COLLEGE COSTS
MAKING OPPORTUNITY AFFORDABLE™

Course corrections

Experts offer solutions to the college cost crisis

Table of contents

Foreword

Robert C. Dickeson

Robert C. Dickeson is senior vice president for policy and organizational learning at Lumina Foundation for Education. He has worked in a number of leadership roles for the Foundation since its inception. President emeritus of the University of Northern Colorado, he has served as the chair of the cabinets of governors in two states, as president and CEO of Noel-Levitz Centers Inc., and as a professor/administrator at five universities. He has consulted with several hundred colleges and universities over the past 40 years. Author of numerous publications, Dickeson received his doctorate in political science from the University of Missouri.

America is wasting human resources because of runaway college costs, and it's time to do something about it. To that end, Lumina Foundation for Education has generated a major policy initiative, College Costs: Making Opportunity Affordable.

As a part of that initiative, these essays represent a national effort that began last fall with the publication of a policy brief titled *Collision Course: Rising College Costs Threaten America's Future and Require Shared Solutions*. That publication outlined 33 suggested approaches to the college cost issue. *Collision Course* divided the suggestions among six constituent groups that share varying degrees of responsibility for tackling the cost issue: colleges and universities, the federal government, state governments, secondary schools, students and parents, and the private sector. The publication can be downloaded at www.luminafoundation.org.

Lumina also issued a *Call for Solutions* that would highlight creative ideas and suggest alternatives for discussion and resolution. We received 25 responses from across the country and, through the advice of a National Editorial Advisory Panel of distinguished leaders and researchers (see Page 112), narrowed the submissions for publication to the eight essays in this volume.

The papers represent a diverse set of authors as well as solutions. Higher education researchers weigh in on the recommendations, but authors also include state legislators, economists, private sector representatives and a student interest group.

Although each paper stands on its own merits and the reader will want to judge the relative strengths of the ideas presented, the essays lend themselves to certain analytic patterns.

Improved institutional practices

Three of the authors focus on institutional practices. **Mary F. Bushman** and **John E. Dean** make the case for colleges to outsource their non-mission-critical functions. Outsourcing, long a valued practice in business, is slowly gaining acceptance in higher education. The authors review current trends in postsecondary outsourcing, and argue that, if done well, outsourcing can lead to improved quality while reducing institutional costs. In his essay, **Bill Coplin** takes on the sacrosanct arena of academics—at undergraduate and graduate levels—on campus. Coplin suggests specific efficiencies that can be obtained by such practices as adapting concurrent enrollment programs with high schools to reduce time-to-degree, and adopting an apprenticeship model for all doctoral programs. **Carol A. Twigg**, whose National Center for Academic Transformation has enjoyed notable achievements in course redesign, argues for a new model of technology-assisted learning to correct undue reliance on costly, labor-intensive instruction. Citing data from 50,000 students at 30 institutions, Twigg's results show improved student learning in 83 percent of the projects while reducing institutional costs by an average of 37 percent.

Improved state and federal policies

Three papers suggest changes in public policy to help close the college affordability gap. The writing team of **Lana Oleen**, **Debra Hollon** and **Diane Lindeman** (Oleen served 16 years as a state senator in Kansas) urges greater collaboration as a cost-reducing solution. Citing several examples of collaboration, including state-to-state reciprocal tuition agreements, in-state agency student data sharing programs, and state-agency-private sector scholarship programs, the authors make a compelling case that could be emulated in other

states. **Kristin D. Conklin's** essay targets the knotty problem facing American education: poor college preparation of our nation's high school graduates. Conklin identifies five strategies that, if adopted on a statewide scale, could contribute to educational savings. Conklin supports a comprehensive state agenda that would enable each state to build a more highly skilled workforce at the same time that every high school graduate would be ready to succeed in college or a good job. Economist **Sandy Baum** views the issue of affordability as both a supply-side and demand-side problem of the higher education market. On the supply side, institutions must focus on reining in cost. But lower cost will not, in itself, increase access. The demand side requires a new federal approach to subsidies to college students: PROMISE credits for low-income students. Baum outlines how this dual-side course of action could prove effective.

Policy-practice combinations

Timothy M. Kuehnlein Jr. and **Olin Joynton** share some working initiatives from Michigan: state-sponsored income tax credits for students who attend colleges that limit tuition increases, and budget incentives to state institutions that limit rises in tuition. These policies, coupled with institutional efforts, show some mixed but promising indicators of effectiveness. Students also have a role to play in reducing college costs, and **Merriah S. Fairchild** reports on the successful effort by the California Public Interest Research Group (CALPIRG) Education Fund to call attention to expensive textbooks and questionable publishing practices. The CALPIRG project includes a set of recommended practices for publishers, faculty and institutions to keep this college cost more reasonable—including details on setting up a textbook-rental program.

Because we wanted to share as many good solutions as possible, we culled the remaining submitted essays for nuggets—suggestions that offered promise—and commissioned **Corinne Wohlford Taff** to author a chapter that captured these creative ideas. This potpourri includes a suggestion for a national transfer articulation pact, by **Michael P. Riccards**; a model for eliminating merit-based tuition discounting, by **Roy F. Heynderickx**; **Robert Berdahl's** thoughts about state incentives to encourage joint doctoral programs between cooperating institutions; a dual-enrollment design based on proficiency, by **Nancy Hoffman**; a strategy for limiting price increases at selective independent institutions, authored by **J. C. Strauss**; an action plan for change, particularly focusing on the high cost of admitting unprepared students, by state legislator **Harry C. Stille**; and the "Student Associate" work program at Rhodes College (which saves money for both the student and the college), by **Forrest M. Stuart**.

Alternative models of delivery

Finally, to round out this smorgasbord of solutions, we asked our own **Dewayne Matthews**, senior research director at Lumina Foundation, to share his thoughts on alternative organizational models of expanding the delivery of postsecondary education. At the same time that traditional higher education has been wrestling with time-honored models, other providers have stepped in to fill voids and educate students in new ways. Matthews also calls attention to the rapidly changing postsecondary landscape in other countries and notes the innovations in delivery being advanced abroad. The implications of these trends for American higher education require further national dialogue.

The college costs initiative

All of these solutions, from whatever source, should be seen in the larger context of Lumina Foundation's efforts to raise the level of public discourse about the college cost issue so that more effective solutions to the problem are likely to be created and implemented. What's at stake, we believe, is the future of American postsecondary education and through it, the accomplishment of all significant national goals and

aims. Because we regard this as a critical issue, we will focus on it for the long term. Specifically, we intend to pursue the following objectives:

- Build a national consciousness about the importance of awareness, preparation and financial responsibilities (both public and private) in achieving student access and success in higher education.

- Work with other partners, associations and organizations in pointing the way to rational, achievable solutions.

- Fund the most promising solutions through a systematic approach to research, grants and communications efforts.

- Serve as the clearinghouse for stakeholders to share information and solutions that work.

Lumina Foundation is open to additional ideas, suggestions for action, and positive solutions. We earnestly solicit your interest and involvement. If there is indeed an imminent "collision course," our nation needs to make some serious course corrections.

Other publications from Lumina Foundation on college costs and affordability

When Saving Means Losing: Weighing the Benefits of College-savings Plans, by Roberto M. Ifill and Michael S. McPherson (July 2004)

Unintended Consequences of Tuition Discounting, by Jerry S. Davis (May 2003)

Meeting the Access Challenge: Indiana's Twenty-first Century Scholars Program, by Edward P. St. John, Glenda Droogsma Musoba, Ada B. Simmons and Choong-Geun Chung (August 2002)

Hope Works: Student Use of Education Tax Credits, by Barbara A. Hoblitzell and Tiffany L. Smith (November 2001)

Debts and Decisions: Student Loans and Their Relationship to Graduate School and Career Choice, by Donald E. Heller (June 2001)

Discounting Toward Disaster: Tuition Discounting, College Finances, and Enrollments of Low-Income Undergraduates, by Kenneth E. Redd (December 2000)

College Affordability: Overlooked Long-Term Trends and Recent 50-State Patterns, by Jerry S. Davis (November 2000)

Student Debt Levels Continue to Rise, by Patricia M. Scherschel (June 2000)

Cost, Price, and Public Policy: Peering into the Higher Education Black Box, by William L. Stringer, Alisa F. Cunningham, Jamie P. Merisotis, Jane V. Wellman and Colleen T. O'Brien (August 1999)

Student Indebtedness: Are Borrowers Pushing the Limits?, by Patricia M. Scherschel (November 1998)

It's All Relative: The Role of Parents in College Financing and Enrollment, by William L. Stringer, Alisa F. Cunningham, Colleen T. O'Brien and Jamie P. Merisotis (October 1998)

Outsourcing
of non-mission-critical functions:
A solution to the rising cost of college attendance

Mary F. Bushman

Mary F. Bushman is vice president for public policy and communications in the Commercial Services Group at ACS Inc., a Fortune 500 company that provides business process and information technology outsourcing solutions to education, commercial and government clients. Before joining ACS, she worked for 10 years at Loyola University of Chicago in the Financial Services division, where she oversaw portions of the financial aid and business office operations.

John E. Dean

John E. Dean is a partner in the Washington, D.C., law firm of Dean Blakey, which specializes in representing clients involved in federal higher education programs. He is also a principal in the public affairs firm of Washington Partners, LLC, and served as associate counsel to the education committee of the U.S. House of Representatives in the 1980s.

Executive summary

This paper discusses outsourcing as one solution to the college cost crisis. It is not presented as *the* solution; rather, it is put forth as an attractive strategy characterized by minimal financial and programmatic risk.

To explore the basic policy considerations associated with outsourcing, this paper briefly reviews why institutions consider outsourcing, the current use and trends among institutions implementing outsourcing as a management strategy, potential new areas for outsourcing, the challenges associated with outsourcing, solutions to address those challenges and approaches for institutions considering outsourcing.

The authors present case examples to support outsourcing as one solution to the strategy of college cost containment, including examples of cost savings and service delivery improvements experienced by several institutions who implemented one or more outsourcing solutions.

Introduction

For most of the 20th century, public support for pursuing academic excellence and expanding educational opportunity led to significant increases in public funding. States offered ever-increasing direct support to public institutions of higher education, and the federal government offered billions in federal student aid directly to students.[1] In the last five years, however, the public's concern for higher education has shifted toward tuition and other college costs.[2] The higher education community is being asked to be "accountable" both for its quality—commonly understood as adequately preparing students to enter the workforce—and its efficiency. The desire for "accountability" reflects a growing skepticism over whether tuition and fees are appropriate.[3]

Statistical analysis of why higher education costs are rising is beyond the scope of this paper.[4] However, this paper does examine areas in which colleges and universities may cut costs, save funds and thus mitigate price increases without impairing an institution's ability to teach. For example, statistics suggest that growing numbers of non-faculty professional staff are increasing expenditures at U.S. institutions. Approximately 9.6 percent of employees at degree-granting institutions were non-faculty professionals in 1976, whereas the number was 19.6 percent in 2001.[5] Concurrently, expenditures for instruction decreased from 39 percent in 1976-1977 to 34 percent in 2000-2001.[6]

---

[1] "Summer 2001 State Expenditure Report," The National Association of State Budget Officers. http://www.nasbo.org/Publications/PDFs/00exprpt.pdf.

[2] National Center for Public Policy and Higher Education. "Finding Five: High Satisfaction, Low Familiarity -- in Contrast with Leaders." http://www.highereducation.org/reports/expectations/expectations9.shtml.

[3] Boehner, Representative John A. and Representative Howard "Buck" McKeon (2003). "The College Cost Crisis: A Congressional Analysis of College Costs and Implications for America's Higher Education System." The House Committee on Education and the Workforce, September. http://edworkforce.house.gov/issues/108th/education/highereducation/CollegeCostCrisisReport.pdf.

[4] Among often-cited reasons are decreasing state appropriations in the case of public institutions and rising health care costs. See CNN (2004). "College Costs Spike Again," CNN Money, October 19. http://money.cnn.com/2004/10/18/pf/college/college_costs/.

[5] National Center for Education Statistics. "Higher Education General Information Survey 2003." http://nces.ed.gov/programs/digest/d03/tables/dt226.asp.

[6] National Center for Education Statistics. "Higher Education General Information Survey 2003" http://nces.ed.gov/programs/digest/d03/tables/xls/tab349.xls. See also Bartem, Richard and Sherry Manning (2001). "Outsourcing in Higher Education." *Change*, January.

The percent of expenditures for non-academic functions has been increasing in recent years because of increased federal regulation[7] and rising student expectations in terms of services.[8] The public, however, appears either not to understand or accept this explanation. As a result, questions from the public and policy-makers about the quality and efficiency of higher education have increased. With this increased scrutiny have come myriad responses from members of the higher education community, including discussions on how to "control college costs" through a variety of means, including changes in how institutions teach students or structure their academic programs.[9]

Higher education has responded forcefully to indications that cost concerns might lead to federally mandated interference in institutional governance.[10] Some accuse higher education of denying the problem,[11] whereas others accuse it of overreacting.[12] Higher education resists the notion of "accountability" as that term is commonly used. Higher education already sees itself as "accountable" and fears federal intrusion will jeopardize its independence.[13]

Although higher education is likely to continue to oppose efforts to impose external cost restraints, numerous states and institutions have initiated efforts directed at the same goal.[14] These efforts reflect the diverse rationales for initiating or, more accurately, expanding consideration of outsourcing non-academic functions.

This paper suggests that institutions should explore outsourcing of non-academic functions as a cost-cutting strategy. Outsourcing transfers the performance of functions once administered in-house to third-party service providers.[15] Efforts to control college costs need not threaten academic quality or institutional independence. Cost efficiencies may be achieved by focusing on non-academic functions and employing outsourcing, a strategy already widely used in higher education.

The pejorative associations with outsourcing present an obstacle for some institutions. This paper attempts to review objectively some of the pros and cons of this management strategy and reflects the belief that outsourcing, when done correctly, may actually enhance an institution's academic functions. As Richard Bartem of the Florida Institute of Technology has noted, "Outsourcing allows a college or university to focus on its primary mission, not on managing an auxiliary service that may compete with private-sector alternatives and not provide a real return for institutional dollars."[16]

---

[7] National Center for Policy Analysis. "Idea House: Education." http://www.ncpa.org/pi/edu/pd021000b.html.

[8] For example, Ronald G. Eherenberg, author of "Tuition Rising," suggests that elite institutions are engaged in an "arms race" to provide students with the best facilities and services with limited concern about the impact on tuition costs. See, Weston, Liz Pulliam. "The Real Reasons College Costs So Much." MSN Money, http://moneycentral.msn.com/content/CollegeandFamily/P74829.asp.

[9] Johnstone, Bruce, "Privatization in and of Higher Education in the U.S." http://www.gse.buffalo.edu/FAS/Johnston/privatization.html.

[10] Institutions have been particularly forceful in condemning legislative proposals focused on college costs. David L. Warren, president of the National Association of Independent Colleges and Universities, for example, described a bill addressing college costs introduced by Rep. Howard McKeon (R-CA) as having "the unintended consequence of closing the door to a college degree on the very segments of the college-going population that his bill purports to help: low- and middle-income students." Statement by NAICU President David L. Warren on Rep. McKeon's Proposed College Affordability Legislation. October 16, 2003. http://www.naicu.edu/news/releases/10-16-03McKeonBill.shtml.

[11] Riley, Richard W. (2004). "Higher Education Management: Achieving Efficiency and Maintaining Excellence," presented at HEWI, Inc. conference on Higher Education Management, Chicago, Illinois, September 20. http://www.hewi.net/conference/pdf/SecRileySpeech-HEWIForum920.pdf.

[12] Warren, David L. October 16, 2003.

[13] Remarks of Richard W. Riley at the Higher Education Washington, Inc. conference on "Higher Education Management: Achieving Efficiency and Maintaining Excellence," September 20, 2004, Online at Riley, Richard W. "Higher Education Management: Achieving Efficiency and Maintaining Excellence."

[14] The State Higher Education Executive Officers, for example, have established a National Commission on Accountability in Higher Education. http://www.sheeo.org/default.htm. See also Magrath, C. Peter (2003). "NASULGC Statement on College Costs," National Association of State Universities and Land Grant Colleges, October 21. http://www.nasulgc.org/Public%20Affairs/Collegecosts10-15.pdf.

[15] As defined by Administrative Information Technology Service Department at the University of Illinois. http://www.aits.uillinois.edu/live/Site.xml?document=Glossary.xml&focus=N16.

