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Web-izing: Preparing Instructors to Teach Via the WWW

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Web-Based Instruction (WBI) has been touted as the means of taking education to the masses. While there are a number of arguments for "Web-izing," perhaps the only sound reason to consider Web-izing is that the Web, in spite of (or perhaps because of) its hypertext nature, lends itself to implying structure to information.

Information only makes sense to a learner if it fits within a matrix, or frame of reference. A good instructor guides the learner through the material and implies a certain structure to the information based upon the instructor's more expert awareness of the field. Information, isolated from its context and meaning, has a noisy, random quality to it. Only upon realizing structure and context does a learner begin to form knowledge from information. Web pages, well-done, lend themselves to naturally implying the structure from an instructor's expert perspective.

The traditional narrative mode of instructional delivery goes something like this: The instructor recites information to the student . . . the student memorizes it . . . the instructor tests the student to make sure he or she memorized the information. This type of instructional delivery is not very effective for long-term retention of information. At its worst, Web-based instruction is threatening to be one step *removed* from the traditional narrative mode . . . the student *reads* the information . . . the student memorizes the information (or makes a note of the website housing the information) . . . the instructor tests the student to make sure he or she memorized the information (or knew how to get to the information).

Knowing where and how to access information are unarguably *very* useful skills in the "Information Age." Humans do not need to be a repositories of facts and information — the Web can hold vast stores of information for ready access whenever it is needed. But humans *do* need to acquire matrixes for structuring that information. Those matrixes are what separate knowledge from information — the

ability to make sense of the world and have a command over a body of information in a formally or informally organized structure, to know what *is* the wheel so as to know what *not* to re-invent are essential tools to make chorus out of potential cacophony.

What is "Web-izing"?

At Briar Cliff, at least, it has come to mean the process, both conceptual and logistical, of translating a particular course or program of study into a form adaptable to delivery and access via the World Wide Web.

Why "Web-ize"?

Briar Cliff College decided to "Web-ize" for two reasons. The first was that we wanted to bring together the different "communities" we serve and create one single college community. Because we are located in rural northwest Iowa, we have a number of off-campus sites serving between ten to fifteen percent of our total student body. We also run in-house programs for several local corporations. Inevitably, issues of academic quality arise. Training of adjunct faculty becomes difficult, communication between the campus and centers can be slow, and asking faculty to travel up to six hours each time they teach can be politically difficult. By putting courses onto the Web, and making them available to *all* our students across all of our constituencies, we hope to avoid some of these problems. "Web-izing," therefore, allows the college to create one college culture, one set of academic standards in spite of the distances we serve, and a more centralized academic environment.

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The second reason for "Web-izing" lies in our belief that the Web can significantly enhance student learning, as we stated above. The Web is a vast repository of information that is relatively easy to access. In this regard, it is unparalleled. But more importantly than that, even, is its potential for creating an extremely high degree of interactivity between faculty and student, faculty and resources, student and resources, and especially between student and student. This belief, that the Web will significantly enhance the educational process and create a highly collaborative learning environment, was perhaps the main impetus behind our "Web-izing" effort.

How do you prepare instructors to "Web-ize" courses?

When introducing Web-based learning, institutions must realize they are engaged in systemic organizational and political change

requiring new resources and different mindsets for all parties, particularly faculty. We, therefore, decided to identify a leadership group, develop cohesiveness within it, and give the group both the academic and technical support we felt it needed. We treated the group members well. We bought them lunches, we brought in experts, sponsored discussion groups, and offered specific technical and pedagogical training. We enrolled them in a Web-based course so they could experience the process first hand as students. And above all, we paid them for developing their first "Web-ized" course.

Faculty obviously need technical training in hypertext markup language, or HTML, (we used Microsoft FrontPage) in order to teach a Web-based course effectively. We required attendance at a two-day workshop and offered optional academic credit for that training.

Given that collaborative learning was, in our opinion, such a critical component of "Web-izing," we required faculty to attend a workshop led by an education expert (who happened to be a "non-techie"). Later, during a virtual field trip, the group of faculty visited a variety of Web-based courses at different Web sites. We also started an internal e-mail distribution list to keep members abreast of developments in Web-based learning.

