Dealing With the Future NOW

By Alan E. Guskin and Mary B. Marcy

Principles for Creating a Vital Campus in a Climate of Restricted Resources

A major irony of the present higher education landscape is that just as we are developing some of the most promising models for teaching, learning, student engagement, and the use of technology, we are simultaneously facing dire budgetary circumstances. Whether we are able to maintain and advance quality teaching and learning in this environment is a challenge that almost all of our colleges and universities will need to address.

Alan E. Guskin, distinguished university professor and president emeritus of Antioch University, is co-director and senior scholar of the Project on the Future of Higher Education at Antioch University. Mary B. Marcy is co-director and senior administrator of the Project on the Future of Higher Education. *They can be reached at aguskin@antioch.edu and mmarcy@antioch.edu.*

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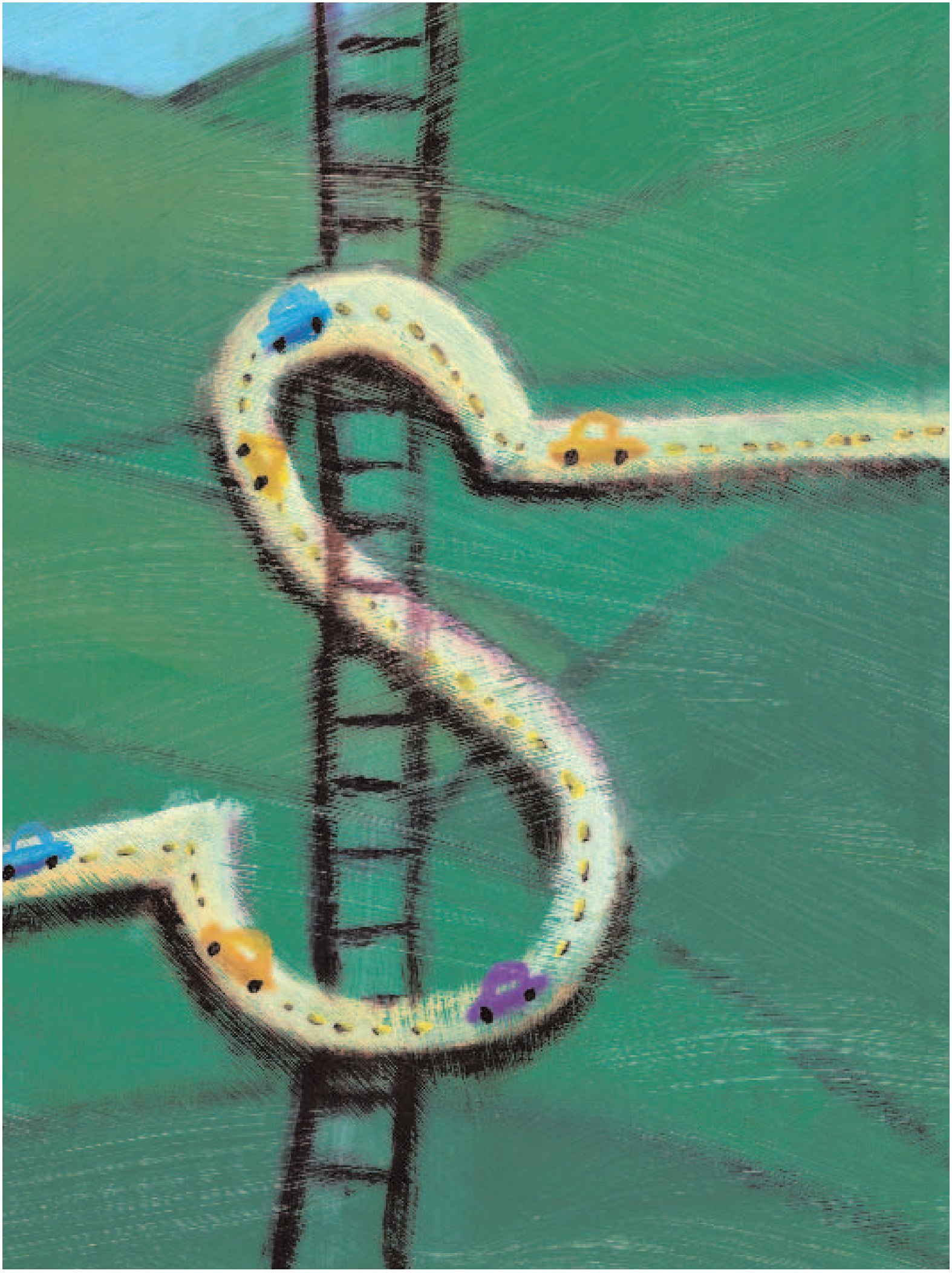

As financial pressures increase, there is a considerable danger that promising innovations in teaching and learning will be marginalized or lost. Under such circumstances campuses typically reduce any activity that is not seen as being at the core of academic life—and even some that traditionally have been seen as essential to it.

