Optimizing Campus Web Sites

Is the portal approach a solution to improving campus Web site usability?

by Ali Jafari

ike most companies, higher edu-
cation institutions generally have a Web site. A college or universi-
ty’s Web site provides the primary navi-
gation interface and gateway to online resources and information about the institution for prospective and current students as well as for the faculty and staff. Most campus Web sites offer a wealth of information about school and department programs, campus directory, news, activities, and so forth. But there is a problem with our campus Web sites that I think we need to address.

My ten-year-old son goes to Jakob Nielsen’s site to see if there is anything good at university sites he finds books and toys and e-mails me his wish list. On the other hand, I see my faculty colleagues and students getting lost trying to find basic information on university Web sites. I decided to explore this major usability contrast between commercial and educational Web sites with an informal study.

Between December 1999 and January 2000 I investigated 60 college and university home pages, which I randomly selected from the member organization list on the EDUCAUSE Web site. I then reviewed each site for its usability from the following perspectives: current (internal) versus prospective (external) users, interface design issues.1-4 Following is a summary of my findings.

Who’s the Audience?

From my personal study I concluded that most university Web site designers have difficulty deciding who to design the site for: current (internal) users or prospective (external) users. Given this confusion, more than 90 percent of the sites I visited opted to compromise and design a single Web site that did not offer a usable interface for either internal or external users.

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The information and resources needed by an institution’s current members (students, faculty, and staff) are different from those needed by prospective members. For instance, current members are less interested in knowing about various degrees available or in viewing promotional materials. Instead they need to know where to find information about e-mail accounts, library resources, courses, housing, and laboratories as it relates to their day-to-day work. Prospective members are more interested in the quality and diversity of degrees, degree requirements, tuition, credit hours, research programs, jobs, and so forth. Prospective members are also interested in finding information such as e-mail addresses of current users, application forms, and public resources.

Mixing the information categories needed by both current and prospective members on a single Web page results in a compromised design solution that does not serve either group well. A simple way to fix this problem is to place a link on the home page that leads visitors to another page that provides different categories of information for the current students, staff, and faculty. Only three of the 60 sites I studied offered this feature. (See the University of Michigan Web site at www.umich.edu and University of Delaware at www.udel.edu for good examples.)

Search Engines

Only 56 percent of the sites I studied included a search engine. Among the sites with this feature, very few of the searches I conducted resulted in useful or functional results. Many search results consisted of a long list of hyper-links with meaningless or locally known names and acronyms that made it diffi-
cult for me as a first-time visitor to locate information. Stanford University offered a good search engine appropriately placed on its Web site. Placing a search engine on the front page of a Web site provides simple, quick access to information available on the entire site. Search engines are quite useful, particularly when the visitors are not sure where to find what they want. To understand the importance of a search engine for a university Web site, imagine trying to find a book at Amazon.com without the benefit of its search engine.

Long Download Times

On average, the Web sites I studied had an average home page size of 94.3 KB. While the home pages did contain nice pictures and graphics, which do make the pages more aesthetically pleasing, they suffer from long download and access times. The average site took 47 seconds to load using a telephone-line Internet connection. This is almost five times longer than the maximum 10-second response time recommended by Jakob Nielsen.2 Long download times often access the site from off campus with 56 Kbps (kilo bits per second) or slower connections and not from the very fast campus backbone network.

What’s in a Name?

Colleges and universities have thousands of internal departments and individual home pages but it seems that there is no consistency for departmental domain naming. Once a visitor knows the name or acronym of an office, department, or school within a university, he or she would be able to correctly guess the URL for the department rather than referring to the campus Web site or a phone book. In most cases, the correct URL is not intuitive. For example, the best explanation Universities tend to use committees or task forces to make decisions. Many campus Web sites seem to have been designed by a committee, usability-tested on the committee, and refined and approved by “the boss.” The boss can vary from the person with overall responsibility for campus Web site development to the vice president or director of the campus information technology unit to the president or chancellor. The boss could also be a campus political figure. In most cases, the boss has no expertise in user-interface design.

Designed by Committee

There may be reasons for inadequate Web sites other than those enumer-
ated by Web usability experts such as Nielsen. Perhaps the traditional practices and internal politics within higher education institutions provide the best explanation. Universities tend to establish a domain naming policy, because both prospective and current users often access the site from off campus without the benefit of its search engine. For instance, the computer science department code is CS, information technology services is IT, and the e-mail address of professor David T. Mills is dtmills@university.edu. The following domain names could be used for the Web sites and homepages of CS, IT, and Mills, respectively: http://cs.university.edu http://it.university.edu http://www.university.edu/~dtmills

University IT departments should establish a domain naming policy, encourage or enforce the standard, and establish domain referral servers to automatically correct previous off-standard internal domains.

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Why Broadband Really Matters: Applications and Architectural Challenges

Broadband is getting massive hype. What characterizes it, and what is it really good for?

by Clifford Lynch

It is easy to caricature the broadband business and technical problem simply as how we get wires (or fibres or wireless services) that can support very fast network connectivity into all the homes, schools, businesses, and other places in this country. The public policy problems can be similarly oversimplified as to how to disenfranchise the fewest people as broadband services roll out, and (maybe) how to equalize the expense to consumers of broadband connectivity, even though the costs will probably vary radically depending on factors such as population density (“universal service”). If someone asks why we need all this broadband service, the answer is usually a vague appeal to “interactive video” and related applications, often with a hint that it’s a really stupid and somewhat tasteless question. There is a lot more at stake in the transition to broadband than this, and I believe we need to think carefully about the issues here. We need to come to an understanding of what constitutes and characterizes broadband service, and why it matters. Why it matters will largely be driven by applications, and I believe the need to access applications is what will make or break the public policy case for universal service. It is also worth noting that many of the universal service arguments are made by analogy to electrification or access to telephone services, and I think they focus far too narrowly on bitways. If we are going to talk about meaningful universal service, we need to talk about which applications are going to be free or very inexpensively available through the broadband.

References
8. ANGEL Project [Research and Development of A New Global Environment for Learning] [www.angel.scs.fsu.edu].
9. Hoppe, M. “Broadband Services: Which Characteristics of broadband, and then consider the sorts of applica-

Broadband Services
The obvious characteristic is that broadband is fast, and this factor has received the most attention. It is fast at least downstream (toward the user) but may be considerably slower upstream (from the user back out to the network) in some asymmetric configurations. This may either be a technical constraint or a pricing artifact. Although it would be