[16] Bartem, "Outsourcing in Higher Education."

This paper discusses outsourcing as one solution to the college cost crisis. It is not presented as *the* solution; rather, it is put forth as an attractive strategy that presents minimal financial and programmatic risk. To explore the basic policy considerations associated with outsourcing, this paper briefly reviews why institutions consider outsourcing; the current use and trends among institutions implementing outsourcing as a management strategy; the challenges associated with outsourcing and approaches for institutions to use in considering outsourcing.

Why institutions consider outsourcing

Institutions cite a number of reasons for outsourcing, including the need to reduce costs and capital investments, accommodate staffing limitations, enhance service quality, achieve access to technology and expertise not otherwise available, better manage periodic service demands, facilitate organizational change, and generate revenue.[17] Others cite budget pressures, competition from other institutions and "greater public emphasis on accountability."[18]

Institutions of higher education may achieve the same benefits through outsourcing as private-sector companies achieve in the business sector.[19] Four of the principal benefits[20] are the following:

- **Reduction in costs:** Cost reduction is the single most important objective of outsourcing. Without the anticipation of reduced costs, few institutions are likely to explore outsourcing. Cost reductions occur as a result of securing new technologies

through the vendor, achieving otherwise unavailable economies of scale, using limited capital more efficiently and reducing personnel costs.[21] In an example from the business sector, the U.S. Chamber of Commerce, the world's largest nonprofit business federation, realized ongoing savings of $300,000 per month by outsourcing its IT department. This provides the organization, which manages an annual budget of $100 million, an ongoing savings of $3.6 million per year, according to U.S. Chamber's Chief Financial Officer/ Chief Information Officer, Stan Harrell.

- **Reallocation of capital resources:** Outsourcing often reduces the need for capital investments associated with the performance of specific functions. Institutions are often required to allocate significant sums of money for capital investments. The continuing need to upgrade services in areas such as information technology can strain institutional resources. Outsourcing capital-intensive functions can free cash flow for the university while providing state-of-the-art systems and processes to support university administrative functions.

- **Improvements in quality:** Employing dedicated third-party service providers for specific functions allows institutions to manage, measure and contractually mandate service quality improvements. Contractually mandating service levels can allow an institution to improve service rapidly and dramatically and ensure that it remains satisfactory. Contracts may include service delivery requirements in areas such as required hours of

[17] Rainsberger, Richard (2002). "Outsourcing Information Systems," presented at ECURE Confrence, October 10. http://www.asu.edu/ecure/2002/rainsberger/rainsberger2.ppt.

[18] Agron, Joe (1999). "Take It or Leave It", *American School & University*, September.

[19] Judi Brown and Joellen Fletcher documented the 1995 decision of General Electric Company to outsource its headquarters information service in a 1997 paper, "Outsourcing." The paper includes an analysis of the goals and obstacles suggesting a clear comparability of how institutions and private sector firms consider outsourcing. Online at: http://www.libsci.sc.edu/bob/class/clis724/SpecialLibrariesHandbook/outsourcing.htm.

[20] The Outsourcing Institute (1998). "Survey of Current and Potential Outsourcing End-Users." http://www.outsourcing.com/content.asp?page=01i/articles/intelligence/oi_top_ten_survey.html&nonav=true.

[21] Phipps, Ronald and Jamie Merisotis (2004). "Is Outsourcing Part of the Solution to the Higher Education Cost Dilemma? A Preliminary Examination," The Institute for Higher Education Policy.

operation, speed and accuracy of response to inquiries, maintenance of system availability and back-up plans in the event of service interruption.

• **Reduced long-term employment-related costs:** Outsourcing non-academic functions reduces employment at the institution, which is likely to reduce short- and long-term costs. Although these savings may result from staff reductions or employees transferring employment to a third-party service provider, the savings nonetheless

accrue to the institution. Other benefits of outsourcing for institutions of higher education include increasing flexibility to meet service demands; facilitating organizational change; compensating for the inability to attract highly skilled staff; and a desire to acquire access to new technologies, skills and expertise.[22] As more institutions consider the reasons for outsourcing non-academic functions, they are likely to seek guidance from institutions that have already begun to outsource.

Percentage of colleges using selected contract (privatized) services, 2001

Type of service	Percentage of colleges
Bookstore	45.7%
Computer servicing	8.3%
Custodial	
Academic buildings	26.3%
Residential buildings	18.7%
Facility management	9.2%
Food service	74.6%
Grounds maintenance	18.1%
HVAC maintenance	17.8%
Instructional-equipment upkeep	2.5%
Laundry	20.6%
Maintenance	
Academic buildings	9.2%
Residential buildings	8.3%
Office-equipment upkeep	9.8%
Payroll preparation	10.8%
Printing	19.4%
Security	
Academic buildings	15.9%
Residential buildings	8.3%
Transportation (busing)	14.9%
Vending	63.2%

---

[22] AACRAO Outsourcing Task Force (2001). "Outsourcing in Higher Education." http://www.aacrao.org/pro_development/Outsourcing_Paper.pdf.

Current trends and uses of outsourcing

Approximately 95 percent of all institutions report outsourcing at least some non-academic services.[23] Approximately 75 percent of all institutions outsource food service, and almost half outsource operation of their campus bookstores[24] (see chart on Page 10[25]).

Outsourcing's popularity is increasing.[26] In 1997, for example, 35.1 percent of surveyed institutions reported contracting out for five or more services. By 1999, this number had increased to 43.6 percent.[27] Approximately 26 percent of institutions expect their use of outsourcing to increase over the next few years.[28] Among the services most commonly outsourced by colleges and universities as of 1999 were food service (75.6 percent), vending machines (58.8 percent), bookstores (46.6 percent), custodial work (39.7 percent), HVAC maintenance (23.7 percent) and laundry (22.9 percent).[29]

The following examples of commonly outsourced services exemplify institutions' rationale for outsourcing. The section that follows describes functions that are less commonly outsourced. Each of these sections includes suggestions on ways in which institutions that use outsourcing could improve on the function.

Functions that are commonly outsourced

College bookstores

Although books are essential to the college experience, institutions have no need to master their distribution and sale. As a result, college bookstores are outsourced either to third-party managers or third-party vendors. Outsourcing of bookstores has grown increasingly common since 1992. In the 2003-2004 academic year, approximately 48 percent of all college bookstores were outsourced.[30]

Advantages for outsourcing the bookstore function include greater efficiency, fewer financial commitments and lower prices for students.[31] Third-party bookstore operators also have access to broader talent pools for their management and operations and do not depend on the academic calendar for employees. Potential savings from outsourcing bookstore operations can be significant. For example, Oakland University estimates that it will earn $575,000 in commissions from its outsourced bookstore in FY 2004 in addition to saving more than $25,000 by not having to carry bookstore inventory.[32]

Food service

Food service was among the first services to be outsourced regularly and remains among the most common, with approximately three-quarters of all institutions contracting out this service.[33] Longwood University in Virginia has outsourced its food services

---

[23] The National Association of College and Auxiliary Services. "The 1999 Survey of Higher Education Institutions of the National Association of College Auxiliary Services." http://www.nacas.org/index.html.

[24] Mackinac Center for Public Policy (2002). "Keeping it Close to Home: A Survey of Education-Related Outsourcing." April. http://www.questforexcellentschools.org/article.asp?ID=4145.

[25] "Keeping it Close to Home: A Survey of Education-Related Outsourcing."

[26] AACRAO Outsourcing Task Force (2001). "Outsourcing in Higher Education."

[27] Agron, Joe (1999). "Take It or Leave It," *American School & University*.

[28] "Keeping it Close to Home: A Survey of Education-Related Outsourcing."

[29] Agron, Joe, "Take It or Leave It."

[30] The National Association of College Stores. "Higher Education Retail Market Facts & Figures 2004." http://www.nacs.org/.

[31] DeVry, Inc. Form 10-Q, filed November 8, 2004.

[32] Oakland University (2004). "Oakland University Cost Containment Efforts." http://www3.oakland.edu/oakland/adminoffices/budget/2004/cost_containment.asp.

[33] AACRAO Outsourcing Task Force. "Survey on Outsourcing in Higher Education."

for more than 40 years.[34] Many institutions have found that outsourcing food service offers the opportunity to both reduce costs and improve quality. The Mackinac Center for Public Policy, for example, notes that "All of Michigan's state universities save money by contracting with private companies, such as Aramark, Gordon Food Service, or the Pepsi Cola Company, etc."[35] The center also notes that Central Michigan University lost money on food services until it contracted in part with Aramark in 1994. Between 1994 and 1999, CMU saved approximately $890,000 while improving food service.[36]

Functions that are less commonly outsourced

Although contracting out bookstore operations, food service, waste disposal and security are no longer controversial on most campuses, outsourcing functions with a closer relationship to institutions' core functions is different. These areas include admissions/enrollment optimization, housing, financial aid, human resources, financial management and information technology.

Admissions

Admissions departments can outsource several functions, including mailroom support for student solicitations, responding to application requests, and scanning application information into the school admissions system. Third-party providers can also work telephones, calling students to obtain information needed to complete applications and answering questions on the status of applications and forms needed. Outsourcing these routine administrative functions allows the institution to increase student service by providing longer hours of operation for

in-bound calls and contacting students at times convenient to them. A third-party service provider may help schools to differentiate themselves by being more accessible to students. Relieving admissions departments of these routine functions allows the school to retain control over the key admissions processes, such as scrutinizing applications and conducting interviews with prospective students.

Housing

Many institutions achieve significant savings by privatizing operation of student dorms and achieving significant savings. The University of Texas at Dallas, for example, first privatized on-campus student housing and now estimates saving at least $500,000 per year.[37] The University of North Carolina at Chapel Hill outsourced management of an on-campus inn and produced revenues sufficient to cover debt service and contribute $100,000 annually toward library operations.[38]

Financial aid

One of the primary objectives of outsourcing administration of financial aid is ensuring compliance with federal regulations, a significant challenge at some institutions.[39] Financial aid functions that can be outsourced include data entry, outbound calling and data verification as required under federal student aid regulations. The university should maintain the strategic operations of financial aid, such as determining award criteria.

Although the practice is still relatively uncommon among traditional colleges and universities, third-party vendors handle the vast majority of federal student aid

---

[34] Longwood University. "Consultancy Services." http://www.longwood.edu/HR/CSoutsourcing.htm.

[35] Mackinac Center for Public Policy (2000). "Harry Privatizer and the Goblet of Fiscal Responsibility." See section "Privatized Dorms: Michigan Can Learn From Texas." Fall. http://www.mackinac.org/article.asp?ID=3005.

[36] Mackinac Center for Public Policy (2000). "Harry Privatizer and the Goblet of Fiscal Responsibility." See section "Privatized Dorms: Michigan Can Learn From Texas." Fall.

[37] Mackinac Center for Public Policy (2000). "Harry Privatizer and the Goblet of Fiscal Responsibility." See section "Privatized Dorms: Michigan Can Learn From Texas." Fall. http://www.mackinac.org/article.asp?ID=3005.

[38] Magrath, C. Peter. "NASULGC Statement on College Costs."

[39] Among the companies offering outsourcing of management of financial aid is Deborah John & Associates, which cites compliance as a reason for institutions to consider using its services. See http://www.gotodja.com/pages/efas.html.

awarded each year during some stage of processing. In fact, a single company, ACS Inc., currently acts as a third-party servicer on more than $103 billion in federal student aid.[40]

Financial management

Although many in higher education would argue that maintaining an institution's general ledger is so central to the control of the institution that outsourcing is inappropriate, it happens more often than is commonly believed.[41] For instance, most institutions use professional firms to manage their endowments,[42] and others outsource functions to take advantage of economies of scale, increased security and technology.[43] Those areas include accounts payable, accounts receivable, payroll, tax reporting, endowment accounting and audit and compliance support. Outsourcing of these functions is likely to become more common as the experiences of their peers are more widely circulated.

Currently, however, reservations about outsourcing financial management functions are significant. Phipps and Merisotis report that "Varied and strict state reporting requirements were seen as too complicated" and that "some felt they are just part of a much bigger system and don't have the autonomy."[44] Some in higher education community believe, however, that interest in outsourcing aspects of financial management will increase as more information about outsourcing strategies and potential savings in this area becomes available.

Human resources

Personnel management is also often considered a "core value" of institutions. These functions include recruitment, administration of the processes and systems to enroll a new healthcare plan, processing of health claims, maintenance of employee records, compliance management, operation of employee self-service portals, mailing of benefit packages and maintenance of a benefit question call center. Although hiring is a function that many believe the institution should retain, many other functions are routine and subject to strict procedures and therefore are candidates for outsourcing. Among those institutions outsourcing human resources functions is the University of Vermont, which as of January 1, 2005, has been outsourcing its flexible spending account program to a third-party vendor.[45]

Information technology

Many institutions are finding that information technology (IT) easily can be outsourced, and most schools begin with outsourcing IT platforms.[46] Additional areas effectively outsourced include data and network management,[47] disaster recovery, security, vulnerability detection, help desk support and asset management.

---

[40] "ACS in Education." See https://www.acs-education.com/bac/EDU/About.html. (Note: One of this essay's co-authors, Mary E. Bushman, is an executive with ACS Inc.)

[41] Use of a third-party accounting firm for audits is the most obvious example.

[42] Angelo, Jean Marie. (2004). "Coping with the Endowment Crisis: With the High-Flying Days Over, New Strategies are Emerging to Protect and Build Assets." *University Business*, November.

[43] Klepper, Robert and Wendell Jones (1997). *A Summary of the Key Concepts from Outsourcing Information Technology Systems and Services*, Prentice Hall. Author summary available at http://www.businessforum.com/woj01.html.

[44] Phipps, Ronald and Jamie Merisotis. "Is Outsourcing Part of the Solution to the Higher Education Cost Dilemma? A Preliminary Examination."

[45] University of Vermont. "Ceridian Benefit Services: UVM's new flexible spending account administrator." http://www.uvm.edu/~benefits/?Page=fsa/ceridian.html.

[46] A specific implementation of an operating system. At a minimum, a platform contains an operating system image, an OEM adaptation layer, device drivers and configuration files. An example of an IT platform is Microsoft CE. Definition adopted from http://msdn.microsoft.com/library/default.asp?url=/library/en-us/wcelib40/html/pbtutpbTutorials.asp.

[47] The execution of the set of functions required for controlling, planning, allocating, deploying, coordinating and monitoring the resources of a telecommunications network, including performing functions such as initial network planning, frequency allocation, predetermined traffic routing to support load balancing, cryptographic key distribution authorization, configuration management, fault management, security management, performance management and accounting management. www.bandwidthmarket.com/resources/glossary/N2.html.

Universities may now save significant capital investments in technology through outsourcing. Certain companies will provide on-demand computing services for a university on a per-usage basis. This practice allows the university to contract for computing space on an as-needed basis, to pay monthly usage fees and to avoid large capital expenditures on technology that is often outdated by the time it is installed. Companies such as Sun and IBM now provide computing services on a usage basis. They manage capacity fluctuation and guarantee updated computer technology as well as service delivery. Failure to deliver subjects the companies to significant penalties.

Although outsourcing IT services is still relatively rare, institutions are likely to grow increasingly comfortable with the practice. In recent years, Chatham College outsourced its library; Cabrini College outsourced its information technology operation; and the City Colleges of Chicago outsourced payroll, purchasing and other financial operations to American Express.[48]

Disaster recovery

In an era of increasing reliance on electronic data, the need for an effective disaster recovery plan is vital to the ongoing operation of any institution of higher education. However, few schools have developed solid disaster recovery programs that include off-site data backup and redundant systems capacity to assume operations in the event of a disaster.

When the word *disaster* is used, it is often associated with terrorism, hurricanes or similar large-scale events. A failed sprinkler that floods a server room also can be a disaster, as can a power outage or small fire in a key location. Even a gas leak can deny the use of certain areas, possibly impeding access to or the flow of data. Although they are small in scale, these events can be catastrophic for those not adequately prepared.

Data recovery from a catastrophic event is crucial to the ability for a higher education institution to function. Not only is financial information critical to an institution's health; seemingly more mundane functions, such as food service credits, research data, classroom grades and so on are all necessary to its vitality. Outsourcing of disaster recovery can aid schools in implementing plans that address the security of and access to their data. By ensuring both forms of security, a school can protect itself from catastrophic data loss.

Because the work of disaster recovery, data backup and so on are not activities in which higher education specializes, outsourcing these functions makes sense. However, a number of challenges are associated with outsourcing.