While attention to increasing revenue will remain necessary, the additional dollars that campuses will likely be able to raise will not be sufficient to assure quality student learning and a decent faculty work life. To achieve these goals, we believe it will be necessary to fundamentally restructure the organizational and learning systems of our colleges and universities around the most promising innovations in teaching and learning. Major structural change, though painful, offers the greatest hope for creating vital campuses in a climate of restricted resources.

Recent trends suggest that higher education's current condition of fiscal stress is not a short-term problem. While the present recession will pass, the financial problems that affect us are long-term and structural. Ray Scheppach, the executive director of the National Governors Association (NGA), recently outlined the major systemic budgetary problems that afflict state governments as follows:

> …the states' fiscal problems [are] only partly due to the cyclical downturn in the economy. Two longstanding structural problems—an eroding tax base and the explosion in health care costs—are the major causes. Both of these problems were camouflaged by the phenomenal economic growth in the second half of the 1990s. The recession unmasked the problems, but it was not the reason for the swift and steep decline in the state fiscal situation…. The bottom line is that the current problem is long-run and structural….

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David Breneman, a leading economist of higher education, echoes this sentiment from the perspective of public higher education:

> Increasingly, tax revenues are insufficient to support the myriad social services expected of state governments, including public higher education. The shift of many social-service obligations from Washington to the states has only amplified this problem. The late Harold A. Hovey, a former budget director in Illinois and Ohio, estimated in 1999 that the high level of economic activity was masking structural deficits in 39 states. His analysis, which many states ignored at the time, was prescient.

The financial challenges faced by our state governments are thus troubling and permanent. And they promise severe consequences for public institutions of higher education.

But it is not just public colleges and universities that face structural financial problems. Fund-raising at private institutions also has been down in the past two years, the result of the recession and a post-9/11 reality. While it is always difficult to predict the future for equity markets, there are indications that the stock market—which has fueled many successful recent college campaigns—will not experience the sustained growth of the 1990s for some time to come.

Many private colleges and universities are already struggling financially, so the probability that future fund-raising might be flat or will increase only modestly for the more than 90 percent of non-wealthy institutions will only exacerbate their problems. Simply stated, costs are continuing to escalate beyond our ability to generate tuition and fund-raising revenues to cover them.

In 1997, the Council on Aid to Education pointed out that the cost of higher education has grown substantially more than the rate of inflation for nearly three decades. Referring to both public and private institutions, it described the problem in this manner:

> A sector whose costs grow faster than inflation for an extended period ultimately reaches the limits of available resources, as has been demonstrated in the health care industry…
>
> In 1995 dollars, higher education will have to spend about $151 billion in 2015 to serve future students if costs continue to grow at current rates. Assuming that public appropriations to higher education continue to follow current trends, government funding will be about $47 billion in that year. Tuition, grants, and endowment income will account for another $66 billion. In other words, the higher education sector will face a funding shortfall of about $38 billion—almost a quarter of what it will need.

If these financial problems are indeed long-term and structural, how can our colleges and universities respond creatively? Most institutions to this point have reacted by making incremental changes in the hope that they will ride out a cyclical downturn. While some of these short-term measures no doubt will provide temporary budget relief, fewer inflation-adjusted dollars from governmental sources, combined with marketplace limits on tuition levels and private fund-raising for almost all campuses, will still eventually lead to significant budget shortfalls.

What will a college or university look like that does not make significant changes in how it educates students under these circumstances? What impact will ongoing budget reductions have on the quality of faculty work life and student learning? If we were creating a college or university today, given what we know about likely fiscal, technological and societal realities, what would it look like?

Generating answers to these questions is (literally) not an academic exercise because facing this future head-on is essential to maintaining the viability and quality of our higher education institutions. And, given the importance of a college education for the citizens of a knowledge-based world, answers are critical to the future of our society.

Table 1. Comparison of Assumptions and Actions of Institutional Responses to Severe Fiscal Problems: Muddling Through Versus Transforming the Institution at the Undergraduate Level

	Muddling Through	Transforming the Institution
Assumptions About the Fiscal Reality	Problems are short-term, cyclical, no permanent consequences: "This too shall pass"	Long-term problems require long-term solutions
Assumptions About Needed Change	• Present educational delivery system is unchangeable • Technology is always an added expense • Changes in faculty and staff work lead to workload increases • Incremental changes in faculty teaching and hiring will be sufficient to maintain quality of student learning and faculty work life • Present organizational systems are necessary to maintain institution • Past calls for fundamental reform based on financial shortfalls proved to be unnecessary	• Reorganizing how education is delivered is necessary to assure quality of student learning and faculty work life • Curriculum reorganization is needed to assure academic program survival with quality • Technology can improve campus effectiveness and reduce costs per student of teaching-learning process and administrative organization • Increased enrollment will lead to increased costs unless the educational delivery system is changed • Large tuition increases are difficult to sustain without undermining campus values regarding access and diversity • Significant increases in fund-raising are needed but will not offset losses in revenue
Actions to Be Taken	• Make only incremental changes; selective cuts and layoffs • Hire inexpensive faculty; increase workload • Increase tuition to the maximum allowed • Focus on increasing enrollment • Contract out/collaborate on selective services • Ratchet up fund-raising • Make more forceful presentations to state legislators • Refinance debt	• Create a Clear and Coherent Vision of the Future (focus on student learning, quality of faculty work life, and reducing cost per student) • Transform the Educational Delivery System (consistent with vision of the future) • Transform the Organizational Systems (consistent with vision of the future)

Two Institutional Responses to Fiscal Constraint

The instinctive reaction of most institutional leaders under constrained resource conditions, usually seconded by faculty and staff, is to assume that these difficulties constitute a short-term problem. The common perception is that state appropriations and fund-raising will bounce back in a year or two, then increase together with continuing tuition increases. As a result, the immediate response to an annual budget shortfall is to balance the budget by draining all available unspent dollars from existing accounts, making across-the-board budget reductions, and protecting faculty and staff positions.

