COLLEGE IS AFFORDABLE TODAY

The occasion for this remark from Gaston Caperton, president of the College Board, was the announcement that tuition and fees had their largest increase in six years and outpaced, by more than twice, the growth in the Consumer Price Index. This makes nearly three decades in which the cost of tuition and fees has more than doubled the increase in the Consumer Price Index.

In more concrete terms, the average cost of tuition and fees at public institutions is over $9,000 and the average cost for room and board is in excess of $8,000. Comparable averages for private institutions are $23,500 and $22,500. The cost of tuition and fees rose more than 5.5 percent at two-year institutions. I guess "affordable" is in the eye of the beholder. $17,000 is about a third of the median income in most states and $46,000 exceeds the median income in many. In fact, $46,000 is about the median yearly after tax income of most of the nation’s faculty.

To be sure, it is estimated that there may be as much as $74 billion available for students in the form of grants and loans. However, that figure is increasingly skewed toward loans and away from grants, which themselves are increasingly based upon merit rather than need. The debt burden of recent college and university graduates is staggering.

The good news is that statistics suggest that a college education may still be worth the cost. But just barely. Career income levels for college graduates, while not as lucrative as pushing dope on the street corner (nor as risky) are a lot better than frying burgers at the local fast food restaurant. The information economy is raising the educational ante for everyone and a college education, or minimally, significant post-high school education, is increasingly necessary for nearly any job in the new economy. If you can't afford a post-secondary education, pushing dope or frying burgers may be the best you can do. Unfortunately, an ever larger segment of our population is faced with just such choices as the door to higher education is closed by economic realities.

These kind of prices for attending a college or university might have been acceptable 100 years ago when only a small minority of citizens chose or needed a higher education. Beginning with the GI Bill over a half a century ago, and exacerbated by the Internet revolution ten years ago, it has become evident that a successful and rewarding work career requires as a prerequisite, some post-secondary education. As our nation's politicians talk of opening the door to higher education for everyone, that door is closing on an ever larger segment of our population.

While it is understandable that college and university spokespersons put the best possible spin on a bad situation, it grows old hearing how the situation is really not so bad because "our prices are less than . . . fill in the name of some other institution." The cost of post-secondary education is simply out of control.

The problem is not that institutions have not gone to some effort to control costs. They have. As the costs of higher education are largely in personal services, many institutions have moved to larger class sizes and the substitution of teaching assistants and adjuncts for senior faculty. Ironically, they are berated for these moves because they raise the student-faculty ratio or substitute less experienced teachers for full professors.

Now, with the Internet, there appears to be another strategy for reducing costs. Asynchronous learning opportunities, whether on campus or at a distance, display great potential for reducing the cost of learning with a quality that can be greater than that of a typical classroom experience.

So how is this new opportunity viewed by university administrators? Many institutions are using the potential of the Internet to offer new, more comprehensive and frequently collaborative learning venues for their students. But, almost always these new offerings cost more than the courses they replace or augment. I recently heard a couple of college presidents express the view that there was little likelihood that new, technology mediated learning environments would reduce costs. Quite the contrary, they felt that these new opportunities would be more expensive but would be justified by the improvement in the quality of the course offerings.

It would be an interesting world if every auto dealership decided that the Rolls Royce was a superior automobile to their current offering and decided to sell only Rolls, or if Timex and Citizen decided that as the Rolex was of
In these new environments, each student has a customized learning plan with specific mastery components. Group laboratory assignments; and self-assessment material to provide feedback on what is being learned. Examples and exercises in the student's field of interest; links to other online materials of interest; individual and digitally recorded presentations; reading materials developed by instructors or in the assigned textbook; and appropriate, varied kinds of human interaction when needed.