Challenges associated with outsourcing

The diversity of higher education institutions makes it difficult to identify a standard approach for choosing outsourcing. No two institutions will encounter the same legal, labor, financial and academic issues. The following are some of the issues likely to arise in considering outsourcing functions:

1. Existing labor agreements. Such agreements flatly may prohibit outsourcing and thus necessitate renegotiation for this option to be considered. This hurdle convinces some institutions to reject outsourcing without even exploring savings or service quality improvement issues. Importantly, although many in the higher education community assume that employees oppose outsourcing, some institutions have reported that employee satisfaction increased after outsourcing because management improved and because employees had access to better tools and equipment.[49]

---

48 Office of Internal Audit, University of Wisconsin. (2002). "Outsourcing Services at UW Institutions," Page 8. May.

49 Johnsrud, Linda K. "Higher Education Staff: Bearing the Brunt of Cost Containment," Page 113. NEA 2000 Almanac of Higher Education. http://www.nea.org/he/healma2k/index.html.

2. Non-union labor issues. Even for institutions without labor agreements, concern over the well-being of employees who could be displaced is an important issue. At the University of North Carolina, for example, a plan to outsource housekeeping staff led to charges of racism because housekeeping staff were predominantly African-American and the action would have reduced salaries.[50] Employees also worry about providing development opportunities for staff and want to maintain personal relationships.[51] Various observers also note morale problems associated with the employment uncertainty in light of outsourcing.[52]

3. Questions regarding quality. Many institutions are reluctant to outsource because of the concern that quality may decline. Because students and faculty use outsourced services, overall institutional morale may be undermined, and future alumni donors may be alienated.[53] These concerns may be addressed through the procurement process, by choosing a vendor with a proven track record of quality service, and through the contracting process, by tying payment for services to a set of quality standards that the vendor must meet.

4. Concern over data security. Institutions are concerned that confidential student records might be inappropriately disclosed or lost. Student records are generally protected from disclosure without the permission of the student under the Family Educational Right to Privacy Act (FERPA),[54] which applies to all schools that receive funds under programs operated by the U.S. Department of Education. Some institutions, in fact, erroneously question whether use of third-party contractors for the management of records is even permitted under the FERPA; however, the U.S. Department of Education has ruled that outsourcing does not violate FERPA.[55]

5. Interest in maintaining control and currency in new technology skills. Some institutions are concerned that outsourcing will lessen control over the outsourced functions and diminish technology skills that would otherwise enable them to evaluate the quality of service received.[56] However, many of the non-core functions that are ripe for outsourcing require a specific skill set that is difficult for the school to recruit and retain. Control over outsourced functions should be maintained through appropriate service contracts with third-party providers, and evaluation of service should be based on student and faculty satisfaction as well as on the financial effect upon the school. This method of evaluation would not require specific technical skill sets to evaluate the services provided. Because research is central to what universities do, it can be used to manage contractors and to determine whether services match or exceed standards at other institutions.

> Control over outsourced functions should be maintained through appropriate service contracts with third-party providers.

---

[50] Wood, Patricia. (1997). "The Winds of Privatization: A Typology for Understanding the Phenomenon in Public Education." Presented at the Association of the Study of Higher Education annual meeting. November 6-9, Albuquerque, New Mexico.

[51] AACRAO Outsourcing Task Force (2001). "Outsourcing in Higher Education."

[52] Johnsrud, Linda K. "Higher Education Staff: Bearing the Brunt of Cost Containment."

[53] Upshaft, M. Lee. "Affordability: Responding to the Rising Cost of Higher Education." As included in "Higher Education Trends for the Next Century," edited by Cynthia S. Johnson and Harold E. Cheatham. http://www.acpa.nche.edu/seniorscholars/trends/trends.htm.

[54] 20 U.S.C. § 1232g; 34 CFR Part 99.

[55] McDonald, Steven J. (1999). "The Family Educational Rights and Privacy Act: A Legal Compendium," National Association of College and University Attorneys. See specifically the letter dated April 19, 1993, from LeRoy Rooker of the Department to Daniel Boehmer of the National Student Loan Clearinghouse.

[56] AACRAO Outsourcing Task Force (2001). "Outsourcing in Higher Education."

6. Uncertainty over potential savings. Although some contracts for outsourcing may include guarantees of potential savings or guaranteed payments to the institution, uncertainty over the extent to which desired savings will materialize is a problem for many institutions. This uncertainty can be addressed contractually and is a perceived obstacle to outsourcing rather than a reality.

7. Political opposition to outsourcing. A relatively new consideration is the emergence of an articulate political opposition to outsourcing. Opposition is often based on the assumption that outsourcing replaces U.S. workers with foreign workers and is making "outsourcing" of all kinds more controversial. Some state legislatures, for example, have enacted statutes intended to discourage or prohibit outsourcing. In Michigan, two directives to limit outsourcing were signed in 2004. One gives preference to Michigan-based job providers in the state government's contracting process and requires the state's Department of Management and Budget to consider whether a bidder exports jobs or uses offshore tax shelters when considering whether the proposal is the best contract for the state.[57] The authors emphasize that "offshoring" and "outsourcing" are separate ideas. The first is the movement of work outside of the United States to provide cheaper labor; the second, which this paper addresses, is the use of third-party providers to perform a service. Mixing of the two terms often confuses the discussion surrounding outsourcing.

Possible approaches in exploring and implementing outsourcing

A number of authors have offered advice on how to explore and implement outsourcing in higher education.[58] Several of the most commonly suggested approaches include the following:

1. Develop a clear set of goals and objectives. This goal is especially important because outsourcing may produce a variety of benefits, some of which may be of marginal interest to particular institutions. Outsourcing also raises a number of practical and philosophical issues. Both the advantages and disadvantages should be reviewed as concise sets of goals and objectives are developed. One common suggestion is to begin with an outsourcing opportunity study that addresses questions such as whether savings from outsourcing are possible and what impact outsourcing might have on performance of the functions involved.[59]

2. Review options with stakeholders and secure buy-in. Outsourcing can have a major impact on key parts of the institution's community—including staff, students and faculty.[60] To protect the community's diverse interests, the institution should consult with stakeholders to develop outsourcing plans that will be supported as widely as possible. Although this approach sometimes significantly changes or even cancels the original plans, it prevents objections based on misinformation. Including stakeholders on an outsourcing task force is one means of reviewing options and of possibly securing buy-in. Outsourcing's success relies on the support of the

---

[57] Griswold, Daniel T. and Dale D. Buss (2004). "Outsourcing Benefits Michigan Economy and Taxpayers," Page 6. Mackinac Center for Public Policy, September 16.

[58] The Outsourcing Institute (1998). "Survey of Current and Potential Outsourcing End-Users."

[59] A good description of how an organization might approach outsourcing information systems appears on the AICPA Web site at http://www.aicpa.org/cefm/outsourcing.asp.

[60] "Stakeholders" should be differentiated from decision makers, which may include divisions and departments within the university as well as the board of directors. See Phipps, Ronald and Jamie Merisotis (2004). "Is Outsourcing Part of the Solution to the Higher Education Cost Dilemma? A Preliminary Examination," The Institute for Higher Education Policy.

leaders of the institution, who must understand the full scope of its benefits. Although consultation is important in the process, the authors note that one of the key obstacles to outsourcing in any environment is the self-interest of current stakeholders who may not see the broader implications for the institution.

3. Develop a process for selecting an appropriate vendor. Much of the risk in outsourcing is tied to the possibility that the contractor will not perform as promised. To minimize this risk, the institution should thoroughly review the capabilities and records of potential vendors, including their ability to comply with FERPA,[61] the third-party service regulations and other rules and regulations with which they might not be fully familiar. The institution should also learn the names of a vendor's other clients and review its performance record with them. The contract with the vendor should be of short duration; three to five years with multiple one-year options for extension is normal. However, the broader the scope of service outsourced, the longer the contract should be. Multiple, one-year extensions to the contract allow the institution to retain the current vendor if it is satisfied with services. Contracts should include appropriate options for termination if performance criteria are not met. Finally, some suggest that outsourcing contracts include performance incentives to encourage strong performance and decrease financial risk in the event the vendor performs inadequately.

4. Ensure appropriate oversight of vendor after contracting. Loss of expertise and control are the two concerns most often cited about outsourcing. Appropriate monitoring of the contractor, including performance benchmarks, can minimize these risks.

In practice, service performance on outsourced functions can and often does exceed that which an institution can deliver itself.

Conclusion: Outsourcing is a low-risk and effective response to rising college costs

Institutions should consider outsourcing as one response to calls for reduced costs. The option has the advantage of being well tested by most institutions in areas peripheral to the teaching and research missions of the institutions. Outsourcing can minimize both financial and performance risk by using experienced, financially stable providers. Perhaps outsourcing's biggest side benefit is its transparency; it need only minimally change campus life for students and faculty.

Congress and the public will continue to push universities to bridle rising tuition costs. In this climate, universities that proactively increase efficiency will draw praise. More importantly, a proactive approach may discourage federal legislation mandating changes in how institutions are organized, including how they perform their key mission of educating students.

Outsourcing of non-mission-critical functions—and even some that are closer to the "core values" of academic institutions—is an idea whose time has come. Like for-profit institutions, colleges and universities stand to reap significant cost savings over a relatively short period of time. ■

---

[61] The Family Educational Rights and Privacy Act. Implementing regulations are found at 34 C.F.R. Part 99.

References

ACS. "ACS in Education." Dallas, Texas. https://www.acs-education.com/bac/EDU/About.html.

Agron, Joe (1999). "Take It or Leave It," *American School & University*, September.

American Association of Collegiate Registrars and Admissions Officers' Outsourcing Task Force (2001). "Outsourcing in Higher Education," Washington, D.C. http://www.aacrao.org/pro_development/Outsourcing_Paper.pdf.

Angelo, Jean Marie (2004). "Coping with the Endowment Crisis: With the High-Flying Days Over, New Strategies are Emerging to Protect and Build Assets," *University Business*, November.

Bartem, Richard and Sherry Manning (2001). "Outsourcing in Higher Education," *Change*, January.

Boehner, Representative John A. and Representative Howard "Buck" McKeon (2003). "The College Cost Crisis: A Congressional Analysis of College Costs and Implications for America's Higher Education System." The House Committee on Education and the Workforce. September. http://edworkforce.house.gov/issues/108th/education/highereducation/CollegeCostCrisisReport.pdf.

Griswold, Daniel T. and Dale D. Buss (2004). "Outsourcing Benefits Michigan Economy and Taxpayers." Mackinac Center for Public Policy. Midland, Michigan.

Johnsrud, Linda K. (2000). "Higher Education Staff: Bearing the Brunt of Cost Containment." NEA 2000 Almanac of Higher Education. http://www.nea.org/he/healma2k/index.html.

Johnstone, Bruce. "Privatization in and of Higher Education in the U.S." http://www.gse.buffalo.edu/FAS/Johnston/privatization.html.

Klepper, Robert and Wendell Jones (1997). *A Summary of the Key Concepts from Outsourcing Information Technology Systems and Services*, Prentice Hall, Upper Saddle River, New Jersey. Author summary available at: http://www.businessforum.com/woj01.html.

Longwood University. "Consultancy Services, " Farmville, Virginia. http://www.longwood.edu/HR/CSoutsourcing.htm.

Mackinac Center for Public Policy (2002). "Keeping it Close to Home: A Survey of Education-Related Outsourcing." Midland, Michigan. April. http://www.questforexcellentschools.org/article.asp?ID=4145.

Magrath, C. Peter, "NASULGC Statement on College Costs," National Association of State Universities and Land Grant Colleges. Washington, D.C. October 21, 2003. http://www.nasulgc.org/Public%20Affairs/Collegecosts10-15.pdf.

McDonald, Steven J., "The Family Educational Rights and Privacy Act: A Legal Compendium," National Association of College and University Attorneys. Washington, D.C. 1999.

National Association of State Budget Officers (2001). "Summer 2001 State Expenditure Report," Washington, D.C. http://www.nasbo.org/Publications/PDFs/00exprpt.pdf.

National Association of College and Auxiliary Services. "The 1999 Survey of Higher Education Institutions of the National Association of College Auxiliary Services," Charlottesville, Virginia. http://www.nacas.org/index.html.

National Association of College Stores. "Higher Education Retail Market Facts & Figures 2004," Oberlin, Ohio. http://www.nacs.org/.

National Center for Education Statistics (2003). "Higher Education General Information Survey 2003," Washington, D.C. http://nces.ed.gov/programs/digest/d03/tables/dt226.asp and http://nces.ed.gov/programs/digest/d03/tables/xls/tab349.xls.

National Center for Policy Analysis. "Idea House: Education," Dallas, Texas. http://www.ncpa.org/pi/edu/pd021000b.html.

National Center for Public Policy and Higher Education. "Finding Five: High Satisfaction, Low Familiarity—in Contrast with Leaders," San Jose, California. http://www.highereducation.org/reports/expectations/expectations9.shtml.

"Oakland University Cost Containment Efforts," Oakland University. Oakland, California. 2004. http://www3.oakland.edu/oakland/adminoffices/budget/2004/cost_containment.asp.

Office of Internal Audit, University of Wisconsin. (2002). "Outsourcing Services at UW Institutions," Madison, Wisconsin. May.

The Outsourcing Institute (1998). "Survey of Current and Potential Outsourcing End-Users," Jericho, New York. http://www.outsourcing.com/content.asp?page=01i/articles/intelligence/oi_top_ten_survey.html&nonav=true.

Phipps, Ronald and Jamie Merisotis (2004). "Is Outsourcing Part of the Solution to the Higher Education Cost Dilemma? A Preliminary Examination," HEWI, Inc. conference on Higher Education Management, Chicago, Illinois, September 20.

Rainsberger, Richard (2002). "Outsourcing Information Systems," ECURE Conference, Arizona State University, October 10.

Riley, Richard W. (2004). "Higher Education Management: Achieving Efficiency and Maintaining Excellence," HEWI, Inc. conference on Higher Education Management, Chicago, Illinois, September 20. http://www.hewi.net/conference/pdf/SecRileySpeech-HEWIForum920.pdf.

University of Vermont. "Ceridian Benefit Services: UVM's new flexible spending account administrator," Burlington, Vermont. http://www.uvm.edu/~benefits/?Page=fsa/ceridian.html.

Upshaft, M. Lee. "Affordability: Responding to the Rising Cost of Higher Education." In Johnson, Cynthia S. and Harold E. Cheatham, editors." Higher Education Trends for the Next Century." http://www.acpa.nche.edu/seniorscholars/trends/trends.htm.

Vedder, Richard (2004). *Going Broke by Degree: Why College Costs Too Much*. AEI Press, Washington, D.C.

Warren, David L. (2003). "Statement by NAICU President David L. Warren on Rep. McKeon's Proposed College Affordability Legislation." October 16. http://www.naicu.edu/news/releases/10-16-03McKeonBill.shtml.

Weston, Liz Pulliam. "The Real Reasons College Costs So Much," MSN Money. http://moneycentral.msn.com/content/CollegeandFamily/P74829.asp.

Wolfram, Dr. Gary L. and Anne Kristen (2000). "Harry Privatizer and the Goblet of Fiscal Responsibility," Mackinac Center for Public Policy. Midland, Michigan. Fall. http://www.mackinac.org/article.asp?ID=3002.

Wood, Patricia (1997) "The Winds of Privatization: A Typology for Understanding the Phenomenon in Public Education." Presented at the Association of the Study of Higher Education annual meeting. November 6-9, Albuquerque, New Mexico.

Seven steps:
Ways to reduce instructional costs and improve undergraduate and graduate education

Bill Coplin

Bill Coplin has been the director of and a professor in the Public Affairs Program of the Maxwell School of Syracuse University and its College of Arts and Sciences since 1976. He has published extensively in the fields of international relations, public policy, political risk analysis, social science education and citizenship, and he has won numerous teaching awards. Coplin earned his bachelor's degree in social science from Johns Hopkins University in 1960, and both his master's (1962) and doctorate (1964) in international relations from American University. His book, *Ten Things Employers Want You to Learn in College*, advises undergraduates on how to make sure their college education pays off. He is a frequent contributor to *USA Today* on high school and college education.

Executive summary

This essay presents the following seven practices that could provide undergraduate and graduate students with high-quality education more efficiently: 1. Outsource selected courses and programs. 2. Expand opportunities for experiential learning credit in traditional four-year programs. 3. Give credit for programs offered by student services. 4. Unbundle university education by providing more credential options than only the traditional bachelor's and master's degrees. 5. Adapt existing concurrent enrollment programs with high schools so that students can graduate in fewer than four years. 6. Use undergraduate teaching assistants for lower-division courses. 7. Adopt an apprenticeship model for all doctoral programs.