But a rapid one-year turnaround in fiscal conditions is highly unlikely in the present environment. The result is that after a second and third year of reduced resources, institutional leaders tend to move into what we call a "muddling through" mode of operation. As described in Table 1, this approach accepts the notion that fiscal realities are serious, but also assumes that they are cyclical and therefore short-term.

Institutional leaders acknowledge that expense reductions must be deep and selective. So fairly significant layoffs and early retirements are a prominent part of budget reduction and, wherever possible, vacated faculty positions are filled with instructional staff who teach more and are paid less.

Meanwhile, significant emphasis is placed on raising revenues from all sources—maximizing tuition, increasing enrollment, refinancing debt, establishing higher fund-raising goals and, in the public sector, pulling out all the stops to persuade state officials to increase appropriations.

Although these efforts are reasonable, their focus is on maintaining and protecting the existing educational delivery system and core administrative functions, while making incremental changes beyond the core. It is assumed that the educational delivery system *cannot* be changed. In parallel, it is

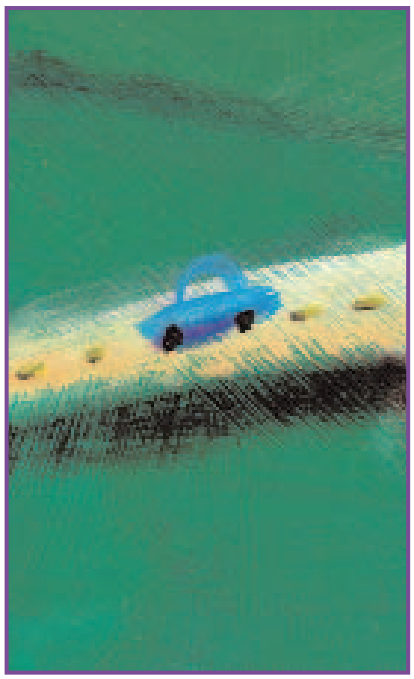
assumed that technology may improve teaching, but that it is always an added expense.

"Muddling through" is a time-honored practice for dealing with recurring fiscal problems in higher education. So in the face of the present fiscal constraints, one can almost hear people voicing familiar sentiments: "We have always been successful in the past and we will surely come out of this okay."

But in the present environment, responses that assume an eventual turnaround in fiscal conditions are difficult to justify. Projected future economic realities indicate a scenario very different from past projections. If this analysis is correct, then the "muddling through" approach, far from protecting institutions, may actually *undermine* the nature of the academic profession in the following ways:

- by requiring faculty members to take on increasing workloads;
- by reducing the number of faculty members who will enjoy the security associated with quality teaching and scholarly pursuits;
- by cutting salaries to the point where they are not competitive with alternative forms of employment;
- by causing the loss of the best faculty members, who either will leave the profession or will not join it; and
- by undermining our capability to deliver present curricula—whether traditional or innovative—with quality.

Over time, this will inevitably mean that academic offerings will be less and less challenging and that the quality of learning will be seriously diminished.



Transforming the Campus: Three Organizing Principles and Seven Transformative Actions

The alternative to "muddling through" is more profound and, we believe, a more hopeful way to meet these challenges. Changing societal conditions force us to think in new ways and demand responses different from those we have followed in the past: College and university leaders must begin to transform their institutions. Here we outline how this might be done by describing a set of three organizing principles and seven transformative actions that can ultimately offer a more hopeful future for both the quality of student learning and the nature of faculty work (see Table 2).

These principles and actions are not meant to be implemented in a linear fashion. Rather, they represent three sets of overlapping change efforts that are systemically interconnected. While the first organizing principle—*create a clear and coherent vision of the future focused on student learning, quality of faculty work life, and reduced costs per student*—must underlie any fundamental reform process, elements of the other two can be approached in a number of different patterns: some in parallel, others sequentially.

The fiscal and administrative organizational systems of any institution probably should be addressed first after creating a clear vision of the future. Admittedly, few campuses will find sufficient cost savings within this area to solve deep multi-year resource problems. But restructuring administrative systems is a wise initial step because doing so indicates to the entire campus the commitment of institutional leaders to addressing these challenges aggressively.

At the same time, beginning on the administrative side allows strategies to be tried out that will be important in undertaking further and more complex restructuring efforts in the educational delivery system. While adopting this approach may delay for a year or two the inevitable need to attack pedagogy and curriculum, it is imperative to begin the process of making some educational changes immediately. Major reform efforts take a long time to implement, and starting too late may miss immediate opportunities to contain rising expenses.

