

Chapter 11 Summing Up

Richard N. Katz and Larry Goldstein

Web Portals and Higher Education Technologies to Make IT Personal

Richard N. Katz and Associates

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Summing Up

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This volume began with Richard Katz's effort to untangle the concept and the rhetoric around portal technologies. When introduced, the concept of portals was seized by marketers as information technology's "next big thing" and soon became laden with meanings and expectations beyond its potential. In higher education, business officers, development officers, and campus presidents enthusiastically envisioned new forms of customer care and, more importantly, new revenue sources, while faculty cried foul at the prospect of seeing commercial advertising creep into the campus Web space. Information technologists on campus organized around portals in the fashion of a search for the Holy Grail, believing portals could solve vexing content management, navigation, and information security issues.

In the two or three years since their introduction, portals have been put into context. In the institutional context, portals are indeed an important technical and visual superstructure for organizing online resources and services. Portals are considered to be a critical layer of so-called middleware that enables users of the institutional Web to customize, personalize, and tailor resources and services in ways that fit the users' needs and preferences. From a business perspective, the portal and associated technologies are key elements of a new business architecture that includes e-business, online transaction services, customer relationship management, and

other capabilities. Portals are neither a technological silver bullet, nor a source of untold riches, nor just another shiny new toy. Portals have the potential to change how an institution appears to its primary stakeholders, but change, as always, comes at a price. This volume is concerned as much with the institutional impacts of portals as the technology of portals.

Portals and e-business are transformational concepts that, for many, are keyed to technological advances. Although there is a great deal of truth in this statement, it is also true that the technology needed to accomplish transformational purposes is only one part of what is necessary to create robust e-business environments in higher education.

What emerges from the organization of this volume is a conclusion that e-business is not merely application of technology to existing business processes. Instead, e-business is helping to create entirely new business practices, in addition to enhancing existing ones. With the capabilities created through the introduction of so-called infomediaries, the integration of portals with the campus Web, e-services, Internet security, enterprise resource management (ERP), and customer relationship management (CRM) capabilities represents a significantly new opportunity area for higher education.

New Business Opportunities

Higher education institutions have been forced to make significant shifts in their business strategies in response to the increased expectations of their constituencies. For example, Oblinger and Goldstein (in Chapter Six) detail changed expectations relating to instantaneous responsiveness, operating efficiencies, and overall cost containment achieved through e-business. The net impact of these rising expectations is an increased emphasis on operating effectiveness. Despite sometimes high initial investments, e-business is moving colleges and universities toward self- and full-service models that eliminate unneeded human intervention in transactional activities.

This has the dual advantage of being able to meet customers' needs whenever they arise—routinely in 24x7 mode—and freeing up staff resources to engage in higher value activities.

Service Delivery

At the core of e-business for colleges and universities is the reexamination of how new technologies can enable the transformation of service delivery. In Chapter Two, Lightfoot and Ihrig describe the University of Washington's approach to providing information when it is needed, where it is needed, and in a format supportive of action. Using service as the driving force, they have redefined customers and placed them at the center of the university's service delivery model. The power of this approach is especially significant in light of the university's decision to continue its reliance on its legacy systems. In essence, the institution remains competitive by extending the life of the existing transaction systems while still moving forward to deliver information needed by its constituents. The beneficiaries are the students, prospective students, patients, donors, and supporters of the athletic programs, as well as the university's myriad other constituents.

The concept of service is completely redefined when one considers the thirteen million hits received monthly by the University of Minnesota's student Web site. Kvavik suggests (in Chapter Five) the awesome effort it would take to replicate manually the three million pages of information being downloaded from the site on a monthly basis and points out that the shift in service delivery is only the beginning of the transformation expected in response to the new technology. When e-business concepts are fully deployed to teaching and learning, new value will be discovered within the educational process.

The focus of enterprise resource planning systems represents a comprehensive approach to data consolidation, enabling institutions to examine their full range of activities in a holistic manner.

E-business takes this several steps further by shifting the focus from processes to information. And possibly of greatest significance is the emphasis on allowing customers to determine the information and services they will access through the use of portals.

Stakeholder Relationship Management

Colleges and universities have sought lifetime relationships with students since the establishment of the first alumni association, if not before. Campuses seek to maintain connections with alumni for several reasons, not the least of which is the role alumni play in perpetuating our institutions through their philanthropic activities. With today's technology, these lifetime relationships take on an entirely new meaning. The concept of "cradle-to-endowment" relationships remains an important one, but other connections take on new significance as well. The idea that a prospective student can establish a lifetime relationship based on an initial visit to an institution's Web site has become a reality for many colleges.

This is symbolic of the customer relationship management shift described by Grant and Anderson in Chapter Three. Customer or stakeholder relation management is the next step in the evolution begun during the 1990s, when ERPs focused on reengineering operating processes to reduce costs and improve efficiencies. In today's environment, institutions are placing students, prospects, parents, patients, and alumni at the core of their educational and business strategy. Thinking of stakeholders in this way is consistent with the more global evolution of higher education from a producer-centered industry to one that is consumer-centered. Higher education is ideally positioned to learn from the successes of other industries that have experienced this shift—primarily those in the commercial sector. Although only a portion of what has occurred in the commercial sector will have relevance for higher education, much can be learned from the examination of their success and failure.