This essay briefly describes each proposed practice, providing concrete examples and examining other possibilities. Costs and questions of quality are also discussed for each proposal. The paper concludes with a brief discussion of the impact on faculty.

Introduction

This essay presents seven practices that could provide undergraduate and graduate students with high-quality education more efficiently. No attempt is made to estimate the overall financial impact of the suggestions made here, but, according to a 2003 Delaware study comparing college and university costs, "instructional expenditures are largely associated with personnel costs."

This paper suggests ways to raise faculty productivity. After the proposals are described, the paper discusses a concrete example and explores other possibilities as well as the effects on costs and quality. The suggestions are based on my more than 35 years' experience as a full-time faculty member and full professor at Syracuse University in the Maxwell School and the College of Arts and Sciences. The suggestions primarily apply to research universities but may also be relevant to small colleges.

A word about quality is in order. If carried out in a competent way, each of the proposals suggested in this paper will raise quality while saving money. In their book *Teaching the New Basic Skills: Principles for Educating Children to Thrive in a Changing Economy*, Richard Murnane and Frank Levy demonstrate how paying

attention to customers and empowering workers to solve problems together increase efficiency and quality at the K-12 level. A similar approach can reduce costs while improving quality at the undergraduate and graduate levels. Like the changes Murnane and Levy suggest, the key to reform is the organization and attitudes of the workers—in this case, the university faculty. All of the suggestions described in this paper can happen only if faculty members, particularly those in the traditional liberal arts, approach reform with open minds and a dedication to meet the needs of their students in a cost-effective way.

The criteria for quality are the extent to which educational programs help students develop the following:

1. Skills to succeed in the workforce.

2. A willingness to work in various ways for the public good.

3. Commitment to lifelong learning for its own sake.

These three goals encompass what most people see as the purposes of higher education, even though people may disagree over precise definitions and their

relative priority. The strategies discussed in this paper are assumed to enhance students' capacity to meet these goals. The paper does not address the political feasibility of these suggestions, yet the political roadblocks are significant. Although few of the ideas are likely to be fully adopted, they may stimulate more incremental steps to slow the rise in college costs.

The seven suggestions are the following:

1. Outsource selected courses and programs.

2. Expand opportunities for experiential learning credit in traditional four-year programs.

3. Give credit for programs offered by student services.

4. Unbundle university education by providing more credential options than the traditional bachelor's and master's degrees.

5. Adapt existing concurrent enrollment programs with high schools so that students can graduate in fewer than four years.

6. Use undergraduate teaching assistants for lower-division courses.

7. Adopt an apprenticeship model for all doctoral programs.

After presenting these specific suggestions, the essay will discuss the underlying dynamics in the way faculty members perceive themselves and their role in educating students. Finally, the paper will discuss briefly ways in which attitudes about faculty roles need to change.

Suggestion 1: Outsource some academic courses and programs

Training firms that sell their services to businesses, government and nonprofit organizations are big business—not just in the private sector, but in the public and nonprofit sectors as well. Although some of the training is technical and highly specific, much of it is not. Colleges and universities could save money, offer more diverse education and increase quality by using some of these vendors.

Example

More than 92 years old, Dale Carnegie Training operates in 65 countries and has more than 7 million graduates. Each of its programs is carefully developed, continuously evaluated and updated and survives because of its commercial success. Relatively few universities give academic credit for its courses. The Carnegie introductory course, which involves 12 sessions of three hours each in addition to outside assignments, is designed to introduce Dale Carnegie's theories of human relations and to encourage participants to practice those principles each week. Students are required to give two brief speeches each week. I recently completed the course and saw a remarkable transformation in the 25 people who attended. Individuals who mumbled during their first speech won speaking awards by the end. Each semester one of my students completes an internship for the organization in Syracuse and in exchange receives a tuition waiver for the introduction course, which costs $1,400. The students are uniform in their praise.

Other possibilities

Professional certification in various computer applications, such as those provided by Microsoft, Sun, Cisco Systems and Oracle, are already available to part-time students in many universities. Other programs, such as the HIPAA Academy, which provides training in the Health Information Privacy and Accountability Act (HIPAA) and its Administrative and Simplification Act, might also be included. The American Council on Education (ACE) and the National Program on Noncollegiate Sponsored Instruction (National PONSI) list and evaluate formal education courses offered by business, industry, professional associations, labor unions and other noncollegiate organizations.

Many training companies offer services that customers in the business, governmental and nonprofit sectors value highly. Why not make these services available to full-time students at the undergraduate and master's levels? Once colleges and universities create a market for such services, more and more varied training and educational commercial vendors will emerge. Faculty may choose to leave the university and set up their own educational services that they sell to higher educational institutions.

Cost

Outside vendors can deliver courses at well below the cost of traditional faculty. An additional cost saving would result from the flexibility in adding new programs without sinking costs into personnel who could not be shifted. Economies of scale would operate just as they do for classes in which one professor and five teaching assistants (TAs) handle 500 or more students. Even if faculty were willing, training them via outside vendors such as Dale Carnegie would not reduce costs.

Quality

The quality of these programs varies not only by the company providing them, but also by individual trainer. Still, we can assume that the quality of the courses will be at least equal to the quality of those offered by in-house faculty if only because most commercial training firms have systematic evaluation and revision procedures and are required to satisfy the people who hire them.

In addition to high quality of instruction, the courses would at least satisfy students' career needs more directly. With respect to the Dale Carnegie training, for example, employers complain bitterly about college graduates' lack of "people skills." Working well with others is crucial to citizenship and personal development, two important goals of college education,

but traditional liberal arts courses in psychology rarely offer practice in human relations.

Given the applied, practical nature of courses offered by outside vendors, students are likely to be more interested and invested in them. This alone should also increase the quality of learning, according to researchers and practitioners who see student engagement as the most important variable in student learning. Moreover, the practical training provided by private companies could help students develop many of the skills—such as communications, computer applications and human relations— essential for success in college.

> Outside vendors can deliver courses at well below the cost of traditional faculty.

Suggestion 2: Expand opportunities for experiential learning credit in traditional four-year programs.

Traditional four-year programs gradually have been providing more credit for field work and other similar experiences, but not enough to realize the inherent potential for cost-saving and increased educational quality. Degree programs such as the co-op program at Northeastern University give credit through internship and service-learning courses for experienced-based learning. Few traditional four-year university programs have thoroughly integrated real-world experience into their programs, and almost none allows credit related to work experience.

Example

Empire State College of the New York State SUNY system provides a model that traditional four-year colleges could adapt to their needs. Empire State's program lists a series of ways in which prior college-level learning can be used for credit toward a degree that includes transfer credit, examinations, evaluations by ACE and National PONSI, and individualized expert evaluation (called Prior Learning Assessments [PLAs]).

Other possibilities

All continuing education programs in U.S. colleges use this approach. Programs that have very limited residence requirements have been designed for full-time employees. Weekend seminars or weeklong class meetings in the summer are often used to supplement distance learning and independent study.

Cost

Given the limited faculty contact time and the use of overload and part-time faculty to staff these programs, the costs are presumably much lower than for traditional four-year programs. For example, students at Empire State College can acquire up to 30 credits (with an average of eight) through the PLA procedure at a cost to them of $300. A small fee is paid to an assessor to evaluate the claim for credit. Although four-year programs need not be built entirely around this model, semester programs or even courses within a semester that rely on experiences from internship, field work or employment could be delivered at lower cost to the institution.

Quality

Alumni of my program in policy studies at Syracuse University laud the use of experiential credit and encourage use of even more. The quality of these experiential approaches will depend on the competence of the staff and faculty delivering them. The key is having clearly defined and responsibly applied standards—the same key required for quality traditional academic coursework.

Suggestion 3: Give credit for programs run by student services

This section suggests that many student affairs programs on most campuses are an untapped source of potentially credit-bearing experiences. Like the previous section, this section encourages the integration of experiential learning into degree programs. In this case, the experience comes from students' on-campus activities.

Example

At Syracuse, the staff of the Office of Residential Life (ORL) offers a one-credit course titled PAF 121: Leadership Practicum at no cost to the department offering the course. The professional staff had been running a course for years with weekly meetings and a 30-hour retreat complete with readings, community service and papers. Three years ago, the course was offered in my program. Two sections of the course are offered each semester, and about 100 students are served annually.

Other possibilities

The following programs could support credit-bearing courses:

- **Career services.** Staff members from career services now offer a one-credit course to freshmen or sophomores to help them plan their college experience. The goal of the course is to help students understand the skills employers seek and how to use the college years to develop those skills.

- **Student employment**. Students tend to view part-time employment on campus as nothing more than a way of making money. Many supervisors of student employees treat students as day laborers. If student employment were viewed as a program to develop professional competencies, attitudes on both sides would change. Students would take their jobs more seriously, and supervisors would realize that encouraging professional development would yield higher productivity and less aggravation. Course credit—including bi-weekly class meetings, readings and reflection on their work—could be offered.

- **Student activities.** Hundreds of student organizations, both Greek and non-Greek, operate on campus, and student activities offices often provide "training"—usually in the form of one-day conferences or half-day seminars. Organizing student leaders' training programs around a list of

professional competencies would better prepare students for professional careers. Providing course credit would improve the quality of the experiences at a very small additional cost.

- **Residence hall programs.** The example provided above is only one way to generate credit for students using the training staff. Additional programs can be developed using the National Association of College and University Resident Halls (NACURH) to help set guidelines.

- **Athletic programs.** All intercollegiate and intramural athletic programs on campus provide a great opportunity for students to learn the skills that employers want. High on that list are work ethic, physical skills, working with and influencing people, using statistics and solving problems. Courses could be developed around these activities. For example, an applied statistics course in which students in athletic programs analyze the data on their own individual and team performance could be offered. A management course that required the students to apply management theories to the efforts of the coaching staff could be another option.

- **Community service support.** The full potential of the growth of community service, both volunteer and credit-based, over the past decade has yet to be realized in academic programs. Service learning has been touted as a way to drive home the theoretical perspectives of the classroom as well as to develop the citizenship dimensions of students' learning. Credit based on community service could be generated for almost every lower-division course.

Costs

These possibilities would require only design and monitoring activity by faculty as well as some additional funding for staff. Instruction costs already would be included in the budget if existing staff offered the course. If more staff were needed, they could be hired more cheaply than faculty would be.

Quality

Offering credit for student services programs would foster the three goals: career, citizenship and lifelong learning. Enriching the student activities to make them worthy of academic credit and providing powerful experiential education would translate into high-quality instruction to students in the areas they need it most. It would help students engage with their college education and lead to better academic performance. Much would depend on the competence, commitment and integrity of those designing and delivering the instruction. Also, tight administrative oversight would be needed to ensure that credit has the necessary academic content. However, these requirements do not differ from those that should be applied to any university course.

> Offering credit for student services programs would foster the three goals: career, citizenship and lifelong learning.

Suggestion 4: Unbundle university education by providing more credential options to the traditional bachelor's and master's degrees

Although college students may need four years to mature and develop, many of them—especially nontraditional students—need more tailored programs. Creating programs that require fewer than 120 hours could save money.

Example

Many institutions of higher education offer programs in legal assistance. These programs, typically offered through continuing education departments, range from 15 to 26 credits and usually end with receipt of

a certificate rather than a formal degree. Dean Bea Gonzalez of Syracuse University says that continuing education students take a career ladder approach. She calls it "chunking the degree"—allowing students to stop at given stages and still feel satisfied. Eventually, they can attain a bachelor's degree in professional studies, but they can stop at the associate's level or after having attained certificates in a given field if they choose.

Other possibilities

A wide range of certificate options are offered through mid-career and continuing education programs. Traditional degree programs do not offer these useful courses of study, and students pursuing traditional degrees are often blocked if they try to get into these unconventional programs. To illustrate the wasteful cost of ignoring certificates in favor of degrees, consider the development of homeland security programs at various universities. In its August 25, 2004, issue, *USA Today* describes several initiatives, including one at Ohio State University, where "students can get a degree in political science, sociology or computer science with a concentration in homeland security." The program director stated: "In most cases, there is not yet a sufficiently well-developed body of knowledge that would declare [homeland security] to be a legitimate academic specialty." Consequently, students interested specifically in homeland security are required to learn Hobbes and Locke, material not directly pertinent to their future careers.

Cost

Students could save significant amounts of money if universities did not require 120 credit hours at the undergraduate level or offered more focused, tailored programs at the graduate level. Evidence for this can be found in the fact that tuition in continuing education

> The traditional four-year degree has lost its academic focus at most colleges and universities.

programs is usually lower than in traditional programs. In this case, the market produces more for less. Higher education institutions would be financially challenged if a significant number of their students took advantage of unbundled programming. Students would be paying for less and getting more; the institutions would adapt or be transformed.

Quality

The traditional four-year degree has lost its academic focus at most colleges and universities. The proliferation of programs has provided more choices, but as Barry Schwartz pointed out in his January 23, 2004, *Chronicle Review* article, "The Tyranny of Choice," "this freedom comes at a price." Schwartz worries about the psychological price of the system, but the educational price is this essay's concern. A program of 120 hours cannot be coherent, given the fragmented and overspecialized nature of higher education. Such a program is burdened by marginally relevant requirements—courses that students neither want nor need, despite protestations by some faculty members that the 120-hour, broad-based approach is important in developing students' critical-thinking skills.

Lack of coherence is not just a problem for liberal arts students; it also affects those in professional schools. The general education or liberal arts requirements usually constitute the bulk of "non-major" coursework for an undergraduate in a professional school. Unbundling would reduce or eliminate much of that coursework, especially since professional school faculty members frequently find some of the liberal arts courses too diffuse. Liberal arts faculty members also question the narrow content and the quality of professional school curriculum. One also wonders if the numerous specialized requirements of professional school programs, especially those heavily shaped by accrediting bodies, are really necessary.

Suggestion 5: Adapt concurrent enrollment programs so more students can graduate in fewer than four years

Over the past 20 years, a growing number of programs allow students to earn college credit during high school. In 2001, the Education Commission of the States reviewed the various options, dividing the list into dual/concurrent enrollment and other college credit programs such as Advanced Placement, the International Baccalaureate and College Level Examination Program. The commission also listed states' policies toward these programs. According to the most recent figures from the National Association of Concurrent Enrollment Programs (NACEP), about 100 concurrent enrollment partnerships exist in 28 states. Together, these partnerships serve more than 150,000 students in more that 3,000 schools each year. With these programs growing, it is time for universities to take steps to develop fair and comprehensive acceptance programs so that students can complete their college degrees more quickly.

Example

Although many institutions give college credit for coursework taken during high school, few universities work proactively to help students graduate earlier by this means. At Syracuse University, students do not always file their requests for credit before arriving and do not always get a definitive answer from the university in time to plan first-semester courses. Students face serious roadblocks to having credits earned in high school accepted toward college graduation requirements. This tendency to grudgingly give college credit toward degree completion appears to be the norm throughout higher education.

Other possibilities

The problem here is not the lack of other possibilities; rather, it is higher education's lack of coordination and focus that prevents students from reducing substantially the number of credit hours they need. Before they make a commitment to matriculate, students should be able to negotiate which credits will be accepted and which requirements they will need to earn. Negotiating this arrangement up front will allow for better planning and possibly necessitate a shorter stay at the university.

Cost

The charges for these advance-credit courses are usually lower than for college tuition. Colleges could create these programs with little or no additional staff costs. In a November 17, 2004, edition of *Education Week*, Virginia Gov. Mark R. Warner said that his state has "vastly expanded the opportunities for students to earn college credits while still in high school." He notes that an agreement with 62 public and private institutions in Virginia ensures a coherent program and reduces a student's tuition burden by as much as $5,000.

Quality

Faculty members are likely to raise questions about the quality of coursework offered outside their institutions. The concern is legitimate; quality *should* be the concern for all classes, including those offered on their own campuses. NACEP currently is developing quality-control standards that will help allay this concern.