Creating an individualized learning environment begins with assessing each student's entering knowledge and/or skill level as well as his or her preferred learning style. In those environments that take full advantage of IT's capabilities, such assessments are incorporated directly into course software. The second step is to develop a buffet of learning materials and activities for students including such things as online access to digitally recorded presentations; reading materials developed by instructors or in the assigned textbook; examples and exercises in the student's field of interest; links to other online materials of interest; individual and group laboratory assignments; and self-assessment material to provide feedback on what is being learned.

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and milestones of achievement. Students engage in study at their preferred times rather than at pre-scheduled times. Students do not all have to do the same thing but rather learn at their own pace within a clear structure that certifies progress and achievement of learning goals. The goal is to maximize students’ flexibility in learning the course material as best fits their learning preference and schedule while providing enough structure for them to make needed forward progress.

Shifting the traditional periodic assessment model (midterm and final examinations) toward continuous assessment is a fourth component. Periodic mastery testing (either graded or non-graded) throughout the semester helps students keep up with course activities and recognize holes in their understanding, and it improves overall understanding and retention of terminology and concepts. Assessing students’ understanding of concepts is very effective in detecting areas they do not grasp, thereby enabling corrective actions to be taken in a timely manner, and in preparing students for higher-level activities.

Finally, a support system, available around the clock, enables students to receive help from a variety of different people: faculty members, other professionals, graduate teaching assistants and peer mentors. Helping students feel that they are a part of a learning community is critical to persistence, learning, and satisfaction. Such active mentorship can come from a variety of sources, allowing students to interact with the person who can provide the best help for the particular problem they have.

Although many believe that learning environments targeted to the individual learning needs of students are more expensive than traditional one-size-fits-all methodologies, new designs based on information technology can allow for more cost-effective ways of learning—cost-effective for both the institution and the student. What is striking is that the same five features that can improve the quality of student learning are also major contributors to cost reduction. A pull strategy is not only more effective in dealing with learning issues; it is also more economical in dealing with resource issues since students use only as much resource as they need.

Course redesigns that begin with student assessment and create individualized study plans based on the results enable students to concentrate their efforts on what they need to learn. Students do not need to spend time covering material they already know and can move on to other studies. By modularizing course content and allowing students to earn variable credit based on individual performance, institutions can tailor resources more directly to actual student need. To draw on our supply-chain analogy, instructional supply is more closely aligned with student demand rather than a forecast of what all students need.

Traditional course designs supply multiple instructors at fixed times and places. Buffet-style learning environments reduce (or eliminate) the number of lectures and/or class meetings, replacing presentations of content with a variety of activities supported by interactive software. Lectures are replaced with a variety of learning resources, all of which involve more-active forms of student learning or more-individualized assistance. Such a strategy is not only more effective in dealing with learning issues but also more economical.

Automated grading of homework (exercises, problems), low-stakes quizzes, and tests and exams for those subjects that have correct or easily assessed outcomes not only increases the level of student feedback but also offloads these rote activities from faculty and other instructional personnel. The result is either a reduction in the number of required instructors or the ability to increase the number of students in any given course.

Without the availability of information technology tools, creating and managing individualized study plans for students would be highly labor-intensive and hence costly. Sophisticated course-management software packages such as WebCT and Blackboard, however, enable faculty to monitor students’ performance, track students’ time on task and overall progress, and intervene when necessary on an individualized basis. Many types of communication can be automatically generated to provide needed information to students and encourage their participation. Regular weekly, computer-generated emails can inform students about their progress and, if necessary, suggest additional activities based on homework and quiz performance.

Finally, by constructing a support system of various kinds of instructional personnel, the right level of human intervention can be applied to the particular student problem. Highly trained, expert (and expensive) faculty are not required for all tasks associated with a course. Non-academic course assistants can answer by non-academic (logistical) questions, for example. Peer tutors can provide individualized assistance, direct students to appropriate resources when they encounter problems or lead group activities.

Pull versus push—the key to improving quality while reducing costs.

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December 3, 2001, Orlando, Florida
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- Move beyond "today" and learn where on-line learning is going . . . find a model that will work for your institution.

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