In starting to transform the educational delivery system—how students learn, how faculty teach, and the nature of the curriculum—it is important to move beyond the many often-successful individual program innovations that most institutions can boast of to institution-wide change. For example, redesigning large multi-section first-year courses by applying technology and restructuring faculty work has proved to be an effective way to increase student learning and reduce costs. But so far, these changes have been made only at the individual course level. Following these principles requires innovations like course redesign to be scaled up to include all courses that could benefit, leading to fundamental changes in the educational delivery system beyond the individual course.

Organizing Principle I: Create a Clear and Coherent Vision of the Future Focused on Student Learning, Quality of Faculty Work Life, and Reduced Costs per Student

The starting point of any major institutional change involves asking a very basic question:

Given what we know and the likely fiscal, technological, and societal realities of the future, if we were creating this college or university today to focus on student learning, what would it look like?

Initial answers to this broad question will likely be global in nature. But they lead eventually to the creation of a clear and coherent vision of the future focused on student learning, on the quality of faculty work life, and on reduced costs per student. This vision provides a starting point for comprehensively aligning and transforming academic programs and organizational processes and structures around a coherent set of goals.

Establishing such a vision quickly yields a set of pragmatic and strategic choices about what to pursue and what not to pursue. Developing alignment around a coherent vision of the future also gives the campus a clear identity in terms of which to rally its community and to position itself with prospective students and stakeholders.

Most current institutional vision or mission statements are broad, general, and overly elaborate. Their intent is usually to

Table 2. Creating a Vital Campus in a Climate of Reduced Resources: Organizing Principles and Transformative Actions

	Organizing Principle I: Create a Clear and Coherent Vision of the Future Focused on Student Learning, Quality of Faculty Work Life, and Reduced Costs per Student	
	Organizing Principle II: Transform the Educational Delivery System Consistent with Vision of the Future	**Organizing Principle III: Transform the Organizational Systems Consistent with Vision of the Future**
Actions	• Establish and assess institution-wide common student learning outcomes as basis for the undergraduate degree. • Restructure the role of faculty to include faculty members and other campus professionals as partners in student learning, while integrating technology. • Recognize and integrate student learning from all sources. • Audit and restructure curricula to focus on essential academic programs and curricular offerings.	• Utilize zero-based budgeting to audit and redesign the budget allocation process, involving faculty and staff as responsible partners. • Audit and restructure administrative and student services systems, using technology and integrated staffing arrangements to reduce costs. • Audit and redesign technological and staff infrastructures to support transformational change.

Table 3. Relationship Between the Present and Future Educational Delivery System, in Terms of Institutional Learning, Productivity, and Faculty Work

Nature of Educational Delivery System	Instructional Learning Paradigm of Educational Delivery System	Method for Increasing Institutional Learning and Productivity
Present Focus on Faculty Teaching	***Student learning is based on faculty teaching courses in classrooms in a time-based calendar format***	Increase faculty teaching time by additional classes or additional students in class Primary focus is on *faculty* productivity
Future Focus on Student Learning	***Student learning is based on:*** ***Multiple instructional strategies—***such as, technology-based group and individual learning formats, learning communities, accelerated learning formats, intensive residencies, experiential/service learning, learning with peers, individual learning ***New instructional roles—***instructional roles for campus professionals (librarians, student affairs personnel, community members), faculty mentoring, faculty-led intensive discussion groups, and courses ***and Assessment of student learning***	Increases in student learning or enrollment occur in many arenas without increasing total faculty instructional time with students Primary focus is on student learning productivity through the assessment of student learning outcomes, irrespective of how or where learning occurs

state a broad philosophy of education common to those of many other colleges and universities, rather than creating a tightly drawn blueprint that enables concrete choices to be made among competing interests and alternatives. Following the latter path requires courageous leadership and the active participation of key members of the campus community. But without such a vision, serious fundamental reform is simply not possible—no matter how good an institution's leadership is or how inclusive its decision processes may be.

Organizing Principle II: Transform the Educational Delivery System Consistent with the Vision of the Future

The present educational system of courses, credits, and calendar-based systems of teaching and learning focuses by its very nature solely on how *faculty* work. As a result, all attempts to achieve efficiency and productivity within this system inevitably involve increases in faculty workload. As outlined in Table 3, the present educational delivery system is locked into the notion that creditable learning is primarily, and

often solely, the result of students' sitting in individual classrooms being taught by faculty members. Under these circumstances, increasing productivity can only mean increasing the number of classes taught or the numbers of students per class.

Since so much of any institution's budget is tied up in instructional costs (that is, in faculty time), a period of severe fiscal constraint generates an overriding need to reduce the faculty time spent per student or to hire inexpensive faculty who can teach more students at lower pay. Up to now, the latter has been the primary means institutions have used to reduce costs, often in episodic and unplanned ways.

But this strategy cannot be sustained. In the long run, as fiscal resources continue to decrease in real dollar terms, there will be a tendency not just to hire inexpensive faculty but to markedly increase *existing* faculty workload. From the point of view of both the quality of faculty work life and student learning, it is thus far better to begin instead to create alternatives to the present delivery system that reduce the amount of faculty time spent per student.