Finally, we provided a course template developed by our instructional designer and offered a twelve-day work session in a lab environment — with technical support available — so faculty could actually develop their first "Web-ized" course in a structured, supported format. Faculty were instructed to bring:

- course syllabus
- course objectives
- course outline
- description of course experience and instructor's expectations of students
- required readings (textbook ISBN, handouts, URLs of on-line resources)
- content (lecture notes, visuals, transparencies)
- tests and quizzes
- instructor information (address, phone, office hours, e-mail address)

Before embarking on "Web-izing," an instructor needs to be encouraged to consider the following questions: How will the instructor bring elements of a face-to-face course into the Web-ized course? Does the instructor want to include full-class, group discussions? Does the instructor want students to break into smaller groups for discussions and then come back to the full class with their thoughts and comments? Does the instructor want students to work collaboratively on projects? Will the instructor want to compile exemplary student works as examples for future students?

The particular handout we provided instructors at Briar Cliff College includes the following headings:

Examples of WBI
Studies, Research, and Manuscripts
WBI Course Design Software (including information on using chats)
Course-Specific Resources

In conclusion, we emphasize the importance of the interpersonal and organization dynamic. Our process has lasted one year from the time we first entertained thoughts of "Web-izing" coursework to the "Web-izing" of roughly twenty courses with more than twenty percent of our faculty participating. We feel we have been very successful and look forward to bringing the number of participating faculty up to fifty percent by the end of next academic year. ■

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Why Universities Should Not Bend to Market-Driven Economy Demands

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Universities are increasingly under pressure to provide outreach programs for growing numbers of students who may never visit the campus in person. With the availability of advanced interactive technology, more university extension programs can be made more accessible to traditional and non-traditional students than deemed possible as little as a decade ago.

In order to accommodate the rise in demand for university programs, restructuring of the status quo must be undertaken by traditional educational institutions to incorporate new technologies and develop the best educational practices associated with their use. There is little question that restructuring will take place. Issues concerning how to deal with the unprecedented growth and dissemination of knowledge, the growth of technology itself, and the subsequent means it offers for increasing learning productivity require that universities find optimal strategies and procedures to manage growth in ways that preserve the excellence and sustainability of campus-based and outreach programs.

At stake is the issue of whether or not the transition to accommodate information technologies as new media for instruction should take place quickly — or cautiously, and hence more slowly. Also at issue is the question of how institutions and the students who attend them are best served. That is, should universities make changes from within or look outward and make concerted efforts to more closely attune the university to the needs of a market-driven economy? This essay contends that changes made in accordance with an outward focus are potentially diametrically opposed to the process of change likely to be undertaken from within the institution.

In brief, from an external perspective, universities are urged by funding agencies, government, and the corporate sector to embrace the changes technology brings. Education-on-demand at home or in the work place is now both possible and potentially lucrative, and revenues from this sector may well offset investments made in the technology itself. Universities are urged to respond quickly to the demands of the marketplace for profitable, just-in-time learning. If

they do not, institutions that do act to fulfill the need will reap the benefits accordingly. Indeed, it is alleged that unless market-based adaptations are soon made, the traditional university may not survive (Denning 1996). From the perspective internal to the university, of utmost importance is the need to preserve traditional academic values cherished by members of the scholarly community — values concerned with excellence in teaching and research and supported by the constancy of resources needed to do the job properly. Also, the need to preserve and sustain core university courses and programs, including those of no apparent or immediate fiscal value, must not be compromised (Noblitt 1997).

In order to get a better understanding of the nature of the contrast between the external and internal perspectives on change, this essay presents a description of how factors underlying a market-driven economy affect higher education. This is followed by an examination of the goodness of fit between the factors and values associated with the marketplace and those associated with the inner workings of the traditional university. This analysis supports the conclusion that universities are ideally placed to meet the needs of both campus-based and outreach students, without need for speedy embrace of the principles and practices of the marketplace. Indeed, the prod to make haste or put the survival of the traditional university at risk stands to lower the very standards that attract students to universities in the first place, but not for the reasons put forward by advocates for a market-driven institution.

Designing a Marketable University

There is an emergent chorus of educators and corporate leaders who argue that the same factors influencing the market-driven economy also exert pressure on the university to deliver education-on-demand to anyone, anywhere, and at any time, and universities are slow to appreciate the gravity of the situation. Put most simply, educational programs are recast as "products" designed to meet specific ends, and university faculty provide the intellectual capital to develop and offer the goods. In this way, education will better serve the need to prepare individuals to enter the increasingly competitive work force of the twenty-first century (Hairston 1997). What universities must do to retool the institution to best serve the marketplace is to assess and optimize programmatic strengths that are in accord with market demands, cut the weak areas, and focus on the future. The goal is to improve competitiveness by streamlining services, increasing productivity, and improving customer service. Faculty resistence, it is argued, reflects entrenchment in the status quo mainly for reasons of self-interest (Olcott and Wright 1995). Needless to say, this vision of the university is not necessarily shared by those within it. The charge that resistance is due to entrenchment and self-interest entirely misses the mark.

