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The Portal's Progress: A Gateway for Access, Information, and Learning Communities

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Campus portals have evolved from static campus Web pages to a comprehensive interface for accessing university resources, community groups, and interactive learning environments.

The campus portal is a hot topic on many college and university campuses. While still in an evolutionary state, university portals provide a new interface between colleges and constituent groups, provide new mechanisms to organize campuses, and offer the promise of new ways to create communities of learners.

The concept of information portals originated with search engines and interfaces like Yahoo, Excite, and Netscape. These companies created horizontal portals to provide information on a broad array of subjects that could be personalized by users. Next came vertical portals, which provided information on a single subject, closely related subjects, or information that was directed at particular groups of users. The combination of these two portal approaches with the integration of campus-specific information creates the campus portal, a new personalized and customized interface for students, faculty, staff, alumni, and visitors to communicate with the university and with each other.

Consider the possibilities that are now available on a user's desktop. Prospective students can track applications for admission, scholarships, and financial aid; attend a virtual orientation; visit with an advisor; register for classes; and pay their bills, all through a single interface. Students can see copies of their current schedules, check their degree progress, discover whether their latest papers have been graded, determine which computers are free in the nearest lab, be reminded that materials are due in the library, chat with friends, read announcements on clubs or special interests, and see headlines or sports results on campus, regional, or national levels. Faculty will be able to see class rolls with student photos, post class announcements, submit grades electronically, check budget balances, and track the status of their latest travel vouchers. Alumni and donors will be able to keep up with classmates, stay in touch with campus events, and follow favorite projects. Many of these activities are possible on campuses today, but certainly not through the convenience of a single interface.

A campus portal may be defined as a single integrated point for useful and comprehensive access to information, people, and processes. While portals have a rapidly evolving set of features and characteristics, they can be described as both personalized and customized user interfaces providing users with access to both internal and external information. Portals can be used for a variety of activities which generally fit into three main categories-gateways to information, points of access for constituent groups, and community/ learning hubs.

Campus Web Presence Evolves

The campus portal gateway is a logical and reasonable next step in the evolution of the campus Web presence. First, colleges created home pages, a static group of links usually including a photograph of a campus building and quite often used as a student recruitment function. Next, university home pages were developed that asked users to identify themselves as prospective students, students, faculty/staff, alumni, or guests. These pages linked users with a separate page created to meet their specific needs. Anyone who has attempted to organize this Web effort knows how difficult it is to meet disparate user needs through a single page. The campus portal provides access to information already available on the World Wide Web, but also can provide access to internal information previously available only through the campus intranet. This access, combining the function of both Internet resources and intranet-based data in an interface that the user configures to his or her personal preferences, can create a strong, powerful, and valuable learning tool.

An effective campus portal requires the interaction of a series of functionalities to provide the access, information, and interactivity described above. The following list describes some of the many features portals may include.

- Gateway: The system identifies approved users through a single sign-on procedure.
- Security: Users are allowed to access information they can see, change information they can change, and no more. Those who should not see or change information are denied access to it.

- Customized information: Users receive information for or about themselves. For a student, this might be a course schedule, degree checklist, bill balances, or a reminder that a library book is due.
- Channel information: Channels can be configured to provide information from internal and external sources. Examples might include the weather, news, entertainment, shopping and/or stock information, campus sports, and newspapers.
- Pushed information: Universities, and users to a lesser extent, can select which constituencies should receive which information; for example, e-mailing to all students, to particular majors, or to students with a specified interest. What is sent could be faculty class announcements, campus calendars, social announcements, and student government activities notices.
- Internet tools: Search and navigation engines for information over the university intranet, university Web pages, and the entire Internet are available. Tools to save favorite Web sites, create home pages, and create or post message boards are accessible.
- Personalized tools: Users can create their own planners, calendars, to-do lists, contact and project management systems, real-time chat, message boards, original content on every imaginable topic, shopping, free home pages, "clubs" which function as makeshift intranets, or small business services.
- Interaction: Portals can be interfaces to chat, e-mail, threaded discussion, and bulletin board postings on a variety of subjects.
- e-Business: Portals that are integrated into university back-office operations can become a one-stop interface for educational transactions over the Web.
- Workflow and application integration: Staff and faculty can access data and applications needed to do their work in a real-time environment creating personalized data reports and tracking indicators. Paper documents can be replaced with Web-based forms and tracking software.
- Personalization: Users are able to edit their portal's look and what sources of information will be available on it.

