content. However, increasing flexibility of these products also increases their complexity. Thus there is a need to very carefully balance the feature sets and complexity of use.

In addition, as institutions move to the Internet as the key point of contact for their constituents, it is important that CMS systems provide for easy linking to and integration with enterprise-wide software.

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Individual statements

Wake Forest University: Blackboard’s CourseInfo

Wake Forest is a private liberal arts institution enrolling approximately 3600 undergraduate students. The University has received attention for its ubiquitous computing environment and use of information technology in the teaching and learning process. In fact, prior to the general availability of reasonably robust course management tools, Wake Forest developed internally a course management system in the Lotus Notes environment. As commercially available products began to appear, however, the maintenance and development costs associated with the home grown solution quickly mounted. The decision was made to consider an off-the-shelf solution.

Wake Forest utilizes an elected body of faculty members, together with selected administrators, to consider many policy and adoption decisions that will have direct bearing on faculty and students. This body – the Committee on Information Technology (CIT) – was charged with determining the appropriate path toward selecting a new course management system for school-wide deployment. The CIT determined that, because faculty members are particularly sensitive to changes in standard issue software, the chosen product would remain in place (with periodic upgrades, of course) for at least three years. The process used to select a new course management system, then, must be sufficiently robust to identify a solution with long term viability for the University.

Toward this end a representative sample of the faculty body was selected for inclusion in a rigorous side-by-side comparison of several of the leading commercially available products. These faculty members represented the faculty at large along a number of dimensions. The result was a requirements list that reflected the diversity of the faculty at large. A comparative test procedure was built to test each of the products; all facets of functionality were examined, but special attention was given to usability. Testing was extensive and rigorous. When test results pointed to one particular product over the others, confidence in this result was high. Results of the testing were communicated to the faculty and a pilot program was initiated.

The pilot program was to last for one academic year. A small group of faculty was hand picked to pilot CourseInfo in one or more courses for one semester. Periodic meetings were held to solicit user feedback; that feedback was acted upon immediately, further building confidence in the process. The pilot was expanded to several more users the following semester when initial results were positive. When the product was deployed in earnest the following year, faculty adoption was impressive and has continued to climb. Faculty satisfaction is likewise high.

It is important to note that while CourseInfo proved to be the best solution for Wake Forest, it may not be the optimal solution for other institutions. The important lesson learned for Wake Forest was that an evaluation and selection process that is highly inclusive of several members of the faculty at large tremendously improves the credibility of the process and ultimate success of the project. Furthermore, rigorous testing of products, while time consuming and potentially expensive, leads to much improved outcomes.

University of Florida: WebCT

The adoption of WebCT at the University of Florida has created many often-unforeseen opportunities for enhancing on-line communication. The University of Florida provides a site license for any academic unit to create an independent WebCT server. Very few units have chosen to run independent servers, instead relying on the centrally provided services. The Office of Instructional Resources provides most of the services relating to WebCT. These services include training, call-in and walk-in support for students and faculty, and technical support. Recently, a second bank of servers have been added through the North East Regional Data Center. The addition of the second server bank was intended to provide true 7-24 support. Realistically, there have been few problems requiring support outside of the normal 40-hour workweek.

When WebCT was first implemented at the University of Florida, it was assumed that the primary use would be for deployment of fully on-line academic courses. Subsequent experience has shown that
there is more interest in using WebCT to support traditional courses. The primary interest in using
WebCT for traditional courses is to provide an easy way for students and faculty to communicate
asynchronously. Many accounts are also established for providing communication channels for multi-
disciplinary academic projects such as the Partnership for Global Learning and the Video Advisory
Committee. Training for WebCT takes several forms at the University of Florida. A number of hands-on
workshops of two-hour duration are offered using both MS Windows and Macintosh platforms. Several
one-hour introductions/demonstrations are given each semester to targeted faculty groups. A WWW
page provides links to training courses available from other institutions as well as providing on-line
tutorials developed locally for students and faculty.

Indiana University: Oncourse

Indiana University is comprised of two core and six regional campuses serving 97,000 students
by 4300 faculty and 9800 staff. Information technology at IU is the responsibility of University Information
Technology Services (UITS), which has five divisions: Teaching and Learning IT (TLIT), Distributed
Education (DE), Research and Academic Computing (RAC), University Information Systems (UIS), and
Telecommunications (Telecom). Development and funding of IT is guided by a strategic plan
(http://www.indiana.edu/~ovpit/strategic).

In 1996, Dr. Ali Jafari began development of Oncourse (http://oncourse.indiana.edu) based on an
experiment in delivering a basic chemistry course on the Web. Oncourse was piloted on the two core
campuses: in the fall of 1998, at Indiana University-Purdue University at Indianapolis (IUPUI), and in the
spring of 1999, at IU-Bloomington (IUB). By fall, 1999, Oncourse moved to production and was extended
to the six regional campuses of the University.

Oncourse provides the standard Web course management tool functionalities. Unlike most such
tools, Oncourse was designed to automatically create an online course space for each registrar-
scheduled course with dynamic updates of class rosters. Oncourse is a strategic initiative for IU and is
being developed as a partnership between the TLIT and UIS divisions of UITS, with input from the DE
division. Oncourse is positioned as an enterprise solution to support online courseware tools primarily for
the mainstream faculty. As more advanced or specialized software is needed, it will be purchased
commercially rather than developed in-house.

When piloted, reception for Oncourse was great but support was lacking. By mid-1999, an Online
Learning Group (OLG) was formed to oversee Oncourse use, development, and support. Faculty input is
sought regularly via such activities as online forums and brown bag lunches. Free Oncourse training
classes are offered, documentation is regularly updated, communication is provided via a LISTSERV and
a newsletter, and our teaching and learning centers provide consultation and instructional design help.
Call-in and walk-in support is also provided by our Support Centers and by our online Knowledge Base
(http://kb.indiana.edu), which now contains some 100 FAQs about Oncourse. All core campus requests
for support from our Support Centers are entered into a special database (http://eclipse.iupui.edu), are
prioritized, and are assigned a number to enable support providers and users to follow progress on
problem solutions. This very successful process is now being redesigned to serve all campuses of IU.
Based on our annual survey of IT users, Oncourse enjoys a 95% approval rating on the IUPUI campus
and a 91% approval rating on the IUB campus. Statistics for the first semester of 2000 reveal 1084 active
faculty users, 17,003 active students, 1,374 active courses, 4,728 daily logins, and 250,000+ page hits
per day. The success of Oncourse may also be measured by its role as a critical driver of the IU initiative
to create a unified Windows NT domain name space for all computer user accounts. In addition, plans
have been outlined to develop a group within UITS to help foster assessment of technology use via such
means as faculty commissions and use of the Flashlight tools.