Well-run dual-enrollment programs offer college-level work that goes beyond the standardized testing and limited faculty-training model of Advanced Placement courses. For example, Syracuse University's Project Advance Program is a partnership program that links Syracuse University with secondary schools. Qualified seniors earn Syracuse University credit by attending regular lower-division courses held in their high schools. The courses are taught by local high school teachers who hold adjunct instructor appointments with SU. Project Advance provides in-service training and professional development for high school instructors,

a continuing forum for communication between educators from both the high school and university settings, and extensive ongoing research and evaluation for systematic improvement of instruction. University faculty and Project Advance administrators work directly with high schools to ensure that the SU courses taught in the high schools maintain standards identical to those of sections taught on the SU campus. SU recognizes these courses as regular offerings, and Project Advance students earn SU credit, verified by an official university transcript. The same evaluation instruments are used in the courses, and high school students generally perform as well as students on campus.

A clear and fair approach to recognizing credits earned in high school would enhance the quality of undergraduate education. Incoming freshmen with a large number of credits could enter directly into high-level courses, thus increasing their engagement and allowing them more options. They could also explore career interests and develop career-relevant skills sooner, leaving them more time to develop their capacities for civic engagement and lifelong learning.

Suggestion 6: Expand the use of undergraduate teaching assistants

Many institutions use undergraduate teaching assistants (UTAs) in a variety of capacities. In the mid-1990s at Syracuse University, 38 professors in 58 courses used UTAs. Professors employed these assistants in varying ways, compensating them monetarily or with credit. The systematic use of UTAs would both increase the quality of undergraduate offerings and reduce the money spent on large numbers of graduate students now needed to cover large lower-division courses.

Example

I have been working with UTAs since 1972, first in an introductory international relations course for the political science department and after 1976 in PAF 101: Introduction to the Analysis of Public Policy. Approximately 17 students from each class are selected to assist with a class of 125 students the following semester. The UTAs sign up for a three-credit course and meet three additional hours a week outside the course. The meetings are used for administrative details, to provide training on grading papers and to discuss how to improve the course. UTAs receive a 30-page course manual.

The UTAs perform the following tasks:

- Take attendance without using class time. (Students are placed in groups of about 10, all of whom sit together with their UTA during class.)

- Grade about eight sets of five papers required for the course. (Each paper is double-graded, and students can request a regrade directly from the professor at no risk of a lower grade. About 10 percent request a regrade. UTAs receive extensive training from the professor on how to grade papers.)

- Run workshops during six classes throughout the semester. (These are not discussion sections such as those normally led by graduate students. Rather, they involve highly structured group activities. Small class exercises can be conducted in the lecture because the UTAs can coordinate the group.)

- Conduct surveys on specific parts of the class throughout the semester. (A UTA conducts a survey on each outside speaker who addresses the class.)

- Maintain a Web site and produce a biweekly newsletter for students enrolled in the course.

- Nominate, recruit and assist in the selection of the following semester's UTAs.

- Organize and administer the five-hour community service requirement.

- Write staff reports suggesting changes. (These changes are often implemented the following semester.)

- Suggest new ideas for changing classroom presentations, bringing in speakers, altering assignments and adding supplementary experiences (i.e., outside lectures).

- Keep one office hour a week. (This stipulation means that there are 17 UTA office hours available to students in the class in addition to the professor's six office hours.)

- Provide tutoring and suggest resources for student papers. (Many UTAs have specialized knowledge in a specific policy area far beyond that of the professor.)

Other possibilities

Every introductory course could use undergraduate teaching assistants, as could some upper-division courses.

> Every introductory course could use undergraduate teaching assistants.

Cost

Fewer graduate students would be needed for the traditional work of taking attendance, grading papers, tutoring, conducting exercises or managing community service. Graduate students could be more involved in course design, managing the undergraduates, course evaluation and special enrichment activities; as a result, colleges and students could be getting more of their money's worth. A credit-bearing course for the UTAs offered by the professor who teaches the course could ensure quality performance and enhance UTAs' learning. It would also generate more credits at little additional cost.

The main cost saving would result from reducing the need for teaching assistantships. Fewer graduate students would mean more highly qualified graduate students. Highly qualified graduate students would increase the output and efficiency of doctoral programs. With more graduate students available for research projects, faculty members would be better able to obtain grants and conduct and publish research.

Quality

The aforementioned examples clearly demonstrate that everyone benefits from the use of UTAs. Undergraduates learn more because the instructor can assign written papers instead of multiple-choice examinations for a large class. UTAs are available many hours a week for personal tutorials, at which attendance is required. The course material is evaluated continuously to ensure its clarity to the students. UTAs learn even more. Graduate students take on a more professional role in the development, delivery, design and evaluation of courses. The use of UTAs would also allow departments to be more selective in admitting only the most highly qualified doctoral candidates. As faculty found undergraduates to be junior professionals, they would build relationships that will increase undergraduate engagement and support their research activities. The threats to quality are the same threats to the quality of any course: The commitment, competence and integrity of the faculty members running the course are the determining factors.

Suggestion 7: Adopt an apprenticeship model for all doctoral programs

Doctoral programs are expensive and require substantial subsidies from outside funders and other areas of the university. This section suggests how existing Ph.D. programs can be streamlined by placing graduate students into apprenticeship roles after their first year and using an "up or out" system. A truly capable doctoral student should be relieved of survey

courses and should quickly start research that will lead to the dissertation and scholarly publications. Research seminars and independent studies can facilitate this work.

Example

I designed and offered an apprentice-based doctoral program in international relations and used the same approach with doctoral students in political science at Syracuse University in the early 1970s. The amount of formal coursework was reduced, and credits were offered for seminar and independent study courses designed to produce written products for grants or academic conferences. This highly focused approach ran counter to the trend of requiring basic courses to introduce graduate students to the many subfields of the disciplines. The apprenticeship approach also applied to teaching. Because UTAs were employed in the classroom, graduate students not only had time to focus on their research but also could help design the courses offered to undergraduates. Some taught their own courses, which made them attractive hires.

Other possibilities

I know of no graduate programs that use this approach, despite regular calls on all sides to streamline the process.

Cost

This practice will reduce the costs of doctoral programs by reducing the number of unqualified students entering graduate schools and speeding up their time to graduation. It will make faculty more efficient in both their teaching and research activities. If faculty treated their advanced graduate courses as research seminars on topics of interest to them, those courses could be considered part of their research rather than their teaching load. My faculty colleagues and I successfully did just that.

Quality

This apprenticeship approach yielded significant successes between 1970 and 1976. The program began with 10 students who had been in the pipeline for three years or more and with several who were just beginning their graduate work. Those already in the pipeline finished in 18 months. Many of the new students left after completing their master's degrees because they were either unwilling or unable to become apprentices to the faculty. Those who stayed finished in four years. Because they were not allowed to seek employment unless our faculty were convinced that they would finish their dissertation before their new job started, students were motivated to finish in a timely manner.

The apprentice approach is based on the same pedagogical philosophy that supports most of the suggestions in the paper—learning by doing. The students who went through this process did extremely well after graduating. Two became presidents of the major academic organization in their field, and all who went into teaching earned tenure at their universities. Quality and common sense demand that institutions give doctoral students experience in their academic trade early in their graduate program and graduate them as quickly as possible. A new Ph.D. facing challenges as an assistant professor will learn much more about teaching and research in that role than he or she would by spending the extra time in graduate school.

What it will take

The seven suggestions together represent a multifaceted approach to reducing cost while increasing or at least maintaining the quality of education at four-year universities. Some of the suggestions could also apply to two-year colleges. All will require most faculty members to change the way they approach education, and that stipulation presents the biggest challenge. Professors need to see themselves as more than purveyors of information and techniques. For their best students, they should see themselves as professionals

offering apprenticeships. Their evaluations should become part of the mentoring process. For their wider body of students, universities need to expand beyond direct contact with students by capitalizing on outside vendors, developing experiential learning opportunities and using undergraduate teaching assistants.

The philosophy presented here is that faculty should help students reach their career, citizenship and lifelong learning goals. A list of objectives can be developed for each of these goals. I have compiled a list for the career component in a book, *Ten Things Employers Want You to Learn in College*. Similar lists can be compiled for citizenship and lifelong learning. Faculty members can use the list of learning outcomes to guide their design and management of the educational environment.

Each of the seven suggestions places faculty members in the role of managing the education of their students. By bringing outside vendors and using undergraduate teaching assistants, they are procuring appropriate resources for their students. In expanding the role of experiential learning on and off campus, faculty members are directing their activities and evaluating their performance. In unbundling their education and facilitating the use of concurrent enrollment programs, faculty members are helping students, as clients, satisfy their needs. In adopting an apprenticeship approach to doctoral education, they are taking a flexible and responsible role to help their students learn.

Bringing resources, managing the educational environment and evaluating performance are already identified roles for faculty members. However, most faculty members approach this in the traditional ways: lecturing, discussing and grading tests and assignments. They need to recognize that "teaching is not telling" and that they can provide better education more effectively and at lower cost by looking at their

> Most important, faculty members need to accept the reality that costs need to be contained and quality needs to be increased.

jobs differently. They also need to accept that the practices of continuing education offer much that could be adapted to their traditional academic programs. It would be dishonest to downplay the significant threats inherent in these suggestions—threats not only to the academy's status quo, but also to faculty jobs. Some of these practices, particularly outsourcing and unbundling, would lead to fewer faculty positions and teaching assistantships. Change brings uncertainty and unexpected risks, but university faculty members need to accept the idea of change within their institutions at least as much as many of them call for change outside the academy.

Most important, faculty members need to accept the reality that costs need to be contained and quality needs to be increased. For each of these suggestions, those who find these practices troublesome are likely to raise the argument that quality will suffer and that students will be short-changed. I have tried to show how quality will actually be improved for each example, if only because students will be more engaged. Ultimately, the quality argument comes down to the degree to which those providing the education have the necessary commitment, competence *and* integrity. Examples of high- and low-quality offerings already abound—in both traditional and nontraditional programs. Some faculty members bristle at the idea that they are "workers" who have a responsibility to serve their clients even as they lobby for higher wages, more freedom and less work. Syracuse University Chancellor Nancy Cantor considers the university a "public good." Cutting costs will improve access for low-income students and offer improved quality of education for all students. If that is not for the public good, what is? ◼

Improving quality and reducing costs:

The case for redesign

Carol A. Twigg

Carol A. Twigg is president and CEO of the National Center for Academic Transformation. The center serves as a resource for colleges and universities, providing leadership in how the effective use of information technology can improve student learning while reducing instructional costs. A widely published writer and a sought-after speaker, Twigg is an authority on using information technology to transform teaching and learning in higher education. In 1995, *Newsweek* named her one of the 50 most influential thinkers in the information revolution, and in 2003, she was the recipient of the McGraw Prize in Education. She earned her bachelor's degree from the College of William and Mary and a doctorate in English literature from the State University of New York at Buffalo.

Executive summary

The need to increase access, improve student learning and control or reduce rising costs continues to challenge American higher education. These issues are, of course, interrelated. As tuition costs continue to rise, access is curtailed. However, promises to increase access ring hollow when high percentages of students fail to graduate. The solutions to these challenges are also interrelated. Historically, improving quality or increasing access has meant increasing costs; reducing costs has meant reducing both quality and/or access. To sustain its vitality while serving a growing and increasingly diverse student body, higher education must find a way to resolve the familiar trade-off between cost and quality.

Unlike higher education, most industries have taken advantage of information technology to increase productivity, thus improving the quality of service while reducing costs. The introduction of information technology to the U.S. economy in general—with the notable exceptions of education, health care and law—contributes to the disparity between the general rate of inflation and higher education's cost increases.

Few colleges and universities have begun to fully realize the promise of technology to improve the quality of student learning, increase retention and reduce the costs of instruction. In contrast, the National Center for Academic Transformation (NCAT) has completed a five-year national project, the Program in Course Redesign, which annually involves 50,000 students at 30 institutions. The program has shown how technology can enhance quality *and* reduce cost. Results show improved student learning in 25 of the 30 projects; the remaining five show learning equal to that found in traditional formats. All 30 institutions reduced their costs by 37 percent on average (from 20 percent to 77 percent) and produced a collective annual savings of $3.1 million. Of the 24 that measured retention, 18 showed noticeable increases. Other qualitative outcomes include better student attitudes toward the subject matter and increased student satisfaction with the mode of instruction.

This paper argues that an outmoded, labor-intensive delivery model and outdated assumptions about the relationship between cost and quality are important contributors to the rising cost of higher education. It also argues that improving student learning while reducing instructional costs is possible if we redesign collegiate instruction. The Program in Course Redesign offers persuasive data about how to achieve this goal. In addition to offering a broad solution to the cost/quality tradeoff, the program's redesign methodology offers many specific solutions that all colleges and universities can adapt.

The National Center for Academic Transformation has established a solid record of success that demonstrates that technology can improve student learning while reducing instructional costs. Each participating institution has found that successfully implementing the redesign methodology involves a partnership between faculty members, professional staff and administrators. NCAT's redesign methodology offers a well-considered, practical alternative to the current postsecondary dilemma facing the nation, especially if it is scaled appropriately to each institution. The paper concludes with a number of recommendations for scaling up the solutions offered by the redesign methodology, which could reduce the annual cost of instruction by at least 16 percent.

Introduction

Many people have observed that both the cost and the price of higher education continue to outpace the rate of inflation. As a U.S. House Education and the Workforce Committee report notes, "While some point to state budget cuts or a poor economy as the source of rising tuition, the fact is that college costs have been steadily and relentlessly increasing for more than a decade—even during the '90s economic boom—and that tuition increases have persisted regardless of circumstances and have far outpaced inflation year after year, whether the economy has been stumbling or thriving." The need to increase access, improve student learning and control or reduce rising costs continues to challenge American higher education. These issues are, of course, interrelated. As tuition costs continue to rise, access is curtailed. However, promises to increase access ring hollow when high percentages of students fail to graduate. The solutions to these challenges are also interrelated. Historically, improving quality or increasing access has meant increasing costs; reducing costs has meant reducing both quality and/or access. To sustain its vitality while serving a growing and increasingly diverse student body, higher education must find a way to resolve the familiar trade-off between cost and quality.

The problem is not that higher education has avoided information technology. Indeed, every college and university in the United States is discovering exciting new ways of using technology to enhance teaching and learning and to extend access to new populations of students. For most institutions, however, new technologies represent a large additional expense rather than an investment in increased productivity. Most campuses have simply bolted new technologies onto a fixed plant, a fixed faculty and a fixed notion of classroom instruction. Under these circumstances, technology contributes to the problem of rising costs rather than helping solve it. Moreover, comparative research studies show that most technology-based courses produce learning simply "as good as" their traditional counterparts—in other words, they produce "no significant difference." By and large, colleges and universities have not yet begun to realize the promise of technology to improve the quality of student learning and reduce the costs of instruction.

We at the National Center for Academic Transformation (NCAT) believe that an outmoded, labor-intensive delivery model and outdated assumptions about the relationship between cost and quality are important contributors to the rising cost of higher education. This paper argues that improving student learning while reducing instructional costs is possible with redesigned collegiate instruction. The Program in Course Redesign (PCR) offers persuasive data about how to achieve this goal. In addition to offering a broad solution to the cost/quality tradeoff, the program's redesign methodology offers many specific solutions that all colleges and universities can adapt.

Program in Course Redesign

Supported by an $8.8 million grant from the Pew Charitable Trusts, NCAT created the PCR in April 1999. Formerly housed at Rensselaer Polytechnic Institute, NCAT sought to demonstrate how colleges and universities can redesign their instructional approaches by using technology to enhance quality and save money. Selected from hundreds of applicants in a national competition, 30 institutions received grants of $200,000 each. The grants were awarded in three rounds of 10. The 30 institutions included research universities, comprehensive universities, private colleges and community colleges in all regions of the United States.

The PCR followed a unique three-stage proposal process that required applicants to assess their readiness to participate in the program, develop a plan to improve learning and analyze both the cost of traditional instruction and of new methods of technology-based instruction. A series of invitational workshops taught institutional teams these assessment

and planning methodologies, and NCAT staff consulted individually with prospective grant recipients.

NCAT required each institution to evaluate student performance and achievement rigorously. National experts provided consultation and oversight regarding learning assessment to ensure reliable and valid results. The results were astounding. Twenty-five institutions showed significant increases in student learning, and the remaining five showed learning equal to that associated with traditional formats. Of the 24 that measured retention, 18 showed noticeable increases. Other qualitative outcomes include better student attitudes toward the subject matter and increased student satisfaction with the mode of instruction.

The PCR's basic assessment concern was the degree to which improved learning occurred at reduced cost. Answering this question required comparisons between the learning outcomes of a given course delivered in its traditional and in its redesigned format. Therefore, costs and outcomes were compared for courses in both formats—some held simultaneously and others held in different terms.