Looking at this complex list, it is easy to understand the potential technological challenges portals can represent for campuses, because connecting portal software with internal data sources is not an easy or simple process. There are many routes to creating a campus portal. Readers are encouraged to visit some of the sites below to experience the wealth of information available and the ease with which it can be accessed.

- A university can choose to build its own portal. Operating examples of providing guest or demo access include My UCLA (<http://web.archive.org/web/20020211121843/http://my.ucla.edu/>), my UW (University of Washington, <http://web.archive.org/web/20020211121843/http://myuw.washington.edu/>), and MyUB (University of Buffalo, <http://web.archive.org/web/20020211121843/http://www.buffalo.edu/aboutmyub/>). All three provide a high degree of integration with university systems. In addition, My UCLA provides area traffic information, is linked to the campus online newspaper, and gives users the ability to choose color themes and layouts. In visiting this page from the guest access, choose the sample student session to see the functionality available. My UW is an entirely text-based approach and effectively uses tabs to allow users to move from one information grouping to the next. MyUB provides excellent user help and explanations of university data sources.
- A campus may choose to partner with others to create a shared code approach to portals. The Ja-Sig group is a partnership of twenty-four campuses doing precisely this (<http://web.archive.org/web/20020211121843/http://www.mis2.udel.edu/ja-sig/portal.html>). Campus examples of this include My UBC (University of British Columbia, <http://web.archive.org/web/20020211121843/http://portaldemo.ubc.ca/index.jsp>) and UD and Me (University of Delaware, <http://web.archive.org/web/20020211121843/http://www.misc3.udel.edu:9091/portal/>). This shared approach lowers the development investments of campuses and provides the advantage of shared source code. The "Current UBC Student" Section of My UBC presents an interesting integration of student service and library information, as well as a pop-up calendar. UD and Me makes effective use of color, and includes scrolling national news and sports windows.
- Universities can partner with vendors to create campus portals. These products provide differing levels of personalization and customization, may include advertising-a sensitive subject on some campuses-and may require that university data reside on vendor servers. Companies providing this type of software and service include Campus Pipeline (<http://web.archive.org/web/20020211121843/http://www.campus-pipeline.com/>), Mascot Network (<http://web.archive.org/web/20020211121843/http://www.mascot.com/>), and Jenzabar (<http://web.archive.org/web/20020211121843/http://www.jenzabar.com/index.cfm>). Campus Pipeline provides integrated functionality with some university data systems. It has attracted attention for its use of advertising on portal pages. The main user has one small advertisement; however, pages designed for links to entertainment contain a significant number of ads. Mascot Network does not present advertising and provides a high level of interactivity among users. It is customizable for university groups, bulletins, and announcements, but the current demo does not demonstrate connectivity to university data. Some companies provide portals for portions of a university's operations, alumni, or athletics. An example of this is zUniversity (<http://web.archive.org/web/20020211121843/http://www.zuniversity.com/index.htm>).

Learning, or Access, Portals

A learning portal is a Web site that offers consolidated access to learning resources. The most common of these involve access to college distance learning efforts. Designed as virtual campuses, they provide student and faculty with access to course schedules, registration and payment systems, information, and other services. Throughout the course, this portal is used as an interface between the student and learning materials. At present, this type of portal is customized to the student's learning interest, but may provide limited or no capacity for personalization.

Examples of learning portals include multinational efforts, such as TeleCampus from the New Brunswick Learning (<http://web.archive.org/web/20020211121843/http://telecampus.edu/learners/>); regional efforts, such as Southern Regional Education Board Electronic Campus (<http://web.archive.org/web/20020211121843/http://www.electroniccampus.org/>); and campus-based efforts, like WSU Online from Weber State University (<http://web.archive.org/web/20020211121843/http://wsuonline.weber.edu/>). The TeleCampus is truly a remarkable collection of online learning offerings from around the world. Courses may be selected by subject, by words contained in the title or description, or by institution. Pop-up windows provide more complete course information including cost, analysis of the offering, and links back to the offering campus to register for the class. The "Before You Begin" section includes valuable information on unrecognized accrediting agencies and unaccredited institutions. The site is not personalized to the student, but provides chat capability and a wealth of useful information for distance learners.