It should prove instructive to look more closely at the assumptions upon which the market-driven vision of the university is based and then assess the goodness of fit between factors that drive

the business community and those that drive the university. Understanding how these factors operate then allows for judgments to be made about whether or not changes prescribed on the basis of market forces are both desirable and possible for universities to undertake. The fundamental question is, can education be considered a marketable commodity? Applying arguments put forward by Winch to the higher-education context demonstrates that, on the face of it, there is not a good match (1996).

Markets and Universities: Assessing the Goodness of Fit

How does the market work? At risk of oversimplification, consider consumer purchase of a new sofa. As with any purchase, customers are best served when knowledgeable about the product. Purchasers either bring relevant knowledge to the retail outlet, or rely upon the advice of a well-informed mediator. The manufacturer makes information about sofas available and is held accountable for the stated quality of the goods. As the marketplace is competitive, consumers can comparison shop to get the best price on the quality of sofa in their price range. Thus, the decision made on which sofa to buy lies with the consumer, and is a rational one based on identifiable criteria; providers are accountable for the state of the goods, and the purchase satisfies an instrumental aim or purpose (sofas can be beautiful, but their purpose is primarily for seating).

At first blush, there is no reason to assume the prospective student could not shop for his or her education in the same manner. A closer examination of the matter, however, shows this notion to be naive. Factors concerning the aims of education, the position of consumers in the purchase of education, how universities sustain a competitive edge, and accountability for and evaluation of the quality of educational programs take on a different cast in educational circles; most of these assessments are overlooked by advocates of market-driven education. While factors belonging to traditional universities must be modified in order to meet increases in demand for outreach programs, I contend the process for doing so should take place from within the institution and in an evolutionary manner, as the ensuing discussion makes clear.

The Aims of Education

From the perspective of the individual, the aims of education are not purely instrumental. They can, of course, be instrumental in the sense that one takes up further studies to prepare to enter the work force or to enhance job prospects. These students bear the closest resemblance to the notion of "consumer" and constitute the focus of the market-advocacy group. But many people also attend universities with the aim of personal fulfillment. Further, from an institutional perspective, the aims of education itself are instrumental in that they serve the public good. The provision of higher education contributes to the social welfare of the populace, to economic growth, and to improved standards of living, for example. These different types of aims are contained within the university and it follows that

universities would stand to lose a great deal in either funding or enrollment if they were to give up any one of them. It also follows that it would not serve the university well to accommodate personal-instrumental aims alone. This means that not-for-profit courses and programs — those having either no immediate fiscal value or that offer ideas, research results, and information that may not be perceived to be valuable for many years to come — must remain intrinsic to higher education curricula. These lie at the heart of the scholarly community and represent the highest of educational values, that is, the freedom to pursue knowledge for its own sake, without undue restraint. It is highly unlikely that any university would willingly compromise the right to academic freedom.

The Consumer

Consumers purchasing educational goods and services do so for a variety of reasons. It is true they can shop and compare among different institutions in order to apply to those that best fit their needs, whether instrumental or personal. It is also just as true that students will apply to a particular university for a host of other reasons: It is within close physical proximity; it is the family tradition; it offers more in student funding; it offers programs through distance education; it is the only place that accepted the student's application for entry; the student's friends are going there; if paying the student's expenses, parents or employers may insist on its selection. Thus, there are many reasons for attending a given university, only some of which may be tied to rational choice as exemplified by the marketplace. It is reasonable to conclude, then, that even students having instrumental aims may choose a university for reasons tangential to specificity of purpose.

There is another important aspect of consumer choice overlooked by marketplace advocates: That universities adjudicate and select students after students have selected them. In fact, selecting students for admission is arguably one of the most rigorous processes universities undertake, particularly at the magistral and doctoral levels. For students, acceptance bestows a sense of worth and confirms confidence in one's abilities while rejection may have a deleterious effect. The rejected but determined student will look elsewhere. Not to put too fine a point on it, but sofas or vegetables or televisions do not choose their purchasers, nor do they care if they are selected for purchase, and those who provide them for the market care little about who buys them. Adjudication of applicants, on the other hand, is core to maintaining the university's competitive edge.