Student mastery of course content was the bottom line. Techniques for assessing student learning included comparisons of common final examinations, embedded common questions or items in examinations or assignments and samples of student work (papers, lab assignments, problems). Outcomes were assessed according to agreed-upon common faculty standards for scoring or grading. Assessment also included tracking student records after they completed redesigned courses. Tracking examined a) percentage satisfactorily completing a downstream course; b) percentage continuing to a second course in the discipline; and c) grade performances in later courses.

> **The course-redesign projects focus on large-enrollment, introductory courses, which can affect significant student numbers.**

"Before and after" course costs were analyzed and documented with activity-based costing. NCAT developed a spreadsheet-based course planning tool (CPT) for institutions to do the following: 1) determine all personnel (faculty, adjunct instructors, teaching assistants, peer tutors and professional staff) costs expressed as an hourly rate; 2) identify the tasks associated with preparing and offering the course in a traditional format; 3) determine how much time each person involved in preparing and offering the course in a traditional format spends on each of the tasks; 4) repeat steps one through three for the redesigned format; 5) enter the data in the CPT. The CPT then automatically calculates the cost of both formats and converts the data to a comparable cost-per-student measure. At the beginning of each project, baseline cost data (traditional course costs and projected redesigned course costs) were collected, and actual redesigned course costs were collected at the end.

All 30 institutions reduced costs by an average of 37 percent, with a range of 15 percent to 77 percent. Collectively, the 30 redesigned courses affect more than 50,000 students nationwide and produce a savings of $3.1 million in operating expenses each year.

The course-redesign projects focus on large-enrollment, introductory courses, which can affect significant student numbers and thus generate substantial cost savings. Why focus on such courses? Simply put, undergraduate enrollments in the United States are concentrated heavily in only a few academic areas. In fact, just 25 courses generate about half of community college enrollment and about 35 percent four-year college enrollment.

The topics of these courses are no surprise. They include introductory studies in English, mathematics,

psychology, sociology, economics, accounting, biology and chemistry. Successful completion of these courses is critical for student progress toward a degree. However, their high typical failure rates—15 percent at research universities, 30 percent to 40 percent at comprehensive universities, and 50 percent to 60 percent at community colleges—significantly influence dropout between the first and second year.

The lesson in these figures is simple and compelling: To have a significant impact on large numbers of students, an institution should concentrate on redesigning the 25 most popular courses. By improving a restricted number of large-enrollment prerequisite or introductory courses, a college or university can affect literally every one of its students.

A variety of models

The PCR has produced many different models of how to restructure such courses to improve learning and cut costs. The program has demonstrated that many approaches can achieve positive results in many types of institutions and in many disciplines. The 30 participating institutions and the curricular area of their redesigned courses are the following:

Quantitative (13)

Mathematics: Iowa State University; Northern Arizona University; Rio Salado College; Riverside Community College; University of Alabama; University of Idaho; Virginia Polytechnic Institute and State University.

Statistics: Carnegie Mellon University; Ohio State University; Pennsylvania State University; University of Illinois at Urbana-Champaign.

Computer Programming: Drexel University; University of Buffalo.

Social science (6)

Psychology: California State Polytechnic University-Pomona; University of Dayton; University of New Mexico; University of Southern Maine.

Sociology: Indiana University-Purdue University-Indianapolis.

American government: University of Central Florida.

Humanities (6)

English composition: Brigham Young University; Tallahassee Community College.

Spanish: Portland State University; University of Tennessee-Knoxville.

Fine Arts: Florida Gulf Coast University.

World literature: University of Southern Mississippi.

Science (5)

Biology: Fairfield University; University of Massachusetts-Amherst.

Chemistry: University of Iowa; University of Wisconsin-Madison.

Astronomy: University of Colorado-Boulder.

What do these projects have in common? To one degree or another, all 30 share the following six characteristics:

1. **Whole course redesign.** In each case, the whole course—rather than a single class or section—is redesigned. Faculty members begin by analyzing the time that each person involved in the course spends on each kind of activity. This analysis often reveals duplication of effort. By sharing responsibility for both course development and course delivery, faculty members save substantial time and achieve greater course consistency.

2. **Active learning.** All of the redesign projects make the teaching-learning enterprise significantly more active and learner-centered. Lectures are replaced with a variety of learning resources that move students from a passive, note-taking role to active learning. As one math professor put it, "Students learn math by doing math, not by listening to someone talk about doing math."

3. **Computer-based learning resources.** Instructional software and other Web-based learning resources assume an important role in engaging students with course content. Resources include tutorials, exercises and low-stakes quizzes that provide frequent practice, feedback and reinforcement of course concepts.

4. **Mastery learning.** The redesign projects offer students more flexibility, but the redesigned courses are not self-paced. Student pace and progress are organized by the need to master specific learning objectives—often in a modular format, according to scheduled milestones for completion—rather than by class meeting times.

5. **On-demand help.** An expanded support system enables students to receive assistance from a variety of people. Helping students feel that they are a part of a learning community is critical to persistence, learning and satisfaction. Many projects

replace lecture time with individual and small-group activities that take place in computer labs—staffed by faculty, graduate teaching assistants (GTAs) and/or peer tutors—or online, thus providing students more one-on-one assistance.

6. **Alternative staffing.** Various instructional personnel—in addition to highly trained, expert faculty—constitute the student's support system. Not all tasks associated with a course require a faculty member's time. By replacing expensive labor (faculty and graduate students) with relatively inexpensive labor (undergraduate peer mentors and course assistants) where appropriate, the projects increase the number of hours during which students can get help and free faculty to concentrate on academic rather than logistical tasks.

Strategies and successes for improving student learning

The redesign projects have changed teaching and learning. Lectures are replaced with a wide variety of learning resources, all of which involve more active forms of student learning or more individualized assistance. Moving from an entirely lecture-based format to a student-engagement approach makes learning less dependent on words uttered by instructors and more dependent on active reading, exploring and problem-solving.

Most of the projects show statistically significant improvements in overall student understanding of course content, as measured by assessments that examine key course concepts before and after the course. For example, at the University of Central Florida, students in a traditional political science course posted a 1.6-point improvement on a content examination, whereas students in the redesigned course nearly doubled that improvement, with an average gain of 2.9 points. At Penn State, students in a redesigned course in statistics outperformed traditional

students on a content-knowledge test. Scores for those in the traditional format averaged 60 percent; for those in the redesigned course, the average was 68 percent.

Other projects demonstrate statistically significant improvements in student understanding of course content, as shown in students' performance on commonly administered examinations. At Carnegie Mellon University, for example, student performance in redesigned courses increased by 22.8 percent on tests of skills and concepts. At Florida Gulf Coast University, the average score on a commonly administered standardized test for students in a traditional fine arts course was 72 percent; in the redesigned course, it was 85 percent. At the University of Iowa, students in a redesigned introductory chemistry course outscored traditional students on 29 of 30 items on a common exam. Students in the redesigned course also outperformed the comparison group on two forms of an American Chemical Society standard exam (65.4 vs. 58.4 on the first and 61.0 vs. 52.4 on the second).

In several of the projects, exam questions in the redesigned courses shifted to testing higher-level cognitive skills. At the University of Massachusetts-Amherst, for example, most exam questions in the traditional biology course were designed to test recall of factual material or definitions; only 23 percent required reasoning or problem-solving skills. In the redesigned course, 67 percent of the questions required problem-solving skills. Similar shifts were observed in Fairfield University's redesigned biology exams. At Carnegie Mellon, final exam questions asking students to choose an appropriate statistical test were added in the redesign. These questions had not been posed to students previously because they had been deemed too difficult. Likewise, because midterm scores in a redesigned programming course at Drexel University were significantly higher than those in the traditional version, instructors created a more difficult final exam for subsequent offerings of the redesigned course.

Many of the projects also reported significant improvements in their drop-failure-withdrawal (DFW) rates. At the University of Southern Maine, a smaller percentage of introductory psychology students dropped the redesigned course or received failing grades, thus moving the DFW rate from 28 percent in traditional sections to 19 percent in the redesigned course. At Virginia Tech, the percentage of students achieving grades of D- or better in a redesigned linear algebra course improved from 80 percent to 87 percent. At the University of Idaho, the percentage of students earning a D or F was cut by more than half. Drexel University reduced its DFW rate in computer programming from 49 percent to 38 percent; Florida Gulf Coast from 45 percent to 11 percent in fine arts; Indiana University-Purdue University-Indianapolis from 39 percent to 25 percent in introductory sociology; and the University of New Mexico from 42 percent to 25 percent in psychology.

What techniques have proven most effective in improving student learning and increasing student success? The most prominent techniques are the following:

- **Continuous assessment and feedback.** It is essential to shift the traditional assessment approach in large introductory courses toward continuous assessment—and away from midterm and final examinations only; research consistently has proven that doing so enhances learning. Many of the redesigned courses include computer-based assessments that give students instantaneous feedback on their performances and enable repeated practice.

  Regular quizzes on assigned readings and homework probe students' preparedness and conceptual understanding. These low-stakes quizzes motivate students to keep on top of the course material, structure how they study and encourage them to spend more time on task. Online quizzing encourages a "do it until you get

it right" approach; students are allowed to take quizzes as many times as they want to until they master the material. Students receive detailed diagnostic feedback that points out why an incorrect response is inappropriate and directs them to material that needs to be reviewed.

Faculty who teach the redesigned courses use quizzes from commercial sources as well as their own. Iowa, for example, heavily relies on *ChemSkillBuilder Online*, a homework software program that helps students practice problem-solving in an active learning environment. At the University of Tennessee-Knoxville and Portland State University, Spanish grammar presentation, grammar drills, listening comprehension and reading comprehension exercises are delivered online, allowing class interaction to focus on student-to-student oral communication. The electronic activities provide consistent, automated grading across sections and instant feedback when students are concentrating on the task.

Quizzes also provide powerful formative feedback to faculty members, who therefore quickly can detect areas in which students are not grasping key concepts. This feature enables timely corrective intervention. Because students must complete quizzes before class, they are better prepared for higher-level activities when they arrive. Consequently, the instructor's role shifts from introducing basic material to reviewing and expanding what students already have been doing.

- **Increased interaction between students.** Many redesign projects use the Internet's ability to support useful and convenient opportunities for student discussion. Students in large lecture classes tend to be passive recipients of information, and class size inhibits student-

to-student interaction. Through smaller online discussion forums, students can participate actively. The University of Central Florida and Indiana University-Purdue University-Indianapolis have created groups such as these for their redesigned American government and introductory sociology courses. Students benefit from participating in the informal learning communities, and software allows instructors to monitor the frequency and quality of student contributions to these discussions more readily and carefully than would be the case in a crowded classroom.

At Florida Gulf Coast, fine arts students complete online analyses of sample short essays in preparation for writing their own short essays. Working in peer-learning teams of six students each, students determine the relative merits and weaknesses of each essay and explain why. The online discussions increase interaction between students and develop their critical thinking skills. At Drexel, a dedicated computer laboratory facilitates group work, allowing students to project shared work and annotations onto white board "wallpaper." Groups mix students with different levels of previous programming experience, thus providing novice students with help in overcoming the initial obstacles to learning programming. The more experienced students can demonstrate the computer and/or software tools to the less experienced in their groups, preventing the latter from falling behind.

- **Individualized, on-demand support.** A support system, available around the clock, enables students to receive help from a variety of sources. Helping students feel part of a learning community is critical to persistence, learning and satisfaction. Active mentorship of this kind can come from a

> Many redesign projects use the Internet's ability to support useful and convenient opportunities for student discussion.

variety of sources, thus allowing the student to interact with the person who can provide the best help for his or her specific problem.

Tallahassee Community College (TCC) English composition students submit rough drafts to tutors at SMARTHINKING, a commercial online tutoring service, and/or to TCC e-responders. These "round-the-clock" services provide students with prompt, constructive feedback on writing assignments. The fast feedback and online assistance allow students to make appropriate changes in their drafts and thus improve their writing. Ohio State has established a help room that allows statistics students to collaborate on difficult problems or concepts. The help room is staffed with faculty members, graduate teaching assistants (GTAs) and adjunct instructors who hold their office hours there. This arrangement makes help available to students throughout the day.

Rather than supplementing class time with help, many of the redesigned courses replace lecture time with individual and small-group activities in computer labs staffed by faculty, GTAs and/or peer tutors. In several instances, increased lab hours have provided students access to further one-on-one assistance. Virginia Tech and the universities of Alabama and Idaho have moved away from the norm of three contact hours per week and have significantly expanded the amount of instructional assistance available to students. Virginia Tech's Math Emporium is open 24 hours a day, seven days a week; Alabama's Math Technology Learning Center (MTLC) is open 71 hours per week; and Idaho's Polya center is open 86 hours per week.

- **Online tutorials.** In redesigned courses, instructional software and other Web-based resources that support greater student engagement with the material replace standard presentation formats. Such resources may include interactive tutorials and exercises that give students needed practice, computerized or digitally recorded presentations and demonstrations, reading materials developed by instructors or in assigned textbooks, examples and exercises in the student's field of interest, links to other relevant online materials and individual and group laboratory assignments.

Some institutions create their own materials; others use materials available from commercial sources. Virginia Tech uses a variety of Web-based course-delivery techniques, such as tutorials, streaming video lectures and lecture notes as tools for presenting materials in a linear algebra course. Consisting of concrete exercises with solutions explained through built-in video clips, such tutorials are available to students from home or at a campus lab. The University of Wisconsin-Madison has produced more than 37 Web-based chemistry instructional modules. Each module leads a student through a particular topic in six to 10 interactive pages. When the student completes the tutorial, a set of debriefing questions tests whether the student has mastered the module's content. Students especially like the ability to link directly from a difficult problem to a tutorial that helps them learn the concepts needed to solve it.

The universities of Alabama and Idaho, Northern Arizona University and Riverside Community College base their redesigned mathematics courses on *MyMathLab*, a commercial software package. Commercial software allows institutions to avoid spending on software development and to direct all of their resources toward supporting student learning. Using instructional software allows much

> Rather than supplementing class time with help, many of the redesigned courses replace lecture time with individual and small-group activities in computer labs staffed by faculty, GTAs and/or peer tutors.

of the time previously spent on instruction about math concepts to be transferred to the technology and eliminates lecture time previously used to review homework. The software supports verbal, visual and discovery-based learning styles and can be reached at any time from home or a computer lab. *MyMathLab* allows instructors to see what work students are actually doing and to easily monitor their progress.

- **Undergraduate learning assistants (ULAs).** Several universities are employing ULAs in lieu of GTAs. They have found that ULAs better assist their peers because of their understanding of the course content, superior communication skills, and awareness—based on their own recent experience—of the many misconceptions that undergraduates often hold. At both Idaho and the University of Colorado-Boulder, course faculty members meet weekly with the ULAs to detail what is working and where students are struggling. Feedback from these weekly meetings gives the instructors a much better sense of the class as a whole and of the individual students than would otherwise be possible with classes of more than 200 students.

- **Structural supports that ensure student engagement and progress.** Each redesigned model adds flexibility in the times and places of student engagement with the course. However, this flexibility does not mean that the redesign projects are self-paced. Student pace and progress are organized by requiring students to master specific learning objectives—often in a modular format, according to scheduled milestones for completion—rather than by class meeting times. Although some institutions initially conceived of their redesigned courses as self-paced, they quickly

> Although some institutions initially conceived of their redesigned courses as self-paced, they quickly discovered that students need structure.

discovered that students need structure—especially first-year students and especially in disciplines that may be required rather than chosen. Most students simply will not succeed in a totally self-paced environment. Students need a concrete learning plan with specific mastery components and milestones of achievement, especially in more flexible learning environments.

To ensure that students spend sufficient time on task, the universities of Alabama and Idaho and Riverside Community College require students to spend a minimum amount of time in their learning labs and to attend group meetings. Despite these attendance requirements, some students do not spend enough time in the lab to meet learning objectives. Technology helps remedy this problem. At Alabama, for example, student hours are tabulated weekly to ensure that students invest adequate time in the course. An automated e-mail system is used to reward students who are meeting requirements and to encourage those who are falling behind. In response to student requests for more structure, the Idaho team created a weekly task list, a step-by-step breakdown of the week's assignments that shows the student precisely where to find the information that pertains to each problem. Instructors can use the task list to help each student devise a detailed study plan for the upcoming week. The task lists are Web-based, with links to all of the necessary online lectures and to hints and other supplemental material.