Course and Program Portals

Some institutions are now creating portals for courses and programs, organized around either course or discipline. Examples of these include Silva Rhetoricae by Dr. Gideon Burton of Brigham Young University (<http://web.archive.org/web/20020211121843/http://humanities.byu.edu/rhetoric/silva.htm>), Professor Freedman's Math Help Site by Ellen Freedman of Camden County Community College (<http://web.archive.org/web/20020211121843/http://www.mathpower.com/>), and American History Civil War to Present by Stanley K. Schultz of the University of Wisconsin (<http://web.archive.org/web/20020211121843/http://us.history.wisc.edu/hist102/>). Visiting any of these sites is an invitation to linger and learn. Dr. Burton uses the metaphor of a forest to provide users with a guide to classical and Renaissance rhetoric. Constructed in frames, the left side lists the trees, or major categories; the right side lists flowers, or Greek and Latin terms. Freedman presents information on basic math and algebra in a site designed for the adult learner. It is a delightful, entertaining, and helpful collection with animation and music. Schultz's pages are tightly integrated to the course the site supports. An especially interesting section is the "Hitchhiker's Guide to American History," which provides content and presentation ratings on Web sites related to class lectures.

Some learning portals are Web sites that provide a combination of courses, collaboration, and community. These are frequently designed to provide training to individuals or industry, are set up as e-commerce offerings, and serve as aggregators of course offerings. An excellent collection of links to these sites is available from Dr. Brandon Hall (<http://web.archive.org/web/20020211121843/http://www.internetconnect.net/~bhall/portals/>).

Other commercial versions of learning portals are designed to create communities of learners. An example of this is Blackboard.com (<http://web.archive.org/web/20020211121843/http://www.blackboard.com/>; choose from the communities on the right hand side of the page). At Blackboard, learning communities are organized by discipline and have separate sections for faculty and students. An interesting category of learning portal is institution-independent and aimed directly at students. Study 24-7.com (<http://web.archive.org/web/20020211121843/http://www.study247.com/home.html>) and Tutor.com (<http://web.archive.org/web/20020211121843/http://tutor.com/>) are two examples of this approach. Study 24-7.com has attracted attention through its offer to purchase class notes and is certainly an interesting approach to encourage student interaction and study.

The Path Ahead

While it is easy to conceptualize the potential value of portals, to date there is limited published information available on student acceptance and use. Clearly, functionality and value will be key concepts in user acceptance of portals. In time portals can become increasingly user-friendly as they track and understand user actions and access patterns. In the future, portals may self-assess, reconfigure, and recommend to users, much as commercial sites recommend choices based on user patterns. For the present, campus portals offer the promise of an individualized view of information, increased access to resources, and new ways to form communities of learners.

David L. Eisler is provost of Weber State University. He is currently working on a portal project linking the ASSCU provosts and the TLT Group in a new learning environment. Dr. Eisler will lead sessions in the featured track on Campus Portals at the Syllabus Fall 2000 conference in the Boston area. deisler@weber.edu

Syllabus Case Study:

The Forest of Rhetoric: A Learning Portal Stands Out in its Field

It all started, as Dr. Gideon Burton puts it, "innocently enough." A professor and scholar of rhetoric at Brigham Young University, Burton originally turned to Web pages and the hyperlinking of data as a way to make notes to himself, to organize the vast terminology of historical rhetoric from antiquity to the Renaissance. Three years later, Burton has added another dimension to his role of scholar-professor—he is now Web master of a widely known and award-winning discipline portal on rhetoric: Silva Rhetoricae: The Forest of Rhetoric.

The development of Burton's portal was also, in part, an outgrowth of his effort to improve his teaching, making an extremely complex subject easier for his students to grasp. Like educators everywhere, he had printed handouts of definitions and

explanations, but still the terminology was confusing and overwhelming to his students. This struggle with the terminology seemed to be obscuring the primary functions of the larger field of rhetoric-not being able to see the forest for the trees. This would eventually become a metaphor for the Silva portal, where the "forest," "trees," and "flowers" of rhetoric inhabit separate frames on the same screen.