Doing so requires an educational delivery system that is built fundamentally upon the principle of recognizing and certifying student learning outcomes, wherever or however the learning occurs. The implicit assumption embedded in this approach is that the key productivity issue is not about how much faculty teach, but about how much students learn.

Students can learn in many ways, and campuses can create specific avenues to foster and recognize that learning. Some of the resulting learning environments will assuredly involve faculty members. But some will also involve librarians and student affairs staff, while others will harness community members and employers. These redesigned learning environments cannot be haphazard or unplanned in nature, but they can nevertheless be highly diverse. The key will not be the amount of time students spend in particular venues, but instead how they demonstrate their learning.

Surviving major reductions in financial resources while maintaining the quality of faculty work life will require a comprehensive reconsideration of how current faculty work.

Transformative Action 1: Establish and Assess Institution-wide Common Student Learning Outcomes as a Basis for the Undergraduate Degree

Establishing the assessment of common institution-wide student learning outcomes as the primary basis on which to award a degree fundamentally changes how institutions approach student learning. Rather than being based on credits earned, seat time, and course grades, degree awards must be anchored in demonstrations of student learning consistent with the institution's educational goals as they are reflected in particular academic areas. Emphasizing mastery-based credentialing opens up new arenas for learning and provides an essential lever for other transformative changes that can lead to reduced costs per student.

This orientation to assessment encourages the integration of experiential and academic learning, as well as the integration of learning across academic disciplines. Continuous assessment of student work uncovers gaps in learning that enable both the students and faculty to monitor academic success. Continuous assessment of learning outcomes also provides an entry point for the development of new instructional roles for faculty and other campus professionals.

Focusing on a common set of institution-wide learning outcomes acknowledges the fact that students can master abilities at different points in time in different academic arenas. Such an emphasis on mastery learning unlocks traditional constraints on how, when, and where student learning can take place.

Following this path, a campus can create alternative calendars that enhance learning options, and can create more effective and efficient instructional strategies like "Hi-Tech, Hi-Touch" learning communities, cohort-based accelerated learning formats, or technology-based individualized instruction. This emphasis on assessment and mastery also opens up the possibility that students with different learning styles can locate, or can be directed to, instructional strategies that are suited to their needs without changing the academic integrity of delivery.

Establishing and assessing institution-wide common learning outcomes encourages colleges and universities to continuously adjust what they do as they receive feedback about how well students are learning through various instructional strategies, curricular programs, or learning arenas inside or beyond the campus.

The information provided by assessment also gives faculty members and institutional leaders information about which areas are essential to maintain and enhance in alignment with the campus's vision of the future, and which are not essential and might be dropped. By itself, the assessment of common learning outcomes may not necessarily reduce costs. But it is an essential tool for ensuring academic quality and to provide an informational foundation for other transformative actions.

Transformative Action 2: Restructure the Role of Faculty to Include Faculty Members and Other Campus Professionals as Partners in Student Learning, While Integrating Technology

Surviving major reductions in financial resources while maintaining the quality of faculty work life will require a comprehensive reconsideration of how current faculty work. At the same time, it will demand a much broader conception of how non-faculty campus professionals can contribute to student learning. We need to think carefully about how to maximize the use of *all* relevant staff in a systematic way by deploying full-time faculty (both tenure-track and non-tenure-track) and part-time faculty, by using librarians and student service professionals, and by involving community members and employers in promoting learning.

Traditional distinctions between faculty and staff roles have meant that faculty members spend most of their time preparing for or working in the classroom or conducting re-

search. Meanwhile, other campus professionals who have close contact with students—like staff members in student affairs and the library—usually are not integrated directly into the educational delivery system. By enlisting other campus professionals as partners with faculty to help students achieve institutional learning outcomes, a wide range of diverse learning options can be developed.

Focusing on a clear set of student learning outcomes makes it easier to conceive of and implement new learning environments involving other campus professionals. Since students will be assessed on the basis of how well they can demonstrate what they have learned, the classroom need not be the only—or even the primary—venue in which learning takes place. Nor will direct contact with faculty members always be needed for legitimate student learning to occur.

Integrating technology into the core of the educational delivery system can also alter significantly how faculty teach and students learn. Restructured courses founded on integrated technology, for example, enable multiple vehicles for learning to be deployed, including content-based software, student-led problem-solving teams, learning laboratories with faculty or tutorial support, increased individual work through online or CD-Rom-based tutorials, and asynchronous learning protocols. Redesigned courses in the Center for Academic Transformation's Program in Course Redesign, for example, have led to increases in student learning, while yielding substantial cost savings (see Twigg in this issue, p. 22). Another restructured course format utilizes cohort-based intensive residencies that meet on a monthly or biweekly basis, complemented by continuously operating technologically linked learning communities.

Such formats have been shown to have considerable success in providing a flexible response to growing demands on student and faculty time, and can also help increase student retention. The key to success in all of these redesign initiatives involving technology is to focus on student learning, faculty workload, and cost reduction instead of on the technology itself.