People who are knowledgeable about proven pedagogies will find nothing surprising in the aforementioned list. Among the well-accepted *Seven Principles for Good Practice in Undergraduate Education*, developed by Arthur W. Chickering and Zelda F. Gamson in 1987, are such items as "encourage

active learning," "give prompt feedback," "encourage cooperation among students" and "emphasize time on task." Good pedagogy in itself has nothing to do with technology, and higher education has known about good pedagogy for years. The significance of the redesigned courses is that faculty members incorporated good pedagogical practice into courses *with very large numbers of students*—a task that would have been impossible without technology.

In the traditional general chemistry course at the University of Iowa, for example, four GTAs previously were responsible for grading more than 16,000 homework assignments each term. Because of the many assignments, GTAs could only spot-grade and return a composite score to students. By automating the homework process through redesign, every problem is graded, and students receive specific feedback on their performance. This process leads to more time on task and to higher levels of learning. Moreover, the GTAs are freed to perform other duties. Applying technology is not beneficial without good pedagogy. However, technology is essential to scale good pedagogical practice to large numbers of students.

Strategies and successes for reducing instructional costs

A variety of ways exist to reduce instructional costs. Thus, a variety of strategies for redesign also exist, depending on institutional circumstances. For instance, an institution may want to maintain enrollment while reducing the total amount of resources devoted to the course. By using technology effectively and engaging faculty members only where their expertise is essential, an institution can decrease costs per student without affecting enrollment. This approach makes sense when student demand for the course is relatively stable.

However, if an institution is growing or has more demand than it can meet through existing strategies, it may seek to maintain the same level of investment

while serving more students. Many institutions cannot meet increased demand for particular subjects such as Spanish or information technology because of a shortage of faculty. Redesign allows them to increase the number of students in such courses without changing associated costs. The University of Tennessee-Knoxville, for example, has increased by one-third the number of students served by the same instructional staff in introductory Spanish.

Another way to reduce costs is to minimize course repetitions due to failure or withdrawal, so that the overall number of students enrolled each term and the required number of sections (and the faculty members to teach them) are reduced. At many community colleges, for example, students take 2.5 tries, on average, to pass introductory math courses. Moving students more quickly through introductory classes will generate considerable savings—both in terms of institutional resources and student time and tuition.

As noted earlier, 18 of the 24 projects that measured retention have reported a noticeable decrease in DFW rates. To illustrate how much can be saved, the universities of Central Florida and Iowa have calculated the savings resulting from increases in course retention. In its American government course, the University of Central Florida increased retention by 7 percent. Applying this rate to 25 redesigned sections results in a reduction of one course section—a savings of $28,064 each time the course is offered. Iowa's reduction in its DFW rate from 24.6 percent to 13.1 percent has meant that 90 students per semester need not repeat the course. These students constitute three discussion sections and four laboratory sections. The personnel needed to cover these sections equates to 1.5 GTAs who are no longer necessary—a savings of $7,022. Not surprisingly, most of the redesigned courses attempt to reduce course repetitions while saving resources from one of the other two approaches.

What are the most effective cost-reduction techniques used by the redesigned projects? Because the major

cost item in instruction is personnel, reducing the time that faculty and other instructional personnel invest in the course and transferring some of these tasks to technology-assisted activities is the key strategy. Some of the more predominant cost-reduction techniques include the following:

- **Online course-management systems:** Course-management systems—software packages designed to help faculty members transfer course content to an online environment and assist them in administering various aspects of course delivery—play a central role in most of the redesigned courses. Some projects use commercial products such as WebCT and Blackboard; others use homegrown systems created centrally for campus-wide use or specifically for the redesigned course. Still others use instructional software that includes an integrated course-management system. Sophisticated course-management software packages enable faculty members to monitor student progress and performance, track their time on task and intervene on an individualized basis when necessary.

Course-management systems can automatically generate many kinds of tailored messages that provide needed information to students. They can communicate automatically with students to suggest additional activities based on homework and quiz performance or to encourage greater participation in online discussions. Using course-management systems radically reduces the amount of time that faculty members typically spend on nonacademic tasks, such as calculating and recording grades, photocopying course materials, posting changes in schedules and course syllabi and sending out special announcements to students. The course-management systems also preserve syllabi, assignments and examinations so that they can be reused in later terms.

> The course-management systems preserve syllabi, assignments and examinations so that they can be reused in later terms.

- **Automated assessment of exercises, quizzes and tests.** Automated grading of homework exercises and problems, of low-stakes quizzes and of examinations for subjects that can be assessed through standardized formats not only increases the level of student feedback but also offloads these rote activities from faculty members and other instructional personnel. Some institutions use the quizzing features of commercial products such as WebCT. Others use specially developed grading systems such as Mallard at the University of Illinois. Still others take advantage of the online test banks available from textbook publishers.

Online quizzing sharply reduces the amount of time instructors need to spend on the laborious process of preparing quizzes, grading them and recording the results. Automated testing systems that contain large numbers of questions in a database format enable individualized tests to be generated easily and then quickly graded and returned.

- **Online tutorials.** Modular tutorials lead a student through a particular topic presented through interactive Web- or CD-ROM-based materials. When students have completed the tutorial, they are presented questions that test whether they have mastered the content of the module. Virginia Tech's online linear algebra course delivery has reduced teaching staff radically. Individual faculty members are no longer required to duplicate content. Interactive tutorials can replace part—and, in some cases, all—of the "teaching" portions of the course. Similarly, at Riverside Community College, lecture time has been reduced from four to two hours per week. Class meetings have been reorganized and targeted to topics that students find particularly difficult. Faculty members spend more time interacting with students about questions and problems rather than repeating math concepts.

Access to Web-based resources has reduced labor costs at Tallahassee Community College by decreasing the amount of time faculty members devote to diagnostics, lecture preparation, grammar instruction, progress monitoring, grading and class announcements. Faculty logs kept during the Spring 2003 semester indicate a 33 percent decrease in time spent on course activities associated with these tasks.

At Iowa State, salary savings in the redesigned course are directly attributable to online instruction and testing. Because instructors do not meet students in the classroom and do not need to design several exams per term, each instructor can handle between 500 and 600 students, rather than 150 in the traditional format.

- **Shared resources.** When an entire course (or more than one section of a course) is redesigned, faculty must begin by analyzing the time each person involved in the course spends doing each activity. This highly specific task analysis often uncovers instances of duplicated effort. This discovery can lead to more efficient shared approaches to course development. The time that individual faculty members spend developing and revising course materials and preparing for classes can be reduced considerably by eliminating such duplications.

For example, Penn State has constructed an easy-to-navigate Web site for its introductory statistics course. The site contains not only material on managing the course but also a large number of student aids and resources, including solutions to problems, study guides, supplemental reading materials for topics not otherwise treated in the text and student self-assessment activities. Putting assignments, quizzes, exams and other course materials on a community Web site can save considerable instructional time because instructors share responsibility for improving and updating the materials, thus reducing each individual faculty member's workload.

Another benefit of sharing course resources is the opportunity for continuous improvement of those resources. During each phase of implementation, redesign teams can modify learning activities based on what works well and what does not. Student feedback on the clarity and number of assignments and on the need for better explanations and models provides multiple indicators of what needs to change. The online environment permits flexible and timely design and expansion where needed.

In addition, many teams have found that once the course resources have been developed, only minimal additional labor has been necessary to improve and update the course content. The shared course materials not only save the original instructors' preparation and maintenance time, they also allow new instructors to benefit from previous course preparation and refinements.

- **Staffing substitutions.** Constructing a support system that comprises various kinds of instructional personnel allows the institution to intervene appropriately for particular kinds of student problems. Employing ULAs in lieu of GTAs, for example, not only improves the quality of assistance available to students, it also saves money. By replacing expensive faculty members and graduate students with relatively inexpensive labor, an institution can increase the person-hours devoted to the course while cutting costs.

At Alabama, the initial redesign plan was to staff the Math Technology Learning Center primarily

> **By replacing expensive faculty members and graduate students with relatively inexpensive labor, an institution can increase the person-hours devoted to the course while cutting costs.**

with instructors and to use graduate students and upper-level undergraduate students for tutorial support. In the first semester, however, undergraduate students proved equally effective as the graduate students in providing tutorial support, thus allowing Alabama to replace the graduate students with less expensive undergraduate labor. Data on student use of instructional staff collected during the first semester of operation were refined each semester. That data suggested that Alabama could reduce the number of instructors and undergraduate tutors assigned to the learning center by matching staffing levels to trends in student use.

Because the course is offered entirely online, it uses no classroom space.

Another solution, implemented by Rio Salado College, is to employ a "course assistant" to address the many nonacademic questions that arise as any course is delivered—questions that can characterize up to 90 percent of staff interactions with students. This frees the instructor to handle more students and to concentrate on academic interactions rather than logistics.

Only full-time faculty teach Florida Gulf Coast's redesigned course. However, a new role—the preceptor—was created to support faculty members. Preceptors interact with students via e-mail to monitor their progress, lead online discussions and grade critical analysis essays. Each preceptor works with 10 peer learning teams, a total of 60 students. Hiring a preceptor at a rate of $1,800 per 60 students was more cost-effective than using adjunct instructors, who were paid $2,200 to teach 30-student sections. This approach has allowed Florida Gulf Coast to accommodate ongoing enrollment growth at a reduced per-student cost.

- **Reduced space requirements.** Using the Web to deliver particular parts of a course enables institutions to use classroom space more efficiently.

Because one of the goals of its redesign was to reduce the need for rented space, the University of Central Florida delivers portions of its American government course online. Two or three course sections can be scheduled in the same classroom where only one could be scheduled before.

Delivering parts of Portland State University's Spanish course online saves significant space on its urban campus—an especially important consideration because of its rapidly increasing enrollment. Online discussions in Spanish allow practice beyond the classroom while maintaining student-to-student contact and instructional supervision. Likewise, Florida Gulf Coast's redesign helps the university manage a space crisis caused by rapidly growing enrollment. Because the course is offered entirely online, it uses no classroom space.

- **Consolidation of sections and courses.** Redesigning the whole course rather than a single section creates significant cost savings because multiple sections can be consolidated. In the emporium model used at the universities of Alabama and Idaho, multiple sections of a course are combined into one large class, replacing duplicate lectures, homework and tests with collaboratively developed online materials. Alabama combined 44 intermediate algebra sections of about 35 students each into one 1,500-student section; Idaho moved two pre-calculus courses—previously organized in 60 sections of approximately 40 students each—into its Polya learning center, treating each course as a single entity. By teaching multiple math courses in one facility, each university can share instructional person-power, thus cutting teaching costs.

At Fairfield, the redesigned biology course consolidated four sections into one, reducing the faculty by almost half. This change used technology

to create dynamic learning environments to compensate for the larger class size. Because of the success of the chemistry redesign at Iowa, the department could combine the general chemistry sequence with a separate chemical sciences sequence, previously required by the College of Engineering. The institution thereby decreased the number of faculty members needed to teach those courses. Now the special sequence is no longer needed, and 1.5 faculty members per term are available for other assignments.

With regard to cost savings, the redesign methodology is an unqualified success. Redesigned courses are reducing costs by an average of 37 percent, with specific savings ranging from 15 percent to 77 percent. Collectively, the 30 courses initially projected annual savings of about $3.6 million. Final results show that the 30 courses annually saved about $3.1 million. Some saved more than they expected; others less.

Producing a savings in excess of $3 million for 30 courses is impressive, but the real savings produced by the redesigns is actually even higher. The $3 million figure is calculated by multiplying the differences in the per-student costs for the traditional and redesigned formats by the number of students enrolled in the course. However, the cost-per-student calculation does not include the following important considerations:

- **Savings accrued through increased retention.** Eighteen of the 30 projects have increased retention. Only the University of Central Florida's savings accrued through increased retention, which were used to demonstrate the calculation, are counted in the $3 million figure.

- **Savings in campus space.** Twenty-four of the 30 projects have substantial space savings because of

reduced seat time. Only the University of Central Florida's space savings, which were used to demonstrate the calculation, are counted in the $3 million figure.

- **Serendipitous savings.** Unplanned savings also were not counted. For example, at Fairfield University, laboratory costs in general biology decreased by nearly 73 percent (from $2,470 to $680) by replacing dissection labs with computer-based activities. By putting course materials online, the University of Tennessee-Knoxville has reduced the cost of students' materials. In the traditional format, students paid a total of $182 for the textbook, a CD-ROM, two workbooks and audio CDs. In the redesigned course, students pay only $96 for a customized version of the textbook and an access card for the online material. At Iowa, the combination of the general chemistry sequence with a separate chemical sciences sequence, described earlier, produced an additional cost savings of $25,959 (1.5 faculty members per semester) that is not included in Iowa's cost-per-student calculation.

> **Redesigned courses are reducing costs by an average of 37 percent, with specific savings ranging from 15 percent to 77 percent.**

Perhaps most important, the cost-per-student savings calculation includes only one year of operating expenses. A more accurate picture would calculate the savings over the life of the course. Because introductory courses have a relatively long shelf life—somewhere between five and 10 years, on average—calculating the savings over the same period would mean that the total savings for the 30 courses is, in fact, *five to ten times higher* than reported.

The discrepancies in savings between the institutions directly relate to the different design decisions made by the project teams, especially with respect to how to allocate expensive faculty members. Redesigns with

lower savings tended to redirect, not reallocate, saved faculty time. They keep the total amount of faculty time devoted to the course constant but change how faculty members actually spend their time (for example, lecturing rather than interacting with students).

Other institutions substantially reduced the time that non-faculty personnel, such as GTAs, devoted to the course but maintained the amount of regular faculty time. Such decisions minimize total cost savings. By radically reallocating faculty time to other courses and activities, in contrast, Virginia Tech saved 77 percent in its redesigned linear algebra course—the most substantial cost savings among the 30 projects. Most of the other projects could have saved more without reducing quality if they had made different design decisions.

By using technology-based approaches and learner-centered principles to redesign their courses, these 30 institutions have shown a way out of higher education's historical tradeoff between cost and quality. Some of them rely on asynchronous, self-paced learning modes; others use traditional, synchronous classroom settings but with reduced student/faculty contact hours. Both approaches start with a careful look at how best to deploy all available instructional resources to achieve the desired learning objectives. Questioning the current credit-for-contact paradigm of instruction and thinking systematically about how to produce more effective and efficient learning are fundamental conditions for success.

What's next? Scaling up

The National Center for Academic Transformation has established a solid track record of success in using technology to improve student learning while reducing instructional costs. Each participating institution has found that the redesign depends on a partnership among faculty members, professional staff and administrators. If it is scaled appropriately, NCAT's redesign methodology offers a well-considered, practical alternative to the current postsecondary dilemma facing the nation.

However, not every redesign project needs a grant of $200,000 as NCAT provided in the Pew-funded PCR. NCAT is currently working with the University of Hawaii system and the Ohio Learning Network to create statewide redesign programs. In each case, the sponsors are offering incentive grants in the $40,000 range. NCAT is also managing a new program, the Roadmap to Redesign, with support from the Fund for the Improvement of Postsecondary Education (FIPSE) to demonstrate how to redesign large-enrollment courses without providing direct grants. Twenty-two new redesign projects are under way. Each relies on a combination of internal resources and technical support from NCAT.

Can NCAT's redesign methodology be applied to parts of the curriculum other than the top 25 courses? Absolutely. Any course that is taught by more than one faculty member is a potential target for redesign. The University of Hawaii-Manoa, for example, recently analyzed its campus enrollment patterns and found more than 120 courses with enrollments exceeding 100 students and taught by more than one faculty member. Redesigning these courses would affect 34,534 students. Any of these courses could improve learning and reduce cost with NCAT's redesign methodology.

Even courses taught by single faculty members can benefit from many of the redesign approaches. Some of the automation techniques and differentiated personnel strategies discussed earlier, for example, would enable faculty members to increase their course loads without increasing their workloads. Employing a course assistant to manage the nonacademic aspects of courses—with or without the addition of instructional software, where available—would allow each faculty

member to teach an additional course. Applying those same strategies would also permit an increased class size in high-demand, bottleneck courses—again, without increasing faculty workload.

If all institutions of higher education in the United States adopted NCAT's methodology to redesign their top 25 courses, the cost of instruction would be reduced *annually* by approximately 16 percent—while improving student learning and retention.

That figure was calculated in the following manner:

- Fifty percent of community college enrollments and 35 percent of four-year enrollments are in the top 25 courses.

- Half of all higher education enrollment is at community colleges, and half is at four-year institutions.

