SINCE THE FALL OF 1999, many campuses have been approached by “college.com” businesses offering some type of “portal,” with a range of e-business models attempting to reach campus audiences, especially undergraduates and alumni. While some campus administrators have welcomed these proposals as a means of providing needed Web services or revenue, others have been offended by what they perceive to be an invasion of higher education by commercial ventures. But most administrators simply could not respond to the offers because they were unable to evaluate the value of portals for higher education. To aid in this decision-making process, we will address three basic questions about portals: What are portals? Why is e-commerce interested in higher education? What is the potential value of a portal for higher education?

By Michael Looney and Peter Lyman

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The reader is encouraged to create a do-it-yourself multimedia text by proposing this idea of EDUCAUSE Review and then differentiating with a computer with a Web browser and exploring the features of the portals discussed in this article while reading the text.

WHAT ARE PORTALS?

Let's start with a simple definition, and then explore some of the variations of portals. At the most basic level, portals gather a variety of useful information resources into a single, “one-stop” Web page, helping the user to avoid being overwhelmed by “infoglut” or feeling lost on the Web. But since no two people have the same interests, portals allow users to shape their information sources by selecting and viewing only the information they find personally useful. Some portals also let you personalize your portal by including private information (such as your stock portfolio or checking-account balance). Put simply, an institution’s portal is designed to make an individual’s Web experience more efficient and thereby make the institution as a whole more productive.

But portals have an economic and social impact that extends far beyond any basic functional definition. Nearly ninety-nine percent of the estimated fifty-eight million people using the Web in the United States use some type of portal. It is estimated that over twenty percent of the Internet’s retail e-commerce is portal-based. And though portals have historically been developed from search-engine-based sites (e.g., Yahoo!, Excite, Lycos, AltaVista) or ISP-based sites (e.g., AOL, Earthlink, Thinkly), their value goes far beyond a Web page containing a directory of URLs. One author described a portal as a place to start your day and get a little news. It is a window into the Web experience of an “home base,” a place to return to when you get lost, a place to keep your information, a place from which to communicate with others, “a security blanket or a safety net, and a trusty guide to all things Web.”

The most common type of portal is a consumer portal. The two most popular consumer portals are AOL and Yahoo! (http://www.aol.com) has over twenty-five million users averaging 12 minutes per session.7 Yahoo! (http://www.yahoo.com) has over twenty-two million users averaging nearly 25 minutes per session and is the classic directory portal that most other portals have imitated. Portals often seem similar from one site to another because publishers of generic consumer information, such as InfoSpace (http://www.infospace.com) and MyWay (http://www.myway.com), license the same information services to many dot.coms. College.com companies may license these information services to campuses as a B2B (business-to-business) enterprise or use them on student-oriented Web pages as a B2C (business-to-consumer) enterprise.

Another form of differentiation is a community portal, in which information is aggregated, edited, and organized around a specific topic. An example is a community of pregnant women or a community of parents on Babycenter (http://www.babycenter.com). This classic community portal is organized around personalized information—the estimated birth-date allows appropriate information to be provided at appropriate times. A community portal of MyUCLA. The value of these types of sites is that users can select and organize the content to some extent. They can select specialized information within a general category; for example, users can select basketball rather than world news and then within basketball can select news and scores about only Big Ten basketball teams or only Michigan State. Sometimes users can also customize some of the look of the site by arranging the location of content (e.g., placing stocks above weather, which is to the left of world news, etc.). Although customized, frequently the information cannot be personalized with information that is specific to the individual (e.g., a checking-account balance).

The key problem in e-commerce is how to differentiate a portal from the competition. One classic solution to this problem is to allow the user to design his or her own customized “My Portal” Web page. Executives at Excite claim that users are five times more likely to return to a customizable site such as MyYahoo, MyExcite, MyLycos, MyUW, or MyUCLA. The value of these sites is that users can select and organize the content to some extent.