Reconsidering how faculty work in the context of new technologies and the roles of other campus professionals leads us to conceive of new roles for faculty members themselves. Instead of the standard lecture-discussion teaching format, faculty members may engage in a diverse array of roles, including mentor, intensive discussion leader, lecturer for short periods of time, and assessor of student mastery.

As long as clear institution-wide and program learning outcomes are articulated and assessed, distributing faculty time consciously across these multiple roles can reduce the total amount of faculty time spent per student, and the work of all campus professionals can be linked more directly to student learning. As discussed in *Transformative Action 7*, moreover, a key to accomplishing such changes in the instructional role will be to establish and extend campus centers for teaching and learning that can help faculty members and other campus professionals to develop the skills they need to be effective facilitators of learning in these redesigned educational environments.

Transformative Action 3: Recognize and Integrate Student Learning From All Sources

The research on student learning tells us that students learn from *all* aspects of their college experience, including time spent with peers, in student activities, and in their out-of-school work and service lives. Yet our academic programs take advantage of very little of this out-of-class learning and we recognize even less of it through our credit structures. A learning process that more intentionally integrates and recognizes student learning drawn from a range of student experiences can ensure that student learning gained in non-classroom settings is focused, reflective, and consistent with established learning outcomes.

Service learning, co-op learning, student activities, and other forms of experiential learning have been shown to make positive significant contributions to student success. One way to financially capitalize on these positive gains is for a campus to build an intentional and comprehensive experiential-learning approach that refocuses current staff workload in areas like student affairs and student support services to more fully integrate the learning represented by these non-academic activities into the academic core.

Another avenue is to more deliberately harness the educational work that skilled community and employer supervisors of students do. Such individuals might be involved not only in guiding student work, but also in creating meaningful opportunities for students to reflect on their work and service experiences, or even in helping to assess student performance.

Capitalizing on student learning experiences occurring in many venues—with and without faculty and staff members—provides opportunities to utilize human and technological resources more efficiently. But the validity of such experiences as educational ventures will be determined by the degree to which students are provided opportunities to reflect on their experiences—with the aid of peers, community members, faculty members, and/or other professionals—and the extent to which they can concretely demonstrate through assessment how the learning they gained through these experiences meets faculty-generated, institutionally approved educational outcomes. By following this pattern, a campus not only can reduce its expenses, but can at the same time offer a richer education for its students.

Transformative Action 4: Audit and Restructure Curricula to Focus on Essential Academic Programs and Curricular Offerings

A campus that has a clear and coherent vision of its future has the capacity to take stock of its entire curriculum and to make strategic choices about which programs are essential. It also has a place to begin when considering anew how essential programs should be designed and structured. The need for

such a "curriculum audit" reflects the manner in which most college and university curricula have evolved over the last four decades. As each discipline or specialty grows, new majors or minors are added, together with the continual development of new programs to meet particular faculty and/or student interests.

This natural course of development tends to hold true even at institutions that have undertaken major curricular reforms. A deliberate curriculum audit allows programs that are in alignment with the institutional vision of the future to be explicitly identified and supported, and programs that are not so aligned to be deleted. Achieving curricular alignment can thus free up a considerable amount of faculty time that can be deployed in support of restructured formats for educational delivery. At the same time, alignment reduces the overall size of the curriculum, diminishes costs per student, and maintains or increases program quality.

Furthermore, a curriculum audit of this kind provides the opportunity to identify

- programs that might benefit from collaboration with (or even from being outsourced to) other institutions;
- extremely large classes that can be redesigned to increase student learning, reduce faculty workload, and save resources; and
- extremely small classes that can be eliminated or offered less frequently or, if deemed important, that can be integrated or restructured in significant ways to reduce costs.

In short, a curriculum audit, together with the strategic decisions that follow, creates the possibility for greater programmatic coherence with a likely enhancement of learning at reduced costs per student.

Organizing Principle III: Transform the Organizational Systems Consistent with the Vision of the Future

Organizational systems in colleges and universities—like those in every other institutional form—are built to maintain present operations and to accommodate occasional incremental adjustments. Major changes in basic operating processes and procedures are likely to be resisted and are usually avoided. Organizational systems are built for stability and are very effective as long as the underlying assumptions on which they are based remain valid.

Established organizational structures and processes for higher education were built to educate and support residential, traditional-aged students drawn from relatively homogeneous backgrounds whose prior education prepared them to attend college in a pre-technology-based learning environment. Faculty members were the primary instruments for imparting knowledge and skills, and individual classrooms remained the province of individual faculty members—who were also solely responsible for evaluating student performance. Completing a bachelor's degree in this setting is determined by the accumulation of individual classroom credits, assessed by discrete faculty members through the traditional grading process.

The challenge is to determine which services and functions are essential, then to redesign them around new technologies...to both reduce costs and improve service.

To support this learning environment, an elaborate professional staff evolved, organized into units that housed specific "non-academic" functions like the registrar, the business office, information technology units, and so on. Much like academic disciplines on the educational side, national associations gradually established standards for performance in each of these professional areas, and this practice led to further specialization.