Burton himself had appreciated the simple charts of "rhetoric in a nutshell" provided by Edward Corbett's Classical Rhetoric for the Modern Student, and used this print model as a starting point for his Web site. He discovered that the Web environment could accommodate both the simplicity of Corbett's visual as well as the details of rhetorical terminology. "Through hyperlinks," Burton explains, "a reader could travel readily back and forth between the overview (forest), and the details (trees)."

Burton discovered that the multi-frame ability of the Web was actually superior to print media for organizing material simply. Web page organizational capabilities, he says, "accommodate well an esoteric subject and make it more accessible" to multiple audiences. Thus, when colleagues at academic conferences asked for more scholarly details and sources, Burton integrated a scholarly apparatus to accompany the more general information. While Silva is still simply organized, each frame addresses a different set of learning needs, a different audience. The frame on the left, trees, includes a limited set of choices and encourages the reader to "stay here so you won't be overwhelmed." The frame on the right includes a more daunting list of rhetorical terms; when a reader clicks on one entry, the term's home page comes into the center frame and includes comparative Greek, Latin, and English terms; etymologies; and the Greek in its original alphabet. At the bottom of every page appear citations to the primary texts where the particular term is defined or discussed.

"Though Web-based scholarship remains an oxymoron for many," Burton confides, this collegial interest in Silva resulted in his taking his Web site "more seriously as a scholarly endeavor precisely because others began to do so." Today, he comments, "My academic Web site has complemented and supplemented the professional meetings I regularly attend." For instance, a professor of Russian at the University of Tartu in Estonia employs Silva in teaching Russian stylistics and has, with Burton's permission, translated the site into Russian at a mirror site.

Rewarding to Burton is evidence that his work has had an impact on students. "That I succeeded in reaching students is apparent not only in my own teaching," he says, "but in the fact that secondary and elementary schools have recommended Silva Rhetoricae: The Forest of Rhetoric as a resource. In September of 1997 the site received the Wise Owl Web award in 'in recognition of exemplary design and educational excellence.'" Are Burton's students impressed by his Web expertise? He pauses to consider. "I know students are often more computer-knowledgeable than their teachers these days," he says. "Does the site make them think I'm hip? I hope so."

Though Burton's experience in assembling an overarching Web site has benefited his research, teaching, and scholarship, he warns that these benefits have come "at a certain price." It is important, Burton acknowledges, that faculty go into Web site construction "with their eyes open." The first drawback to the medium, of course, is time. "The creation of a Web site takes a great deal of time," Burton says, "much of which is not spent in the areas for which a scholar is trained." Burton himself learned to manipulate HTML, progressing from his original Web site Rhetoric for Rookies, a simple one-page site with links to definitions and explanations in other parts of the page, to Silva, the much more complex and satisfying multi-framed site he uses today.

Another part of the time sink of portal creation, according to Burton, is the siren call of the huge project. It is simply far too easy to take on a project that is too large, Burton cautions. Any project involving graphics, database preparation, or multimedia requires significant underwriting and "like all electronic publishing, can become something more akin to the collaborative and costly production of a movie than to typical scholarly work if one indulges all the tempting possibilities of this new medium."

Finally, Burton notes that Web site and portal creation "is hard to sell to one's academic peers as a legitimate scholarly activity." While this is changing, Burton finds it ironic that on his campus "facility in Web publishing has become a criterion for assessing faculty candidates...but faculty already in place (at least in the humanities) are told not to rely on Web publishing for rank and status advancement." It is possible, Burton concludes, that one can be "penalized for being on the cutting edge."

Nevertheless, Burton says, "with these caveats in mind, I urge scholars to bring their knowledge into the electronic environment. Many significant uses of the electronic environment have yet to be discovered, and along the way the very pitfalls one faces can provide a stimulus for rethinking one's research and reframing its use in the classroom."

*For more information contact Dr. Gideon Burton, Brigham Young University.
<http://web.archive.org/web/20020211121843/http://humanities.byu.edu/rhetoric/silva.htm>*

Resources:

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All links in this article are accessible from <http://web.archive.org/web/20020211121843/http://weber.edu/deisler/portals.htm>

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