Maintaining Competitiveness

Universities, whether privately or publicly funded, compete for the best students and faculty. They do so by offering the finest programs, funds to support students, excellent research opportunities, and good instruction. Institutions of the highest quality attract the most capable students who, in turn, sustain the

quality of the institution. Accepting less-capable students would lower the standards of the university; it, in turn, would experience a decrease in its market value, that is, its desirability. For this reason, inherent dangers confront universities that opt to invest time, money, and technology in majority expansion into academic areas having high appeal in the marketplace at the expense of those that do not, particularly if it means jeopardizing both the traditional values of the institution and those who sustain them. The very features that make a university a desirable educational "good" in the first place would then diminish. First to go may be departments, programs, or courses of high intrinsic educational worth but of no obvious marketable value. Good students wanting something other than instrumental education are then forced to go elsewhere, taking tuition revenues with them. It is folly to underestimate their numbers. Arts faculties on most campuses typically enjoy the largest student enrollments. Further, retiring faculty may not be replaced and choosing to invest in technology rather than hiring replacements sends the wrong message to faculty. The best teachers and researchers can always opt to change institutions and by doing so will thereby lower the standards of the universities who become their former employers. Monetary or promotional recognition for teaching and research efforts pertaining to technology-based program development and instruction can be given in the spirit of compromise, but not at the expense of more traditional promotional and funding practices.

. . . [not-for-profit courses and programs] lie at the heart of the scholarly community and represent the highest of educational values, that is, the freedom to pursue knowledge for its own sake.

One further point needs to be made and it concerns the issue of excellence and sustainability of university programs. In the marketplace, consumer preference changes quickly and providers are attuned to its fickleness in order to capitalize on the next emergent fad. Quick change of this nature would be difficult and costly to do in the university setting. Imagine, for example, the case where Spanish falls out of favor and the Spanish Department is cut because of low enrollment. At some future point, exchange agreements to foster trade are then made between local governments and Spanish-speaking countries. Spanish is once more in demand, but reconstituting the Spanish Department is an exceedingly complex and expensive undertaking. Few universities can afford to meet marketplace demands in this manner — nor would they be tempted to do so. Reputations and credibilty of educational institutions are built on maintaining the quality, excellence, and sustainability of

university programs. It is apparent that rapid or quick-fix transitions are out of the question.

Quality and Accountability

Judging the quality of educational goods is normally carried out by two distinct groups — the students who take university programs and the resource providers that fund or make monetary contributions to the institution. In the first instance, the students may or may not pay for the educational goods themselves. Payment could be provided by parents, employers, students loans, scholarships, grants, and the like. In these instances the purchasers are not the consumers of the educational goods and services. Are students good judges of quality? Yes, if they have available relevant information about instructors, curricula, standards of research and teaching, and practices of the institution they plan to attend. Are they good judges of quality of programs *per se*? Perhaps, but in hindsight, because students often will appreciate the value of a good education after the fact. During the course of pursuing it, the demands and hardships encountered may be arduous, painful, and accompanied by fears of low achievement or outright failure. Success puts university-level studies in a most positive light and enhances the quality accordingly. In the second instance, the funding agencies, primarily governments, or private contributors such as corporations or special foundations also do not use the goods they purchase. However, some form of accountability for quality is usually required, and normally provided by the university in an institutionalized form, by request from the donor or by some other agreed-upon arrangement. In short, in marketing terms, in both instances, the purchasers are not necessarily the consumers, a fact quite counter to the fundamental nature of the marketplace. Under these circumstances, it is unclear how quality, accountability, and ultimately the sustainability of educational programs are to be accounted for under the auspices of a market-driven economy. By implication, how would the reputations and prestige of educational institutions be established? Just what are the marketplace's criteria for judging quality and accountability?

Conclusion

The need for universities to change to accommodate increases in demand for programs and services and implement the technologies that make accessibility possible is not at issue.

What is contentious is the focus of change — should it be internal or external; the process and pace of change — should it be evolutionary or revolutionary; and the agents of change — should they be from the marketplace or the academy?

For universities, there is much at stake here: The preservation of quality, excellence, and sustainability of courses, programs, and opportunities for research; the need to adjudicate applications and select the most capable students in order to remain competitive with other educational institutions; and, most importantly, the

preservation of academic freedom. After assessing the goodness of fit between factors that drive the marketplace and factors that drive the university, I conclude that change must take place from within the university, that the process should proceed in a determined, but cautious manner, and the agents best suited to define, implement, and manage the change process are those most directly affected by it — the members of the university community themselves. Some factors associated with the marketplace may be modified to suit the needs of the outreach student, but others are better left to the Red Queen's list of impossible things. ■

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