As the internal and external demands on each of these support functions increased with the introduction of computer technology, so did the need for even more staff and fiscal support. In the 1980s and '90s, as a consequence, the largest increases in campus personnel were experienced in non-academic areas.

One result of greater functional differentiation between faculty and non-academic staff—as well as among different offices within the non-academic area—was that each unit focused more intently on its *own* activities, while expecting the incumbents of all others to be totally successful in theirs.

For example, admissions staff were seen as solely responsible for bringing in students and were "to blame" if targets were missed. Student support staff, in turn, were responsible for student retention and for taking care of student problems. Faculty were expected to teach and to do research and not to worry about the budget, which would be handled by the financial office. And so on. One outcome of this growing specialization is a tendency to blame others when things go wrong, and not to take responsibility either for how resources are spent and generated or for overall student success.

Each of these incremental changes made sense at the time, and each was rooted in real institutional needs. But, as in the academic area, these actions were based on a particular set of assumptions about how colleges and universities should be funded, about how particular professional practices should be discharged, and about immutable expectations regarding the use of professional time.

The problem today is not that people in professional staff roles of colleges and universities are failing to do their jobs. It is instead that the assumptions around which their work is structured are crumbling in the face of shortfalls in available funding, powerful changes in the academic area and its needs for support, changing student-body profiles, and the ever-increasing sophistication of computer technology.

But these new technologies themselves provide much of the potential to redesign routine administrative activities to substitute technology for staff. They also allow ready access to campus-wide information that can be harnessed collectively to improve administrative functions.

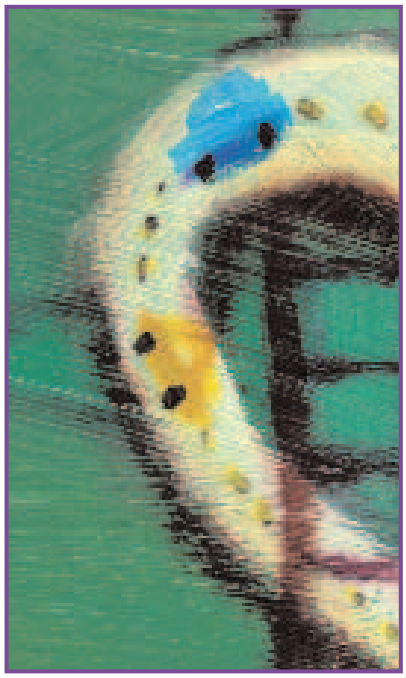
The tendency of administrators in colleges and universities—like everyone else—is not to challenge underlying assumptions but instead to make incremental adjustments to adapt to new conditions. But the current reality is that if we do not

transform administrative work as well as restructure educational delivery, the costs of maintaining our colleges and universities will significantly outstrip our capability to generate resources.

Transformative Action 5: Utilize Zero-based Budgeting to Audit and Redesign the Budget Allocation Process, Involving Faculty and Staff as Responsible Partners

The most effective way to move a college or university in the direction of any desired future is to ensure that budgetary allocations are aligned with what the institution wants to accomplish. This may seem obvious, but it is not easy to do. Most institutions engage in incremental budgeting, adding to or reducing prior-year allocations to units depending on available resources. And even when a campus undertakes a new initiative, it is most likely supported by additional funds, with little serious reallocation of the base.

Building a zero-based budget structured around an institution's vision of the future is challenging, but it is essential in order to cope with continuing fiscal constraints while creating new structures. The challenge lies in questioning *all* institutional functions and services, then determining for each budget cycle which are most aligned with what the institution wants to create.



Questioning and challenging every institutional function and service—including those in the academic area—requires the involvement of faculty, staff, and administrators at many levels, not just higher-level administrators responsible for major institutional units. Enabling people to participate in, and to take responsibility for, decisions that affect their lives as members of a campus community is both a right and a practical thing to do. People can and will change when they know that they need to, when they understand the costs of not doing so, and when they believe that they themselves share the responsibility to create a more hopeful future.

But if people are ignorant of how money is allocated even in their own unit, and have no responsibility for what can and will happen to their unit's resources, they will automatically think that reductions and calls for reorganization in their own area may not be matched in other units. Under these circumstances, there will be a natural tendency to keep budgetary information secret and to hoard resources.

Ultimately, an institution's annual budget process represents the only concrete statement about how its structures and practices are aligned with its vision of the future. Where money is spent drives people's expectations about what they should and should not do.

If an institution's vision for the future is funded incrementally, using only the relatively few dollars saved from unfilled positions or from any windfall savings that are available, the message is clear to everyone: new initiatives consistent with the vision may be desirable, but they are certainly not essential. Business as usual rules the day. College and university leaders can always deliver pronouncements about their institution's future, but how the budget is allocated creates that future.

Transformative Action 6: Audit and Restructure Administrative and Student Services Systems, Using Technology and Integrated Staffing Arrangements to Reduce Costs

At most institutions, administrative and student support services are not usually audited in the context of an overall plan. Instead, they typically receive incremental increases or reductions in budget allocation based on available resources. Given the need to reduce expenses, however, campuses will need to redesign all of these services, together with the systems that support them. A first step here, as in the academic area, is to determine which services are essential and which are not, then reduce or eliminate the non-essential.