According to the Delphi Group’s published survey results, 55 percent of Fortune 500 companies are already using an enterprise portal or have plans to develop one in the near future. Enterprise portals are intended to assist employees to be more efficient and productive by centralizing access to needed data services—for example, competitive information, manufacturing and accounting data, 401K information, and other human relations data. Enterprise portals often include news, weather, and sports feeds as a benefit for the employee, giving these portals the appearance of a community portal. Corporate portal designers often buy specialized features from Application Service Providers (ASPs), such as Perk At Work (http://www.perkstatwork.com). In addition, a number of portal application developers have emerged to assist corporations with the internal implementation of their enterprise portals. Companies such as Epicentric, Plumtree, Autonomy, and Verano have all created software tools that are designed to assist a company in bringing Web-enabled intranet data to the employee’s browser in a “one-stop” portal.

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WHY IS E-COMMERCE INTERESTED IN HIGHER EDUCATION?

Many college administrators were bewildered by the sudden onslaught of all the colleges.com companies, in the back-to-school period of 1999. Why us? Why now? To answer these questions, we need to understand that economic incentives drive the world of Internet e-commerce and to note that most college Web sites have yet to take advantage of the applications that corporations are using to enhance productivity and build a sense of community.

As e-commerce investment has exploded, the entrepreneurial world has looked around the Internet and realized that the most connected population with the best commercial demographics is in higher education. Approximately 80 percent of higher education is already connected to the Web, compared...
With the average 39 percent of the U.S. population as a whole, higher education also represents the most educated portion of the best-educated, and in some segments of higher education, the most “brand ready” population groups. Moreover, since e-commerce business models tend to be tightly focused on building brand names to ensure loyalty in a fiercely competitive marketplace, college.com companies perceive the loyalty of students and alumni (and often parents) to the campus brand to be a valuable marketing asset. Others seek undergraduates, or alumni, because of the value of their demographics to advertisers. Thus, although campuses do not often think of themselves in terms of their “brands” or in terms of mapping demographics, higher education possesses extraordinary assets for e-commerce and should not give these assets to a college.com too cheaply or too quickly.

There are many different college.coms in the market, with more being created and announced every day due to the low barrier to entry, and others going out of business due to economic instability, consolidation, and other factors. To help distinguish one from another, the matrix below might be useful in mapping the roles and business models of these various competitors. The horizontal rows describe different segments of the higher education market, whereas the vertical columns refer to the content or service being offered by the portal.

### E-Commerce

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<th>Campus Administration and Alumni</th>
<th>18-to-24-Year-Old Undergraduates</th>
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<tr>
<td><strong>Alumni</strong></td>
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<td>The irony in all this is that the Internet and the Web largely originated in the higher education research community, and although portal technologies have developed for e-commerce, they could be adapted to serve educational needs very well. E-commerce business models may be useful examples for economically sustainable Web-based educational services (at the discretion of the campus rather than a mandate by a vendor) — services such as digital libraries, alumni relations, or lifelong learning. However, the ideal campus portal would not simply import commercial technologies. Campuses are complex social and information environments that require a new paradigm on each of the types of portals described above. The following examples show how a campus might begin to plan a portal-based innovation process. But higher education involves so many applications in innovative ways to achieve unique campus needs and missions.</td>
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<td>A data-centric or enterprise portal is important because of the information services that the campus may want to provide to many of its constituents—not just students but also alumni, donors, and even parents. Elements of a campus portal will be needed, to provide relevant day-to-day information and to reach out to the 40 percent of students who are nontraditional undergraduates. Many students are adults in the real world—they are employees and college.coms may allow them to accomplish these goals. The University of Washington has developed MyUW (<a href="http://myuw.washington.edu">http://myuw.washington.edu</a>). This portal provides information in innovative ways that enhance the educational mission, personalizing student data (student identifier, course grades, student course information) and providing faculty with ideas and resources for new uses of technology for teaching. The</td>
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<td>A campus develop a portal? Increased efficiency alone suggests yes, but there are other benefits that make a personalized campus portal not only desirable but imperative. We believe that the value of a portal to a campus is that it can be used to engage constituent groups, empower them with access to information resources and communication tools, and ultimately retain them by providing a more encompassing and enrollment membership in an academic community. Some campuses have already started developing educational portals and look forward to completing these goals. The University of Washington has developed MyUW (<a href="http://myuw.washington.edu">http://myuw.washington.edu</a>). This portal provides information in innovative ways that enhance the educational mission, personalizing student data (student identifier, course grades, student course information) and providing faculty with ideas and resources for new uses of technology for teaching. The</td>
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UW portal seems to have the mission of creating an online community encompassing a diverse and complex on- and off-campus environment. And the MyUCLA site (http://www.my.ucla.edu), one of the oldest in higher education, provides a classic directory-style portal, ranging from new modes of accessing campus administrative data to relevant feeds from the UCLA Daily Bruin.