Portals

One area in which much can be learned from the commercial sector is that of portals. Strauss (in Chapter Four) describes two types of portals: horizontal enterprise portals (HEPs), or megaportals, and vertical enterprise portals (VEPs). Colleges and universities are learning from the successes of HEPs, such as Yahoo! and Netscape, but the most successful portal solutions for campuses will inevitably be VEPs. The portal defined by Strauss is a “single CPAD—a customized, personalized, adaptive desktop.” He goes on to describe an environment wherein each user will use a unique portal, reflecting his or her role, needs, and interests. Relying on a single sign-on accomplishing both authentication and authorization, individual users will have access to information and functionality based on their preferences and needs.

Technology Implications

Although we have suggested that the technology is only one factor in the evolution of e-business for higher education, it should not be assumed that the technology is without its complications. The specific technology decisions required today are incredibly important, and if they are not planned appropriately, they will represent significant costs. These costs may take the form of wasted expenditures due to abandoned investments, or, more likely, they will appear in the form of opportunity costs. Katz and Gross (in Chapter Ten) remind us that technology planning in higher education environments is complicated and confounded by the juxtaposition of complex and highly distributed decision styles and norms with fast-moving technologies.

Daigle and Cuocco (in Chapter Eight) and Gleason (in Chapter Seven) address aspects of this situation from the perspective of a large public comprehensive university and a private, selective college, respectively. Each identifies and explores the range of technical opportunities surrounding portal technologies and outlines how

institutional priorities influence weights and choices among alternative platforms. Their experiences reinforce the idea that no specific approach is right for every institution. Technology decisions and priorities, in the final analysis, are guided and reinforced by the cultural and technical contexts in which they must be implemented. The California State University and Boston College examples illuminate the thought and action processes that institutions must go through to acculturate technologies that are likely to become pervasively used by members of the institutional community. Their experiences can help position other institutions to take advantage of the e-business opportunities present in today's environment without prescribing specific solutions. Without such a plan—incorporating input from diverse campus sectors, including information technology, the business office, academic affairs, development, and athletics—institutions will likely be positioned poorly to respond to these e-business opportunities. Given the uncertainties and changes in the vendor community that drive much of e-business activity, it becomes even more critical that institutions be prepared to make the decisions that are best for them.

Policies

The most difficult aspect of e-business for many colleges and universities will be the development of the institutional policies required to support it. As Katz and Gross point out in Chapter Ten, “the privacy, access, ownership, and security issues posed by e-business are extraordinarily complex and represent as much a set of cultural, behavioral, and policy issues as technical ones.” Although Gleason (Chapter Seven) is able to summarize in a useful list the steps that need attention to establish the technology needed to support e-business at one university, no such list exists for the policy decisions required to leverage, support, monitor, or control the e-business opportunities facing campuses today. Each situation will be different. For some campuses, attention will center on the reputation of the institution and the appropriateness of introducing advertising to

the institution's Web pages. For others, the focal point will be ownership of intellectual property. For others, the critical issue will be the identification of the appropriate institutional officer to make decisions about which business opportunities will be pursued and which ones will not be considered. Each of these issues has the potential to stimulate heated debate within the academy. The debate needs to begin immediately because the opportunities are here today.

People

In Chapter Nine, Curry reminds us that the success of any technology-enabled change initiative ultimately rests on the ability of leaders to inspire change and of people to embrace change. Curry presents the view that experience *and* the new technologies suggest the need to transform the manner in which transformation is crafted and communicated in higher education. The new technologies will indeed transform our institutions but will do so through the management of a steady stream of service innovations that are delivered in an integrated fashion through the institutional portal. In this way, change is likely to be perceived as being gradual, and in general it will be associated with service enhancements, thereby lowering the oft-experienced resistance to change. Portal and related technologies make it possible to rethink the confederated relations between the campus central administrative organizations and the organizational subunits of the institution. Such a rethinking is enabled by standards enforced by the portal—standards that empower solutions wherever they may emerge so long as these solutions belong to the institution and conform in certain critical ways to institutional standards.

Conclusion

The Internet has held the promise of financial value ever since its inception. Only now are colleges and universities truly recognizing the magnitude of its potential. The irrational boom and bust of the

so-called New Economy suggest to us that caution and enthusiasm are both warranted. Emerging technologies are making clear both a new business architecture¹ and a new technical architecture to foster higher education's mission. These architectures put a design accent on modularity, flexibility, and nimbleness and are focused on presenting institutional services and information in ways that conform to the needs of stakeholders rather than the needs of unaligned functional organizations. This potential is enormously powerful and, in fact, it may be quietly revolutionary. Once information that previously resided in stovepiped organizations can be brought to the surface and joined with information from other organizations, students, faculty members, staff members, parents, and others can make new inferences about the institution and can begin to reorient the behaviors of the institution. Once our technologies make it possible to facilitate the building of a relationship with a prospect or a patient and to follow such individuals throughout their decades of involvement with our institutions, new relationships can be enabled.

The technologies of portals, e-business, customer relationship management, and so forth, are making it possible for us to create compelling virtual environments to accompany our compelling campus environments. Bricks and clicks. It is clear that our great institutions will not only survive this new wave of technology, they will also embrace it in ways that foster higher education's purpose. In fact, we hope that these technologies will extend higher education's purpose across distance and time in ways that knit our institutions even more deeply into the very fabric of our stakeholders' lives.

Note

1. See "UC2010: A New Business Architecture for the University of California," <http://uc2010.ucsd.edu> (University of California: July 2000).