A second is to utilize technology to redesign and streamline support activities where possible, and to train staff to work together more effectively within these redesigned organizational environments.

A third is to consider outsourcing even basic administrative functions and services when these can be done more efficiently and effectively by others. Bookstore and food services on many campuses long have been outsourced, but more and more institutions are successfully outsourcing things like computing and counseling services as well.

Applying technology may result in significant efficiencies in an institution's administrative functions—but only if careful consideration is given to what technology can do well. As one of our colleagues put it, "Let robots do robotic work, and let humans do people work."

Many budgeting, accounting, and financial aid processes have been rendered more efficient through the use of technology. Technology that supports automated registration and grading is now common, and there are growing numbers of institutions where almost all students apply for financial aid online. These infusions of technology have yielded reductions in staff time and have allowed students the chance to avoid long lines.

The challenge is to determine which services and functions are essential, then to redesign them around new technologies and delivery mechanisms to both reduce costs and improve service. The principal mistake to avoid is treating technology as an "add-on" to traditional structures. A critical part of the redesign of essential functions, moreover, will be to cross-train staff to operate as multi-functional teams that can offer more integrated, effective, and efficient services.

Transformative Action 7: Audit and Redesign Technological and Staff Infrastructures to Support Transformational Change

Developing a strong, efficient, and creative academic and administrative support infrastructure is critical to any institutional transformation. There are infrastructure needs associated with every transformative action that will require new investments in technology and personnel. While it may seem paradoxical to urge additional resource investments in such areas while reducing support in others, this is a practical fact of life that must be confronted in any fundamental reform.

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For example, faculty will need new skills to build a comprehensive approach to assessing institution-wide learning outcomes. Acquiring these abilities will require considerable faculty development and the expertise of knowledgeable professionals in this area. When faculty roles are restructured around learning outcomes and non-classroom-based relationships with students—like leading intensive small-group discussions outside traditional classrooms, facilitating student reflection on work experiences, or working as partners with others in the learning process—providing appropriate faculty development through Centers for Teaching and Learning becomes essential. Encouraging administrative staff to be cross-trained and to operate in an integrated fashion with others, instead of in separate departmental silos, will also require considerable initial training and ongoing support

One area that should undergo significant internal restructuring—as well as assignment to a more prominent role in educational delivery—is the library. Rather than operating as a separate unit that provides access to locally owned information resources, the academic library is rapidly becoming part of an elaborate network of information provision and an essential portal for students and faculty to access global information resources.

The library of the future will need to become a true learning center for students and faculty, where available information-technology resources are centrally and efficiently integrated to further student learning and to facilitate faculty and staff transformation. A transformed library will constitute both the symbolic and concrete heart of a learning-centered campus.

Major investments in the necessary infrastructure to support transformation will make the already-difficult process of zero-based budgeting even more complex. The tendency in hard times has always been to cut costs in support and infrastructure first, including such functions as the library and the faculty-development center.

Even deeper and earlier cuts in traditional administrative functions will be needed in order to reallocate funds to develop needed infrastructure to support transformation. But these tough decisions will be easier to face when members of a campus community recognize collectively that current fiscal realities are not short-term, and when they have a voice in shaping their future.

Conclusion

We have argued that there is a pressing need to significantly restructure our colleges and universities—especially at the undergraduate level—and we propose some initial thoughts about how to do so. In making this case, we are fully aware of the pain that will likely ensue as administrative leaders and faculty embark upon this journey.

We propose such fundamental changes only because the alternative is even more painful, more damaging, and less hopeful. We do not believe that it makes sense to follow a path that leads to a slow and inexorable erosion of the nature of the academic profession as we know it, and of the quality of the educational programs and student learning that this profession has sustained.

As they embark on a path toward fundamental reform, faculty and institutional leaders need models of what a transformed and viable campus for the future might actually look like. In the months ahead, the Project on the Future of Higher Education will use the organizing principles and transformative actions outlined here to create concrete models of how institutions might be restructured in different types of college and university settings, and will explore the appropriate implementation processes that will be needed to make these changes.

In doing so, we recognize that there will be no single model that will fit all college and university circumstances. Each institution will have to come to terms with its own history, values, institutional settings, and resources in evolving an appropriate vision, and in implementing the transformed structures and processes needed to realize that vision.

Choosing to follow the path we have outlined demands a basic overhaul of our conceptions about how colleges and universities work and how they ought to be organized. These are tough choices in difficult times. But for the majority of young and middle-aged faculty who will remain at their institutions throughout their working lives, fundamental changes along the lines we suggest constitute the only way to preserve their opportunities for a meaningful and vital career, while sustaining engaged and substantive learning opportunities for students. ©

Authors' note: *Besides the authors, additional members participating in the Project on the Future of Higher Education include Michael Bassis, Edgar Beckham, Estela Mara Bensimon, Johnetta Cross Brazzell, Marie Eaton, Peter Ewell, Richard Guarasci, Devorah Lieberman, Kathleen O'Brien, William Plater, Eugene Rice, Barbara Leigh Smith, Carla Stoffle, and Carol Twigg.*