In strategic planning discussions about portals, campuses must think clearly about the return on investment they need and expect. They should answer the following questions:

- How will we extend the sense of membership in the campus community beyond the campus walls?
- How should we manage our brand and image?
- Can administrative costs be reduced by building more efficient modes of access to data and services?
- Can portals increase targeted admissions and acceptance rates and increase retention by fostering a sense of community?
- Can portals increase the quality of connection with parents and alumni, building lifelong educational relationships and encouraging increased financial support?

Such strategic questions are critical, for campus portals should be designed to enhance the academic mission, and there is no one simple formula for accomplishing this goal, given the great diversity of institutional missions and histories. Campuses that decide to commit to building a portal will face issues beyond a "build-or-buy" decision. The Forrester Group has estimated that corporations spend several hundred thousand dollars on their enterprise portals during the first year and up to several million dollars by the end of the second year. The following are some of the issues to consider in this decision-making process:

- What technology is needed? Is it available? Is it affordable?
- Who is going to do this? Do we have the in-house talent and engineering?
- Do we have the content needed for the audience/constituents this portal is designed to reach?
- Do we have the ability to keep the site current, fresh, and engaging?
- How and by whom will the site be directed, maintained, and refreshed?

We believe these latter questions are the critical issues for higher education; the problem is not the absence of suitable technology. Many Research 1, Research 2, and even some small liberal arts schools are now building portals using off-the-shelf tools or are licensing enterprise portals. Some campuses will likely share their technologies with one another; for example, North Carolina State University is making its MyLibrary (http://mylib.ncsu.edu) open-source code available, and the JA-SIG group (http://www.ja-sig.org) also has a portal solution freely available to interested campuses.

However, we believe the bigger issues to tackle are ones that affect sustainability: content, maintenance, and support. These issues are ultimately going to be the test of a good campus portal solution.
have just begun to realize that a portal cannot be turned off once it is begun; thus campuses need to understand that recurring budgetary commitments are needed. But in addition, campuses must calculate what it will take on an ongoing basis to keep pace with the e-commerce world, which will be setting the standard for applications, tools, and content.

Why develop a portal? We believe that a portal is a means of renewing and extending a sense of academic community—learning communities, alumni or development communities, faculty communities—using the Internet. Every campus will have to decide how the development of these virtual communities can be affordable. What form should a return on investment take? The answer will depend on the culture of the community and its needs. In some communities, the notion of any type of commercialism will be unacceptable, and finding sources of funding such as departmental software budgets or fees will be necessary. For other communities, the idea of advertising or commercial sponsorship may be acceptable and may even be seen as a “value added” to the community as a whole. For instance, learning communities may appreciate sponsorships from publishers or research database companies. Student services communities may welcome sponsorships from potential employers and service providers (such as travel agents and financial aid organizations). These sponsorships can be provided with discretion and taste, not unlike the sponsorships found on public television. As for ongoing content and information, it will be important for campuses to collaborate with other institutions to keep academic communities alive and fresh. There is more and more technology available to support such cooperative work. And, most fundamentally, portals can be supported if they provide a more cost-effective means to accomplish goals that are already in the budget, such as publication and information management.

Finally, we believe that portals can be used to engage and retain students for a lifetime of education. Although new models of “digital marketing” are unfamiliar, and perhaps even alien in their campus.com incarnation, campuses can design and support portal-based “virtual communities” to extend traditional academic values and relationships into new markets.

Notes
2. These figures are taken from Nielsen ratings for the second week in January 2000.
3. A “bounty” is a lump-sum payment made by a commercial entity to a vendor (e.g., a bank may pay $50 for a vendor to sign up new users).
4. Marketers have long seen undergraduates as “brand ready,” meaning that developmentally they are at a stage in which they will start making independent choices about which products and services they will buy: developing purchasing behavior that can last most of their lives.