- Given the proportion of two-year vs. four-year colleges in the U.S., 42.5 percent of all higher education enrollments are in the top 25 courses.

- The average cost reduction of the 30 projects that use NCAT's redesign methodology is 37 percent.

- Thirty-seven percent of 42.5 percent is 16 percent.

Arriving at an exact dollar value of the savings is difficult because estimates of total higher education expenditures—and the "Education and General" portion of those expenditures (those that support an institution's primary missions: instruction, research and public service)—seem to vary, depending on the source.

One way of estimating the impact of all higher education spending is the following:

- The National Center for Education Statistics (NCES) says that total higher education expenditures are 2.3 percent of the U.S. gross domestic product (GDP), which was about $10 trillion in 2002.

- If 2.3 percent of the U.S. GDP is spent on higher education, total higher education expenditures in the U.S. equal $230 billion.

- If the portion devoted to instruction averages 35 percent, the cost of instruction is $80.5 billion.

- Sixteen percent of $80.5 billion is $12.9 billion per year.

- $12.9 billion is 5.6 percent of the overall cost of higher education.

Whatever the right number, as Everett Dirksen once observed about the federal budget, "A billion here, a billion there, and first thing you know you're talking about real money."

What should those concerned about the future affordability of higher education—particularly those in leadership positions—do with the knowledge that they *can* reduce costs and improve student learning by redesigning traditional methods of instruction? First, we need to change the national conversation about what is possible. Once we break the higher quality/more money connection, we can unleash the creative energies of hundreds—indeed thousands—of faculty, professional staff and administrators in higher education to work on redesigning courses. Second, we need to establish redesign programs in states, in higher education systems, in community college districts and in institutions to provide a framework and incentives for institutions to begin the process. Third, we need to build incentives into the ways in which we fund higher education—at the national, state and local levels—to accelerate an ongoing redesign process. This new process must emphasize the importance of measuring learning outcomes and instructional costs, reward those who make constructive changes and penalize those who do not.

Perhaps the most significant contributor to the success of the PCR has been NCAT's effort to teach institutions

its redesign methodology, especially its rigorous approach to understanding cost savings. Faculty members and administrators rarely understand the full instructional costs of a course, especially the personnel costs that are often viewed as "sunk." Clarifying these costs clarifies the framework for achieving savings with technology. Faculty members and administrators involved with the PCR have repeatedly indicated that learning the methodology is central to the effectiveness of the process, yet once it is mastered, the methodology is easily transferable to other courses and disciplines. An initial partnership with NCAT can allow states, systems, districts and individual institutions independently to support this process on an ongoing basis.

The biggest challenge higher education faces in the coming decade is providing a cost-effective, high-quality education for all Americans who can benefit. As Russ Edgerton, president emeritus of the American Association of Higher Education, has said, "For many Americans, what is at stake is nothing less than the continued viability of the American dream."

The solution is *not* to throw money at the problem. The solution is to work together to rethink the ways we teach and students learn. Higher education has traditionally assumed that high quality means low student-faculty ratios and that large lecture-presentation techniques are the only low-cost alternatives. But course redesign using technology-based, learner-centered principles can offer us a way out of its historical trade-off between cost and quality. By building on those principles, we can create a 21st-century higher education system that will serve our nation well. ▪

Shared solutions:
The Kansas perspective

Lana Oleen

Lana Oleen served 16 years in the Kansas Senate, acting as majority leader from 2000 to 2004. During her tenure, she chaired and served as a committee member of the Legislative Education Planning Committee, where several of the initiatives discussed in the following essay were developed and passed into law. Oleen also has served as chair of the National Conference of State Legislatures Standing Committees and of the Midwestern Higher Education Compact. She currently chairs the audit committee of the National Board of Professional Teaching Standards. She earned her bachelor's and master's degrees from Emporia State University and is a Kansas Master Teacher.

Debra Hollon

Debra K. Hollon is a senior fiscal analyst with the Kansas Legislative Research Department, the nonpartisan agency that provides research, policy and fiscal analysis for the Kansas legislature. Hollon has been with the agency since 1998. Her duties include the review of the state's postsecondary budgets, including the institutions under the authority of the Kansas Board of Regents. She also serves as staff to the Legislative Educational Planning Committee, which oversees postsecondary education in Kansas. Hollon earned a bachelor's degree from Indiana State University and an MBA from the Owen Graduate School of Management at Vanderbilt University. Before moving to Kansas, she worked for the Legislative Services Agency of the Indiana General Assembly.

Diane Lindeman

Diane Lindeman is director of student financial assistance for the Kansas Board of Regents. She holds a bachelor's degree in secondary education, a master's degree in counseling psychology and is studying for a master's degree in public administration—all from the University of Kansas. Lindeman has more than 20 years of higher education student service experience. Before joining the staff of the Board of Regents, she was director of admissions at the University of Kansas School of Law, associate director of student financial aid at Baker University, and served as assistant director of student financial aid and of admissions at the University of Kansas.

Executive summary

The State of Kansas has collaborated with other stakeholders for many years to combat problems in higher education. Original collaborative efforts, such as in recruitment and retention of medical professionals, fostered a cooperative mindset that has broadened efforts to increase student access despite the rising costs of higher education. Kansas has developed relationships with other states, local communities, private businesses and its own state agencies.

Kansas and Missouri have negotiated a reciprocal tuition agreement to address shortfalls in educational resources in each state. Kansas residents enroll in the University of Missouri-Kansas City School of Dentistry and the University of Missouri-St. Louis School of Optometry at the Missouri resident tuition rates. In exchange, Missouri residents pay Kansas resident tuition rates to attend the architecture programs at the University of Kansas and Kansas State University. Kansas purchased seats for its residents at optometry institutions in Tennessee and Oklahoma. Students pay the resident tuition, and the State of Kansas pays the difference between resident and out-of-state tuition. Moreover, Kansas' membership in the Midwest Higher Education Compact provides Kansas students with discounted tuition rates at participating public and private universities in other member states.

The Kansas Board of Regents has developed relationships with other state agencies to coordinate information about student assistance and other programs. The National Guard Tuition Assistance Program provides members with assistance up to 100 percent of tuition and fees if they meet certain criteria and commit to a continuation of Guard service. The Foster Care Tuition Waiver Program waives tuition and fees for students who have been in the state's foster care system. Finally, concurrent enrollment allows students to take college-level courses for college credit while they are still in high school. This program allows the student to graduate from college in less time than would be possible otherwise.

Collaborations between the state and local entities and private businesses also have been developed. For example, the Nursing Service Scholarship Program provides a scholarship to students enrolled in nursing programs. Students must have a sponsor that pays a portion of the scholarship. In return, they then commit to working at the sponsoring facility upon graduation. The Kansas Career Work Study Program provides postsecondary students with vital career-related employment; the educational institution and the business each pay a portion of the student's wages.

These collaborative efforts, along with two recent access initiatives, have allowed Kansas to implement a variety of programs to reduce the cost of higher education for its students. As the economy continues to improve, additional efforts will be made to provide access and affordability for students seeking higher education in Kansas.

Introduction

In *Collision Course: Rising College Costs Threaten America's Future and Require Shared Solutions*, Robert Dickeson states, "Tackling and surmounting this complex issue will require efforts undertaken by many parties working in a common direction." The State of Kansas has taken just such a collaborative approach, working with other stakeholders to combat problems in higher education. Original collaborative efforts, such as recruitment and retention of medical professionals, fostered a cooperative mindset that has broadened student access despite the rising costs of higher education.

Two other student assistance programs, the Nursing Service Scholarship and the Dental Program, have existed for approximately 15 years. These were designed primarily to address the need for medical professionals in rural areas of Kansas. The programs reduce—and in some cases eliminate—cost to students. More recent programs, such as the National Guard Tuition Assistance Program and the Foster Care Tuition Waiver Program, were implemented solely to assist more students with higher education expenses.

Collaboration among several parties was essential to these programs' success. Cooperation was required not only among state agencies but also with other states, the private sector and other local entities. These relationships have helped Kansas increase student access to higher education and cut the associated costs.

Collaboration with other states

Kansas, like many other states, struggles to recruit and retain medical professionals for its rural locations. The lack of dental or optometry schools in the state complicates the problem; Kansas could not "grow its own." Kansas' solution therefore required options for professional education in other states.

Reciprocity in Dental Agreement and Optometry Service Program

Whereas Kansas lacks a dental or optometry school, Missouri lacks a public school of architecture. The two states have negotiated a reciprocal tuition agreement to use existing resources rather than take the costly step of developing additional programs themselves. The agreement allows 80 Kansas residents to enroll in the University of Missouri-Kansas City (UMKC) School of Dentistry and 20 Kansas residents to enroll in the University of Missouri-St. Louis (UMSL) School of Optometry at Missouri resident tuition rates. In exchange, 491 Missouri residents pay Kansas resident tuition rates at the University of Kansas School of Architecture and Urban Design and the Kansas State University College of Architecture, Planning and Design. (The apparent imbalance in the number of students reflects the differing costs at a dental or optometry school in comparison to the costs of an architecture school.)

The agreement allows students to attend the respective institutions for thousands of dollars less than they would have paid otherwise. The discounted tuition often is the deciding factor in career choices. Over the last 10 years, the enrollment of Kansas residents in the dental program at UMKC has remained relatively steady at between 70 and 80 students each year.

The table on the following page notes the differences in resident and nonresident tuition at the four institutions for Fall 2004.

Kansas also actually purchased seats for its residents in optometry programs in Tennessee and Oklahoma. A student pays the resident tuition, and the State of Kansas pays the difference between resident and out-of-state tuition. Twelve seats (including three for freshmen) at the Southern College of Optometry in Memphis are reserved for Kansas residents, as are eight seats (including two for freshmen) at the

Differences in resident and nonresident tuition

Institution	Resident tuition	Nonresident tuition
UMKC School of Dentistry	$ 10,555	$ 20,571
UMSL School of Optometry	$ 8,928	$ 16,955
University of Kansas	$ 2,368	$ 6,346
Kansas State University	$ 2,333	$ 6,713

Northeastern State University School of Optometry in Tahlequah, Okla.

Because Kansas actually pays a portion of the tuition, individuals filling the seats in Tennessee or Oklahoma have a service obligation to the State of Kansas upon graduation. They must be licensed and practice in Kansas one year for each year they receive assistance.

One student's story

Karen was a Kansas high school teacher who decided, while demonstrating a career aptitude software package to one of her classes, that *she* needed a career change. She took evening and weekend classes to acquire the math and science courses needed for optometry school and entered the University of Missouri-St. Louis in 1987. After graduation, she returned to her home (and her husband) in Hill City, Kan., to open a practice. Karen is now the only optometrist in two counties.

Karen explains: "[The optometry program] allowed me to obtain an education at a cost that was more affordable because of the in-state tuition, and so I graduated with a more manageable debt. Because my education debt was smaller, I was able to establish a practice in a small western Kansas town that otherwise would not have had an optometrist."

Individuals who do not meet the service obligation must repay the tuition difference with interest. Revenue from repayments is used to fund the purchase of the seats. Since the program's inception, 74 percent of optometry students who have graduated from Southern College of Optometry or Northeastern State University are practicing in Kansas or have met their service obligations.

The approved funding for the purchased optometry seats in Tennessee and Oklahoma for the 2004-2005 academic year—equivalent to the students' total cost savings—is $128,850. This amount does not include the seats at the University of Missouri-St. Louis because funding is not exchanged in that agreement.

Midwest Student Exchange Program

The Midwest Higher Education Compact (MHEC) was founded in 1990. Its members are Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio and Wisconsin. Kansas, a charter member, actively participates in the Compact's Midwest Student Exchange Program. Residents of member states may receive reduced tuition at participating institutions in other member states. Students from participating states who attend a public institution pay no more than 150 percent of resident tuition. Moreover, students attending a private institution receive a 10 percent discount on tuition. According to MHEC, more than 17,000 students have used the program since 1994. Almost 7,000 of these students were Kansans, who saved an estimated total of $21.4 million in tuition costs.

Collaboration among state agencies

Cooperation among state agencies is an important aspect of reducing the cost of higher education in Kansas. Two recent initiatives offer tuition assistance for members of the Kansas National Guard and a tuition waiver for students who have been in the state's foster care system.

National Guard Educational Assistance Program

Because of the state's strong military history and the continued presence of the military at several installations around the state, Kansas readily accepts its responsibility to its military personnel. In 1996, the Kansas legislature enacted the National Guard Educational Assistance Act, which allows members of the Kansas National Guard who meet certain criteria to receive up to 100 percent of tuition and fees at the state's institutions of higher education. Eligible individuals must be residents of Kansas, must have been in the Guard less than 15 years, and cannot have a baccalaureate or higher academic degree. Other eligibility criteria relate to the individual's entitlement to federal educational benefits.

The program requires a service commitment from the recipient. Guard members must complete their current Guard service and commit to an additional three months of service for each semester of assistance received. Should the service obligation be unfulfilled, the participant is required to repay the amount of the assistance, plus interest. These repayments are funneled back into the program to fund additional awards.

The Kansas Board of Regents and the Adjutant General's Office must work closely to determine each applicant's eligibility. The Board of Regents receives and processes applications and is the agency to which the funding is appropriated. The Adjutant General's Office verifies that the applicant is indeed eligible for the benefits.

One student's story

Erin is a senior airman with the Kansas Air National Guard and a student at Emporia State University. She has been in the Guard for two years and plans to make a career of it. Erin's father was an officer in the Army, so the military has always been a part of her life. Her family moved from place to place while she was growing up, but she considers Gardner, Kan., her home and plans to return there to teach high school theater when she graduates. Erin did not learn about the tuition assistance program until after she began college. Although the program did not play a part in her decision to begin college, Erin is very grateful for the assistance as she furthers her education.

Erin states, "It's really a helpful program. The assistance allows me to be in school and not have to work multiple jobs to pay for it."

An additional collaborative link exists with the Kansas Lottery. Beginning in 2003, a veterans' benefit scratch-off ticket was made available to the public. The estimated $500,000 yearly proceeds are divided equally between the National Guard Educational Assistance Program and the state's veterans' homes. Although the actual amount of the assistance and number of recipients varies, depending on the level of appropriations and the number of eligible applicants, the 2005 award is an estimated $1,800 for each of approximately 515 students.

Foster Care Tuition Waiver Program

The 2002 Kansas legislature passed an initiative addressing the lack of resources and family support for higher education for individuals who "age out" of the foster care system at 18. The Foster Care Tuition Waiver

Program was established to assist those students in pursuing higher education. Individuals otherwise eligible for admissions and who meet either of the following criteria are eligible to receive a waiver of tuition and fees at public educational institutions in the state:

- The student was in the foster care system before or on his or her 18th birthday and graduated from high school or attained a General Educational Development (GED) certificate while in the foster care system.

- The student was adopted out of a foster care placement on or after his or her 16th birthday.

In addition, students must apply to a college or university within two years of high school graduation or attainment of a GED. Students can receive waivers for eight semesters or until the semester in which they reach age 21.

This collaborative effort involves the Kansas Board of Regents, the educational institutions and the Kansas Department of Social and Rehabilitation Services. The Department of Social and Rehabilitation Services verifies the eligibility of the applicants. The educational institutions are reimbursed the amount of the tuition and fees by the Board of Regents, which uses federal Chafee Foster Care Independence Grant funds transferred from the Department of Social and Rehabilitation Services. All of the entities must work together closely to process and verify the applications.

Students who receive the tuition waiver do not have a continuing service obligation after graduation. However, to remain eligible, students must be enrolled full time and maintain part-time employment of an average of 10 hours per week. In this way, students not only continue their education but also gain work experience for life after college.

For the 2004-2005 academic year, 64 students used the waiver at 17 institutions, for a total funding amount of $74,897. This figure was double that of the previous academic year. Only three years into the program, available funding still exceeds demand. However, the program continues to grow as more foster care children learn about the waiver and enter the higher education system.

Concurrent enrollment

In 1993, the state legislature passed the Kansas Challenge to Secondary School Pupils Act, which authorized certain secondary school students to enroll in classes at a postsecondary institution. In most instances, students receive credit at both secondary and postsecondary institutions. The Kansas Board of Regents and the Kansas Department of Education collaborate to determine the eligibility of students, courses and faculty.

The program provides multiple benefits to students. Individuals who have completed the requirements for high school graduation can take courses for college credit. Although they pay the usual tuition rate at the postsecondary institution, the overall cost of higher education for the student is reduced. After students graduate from high school, college credits earned during high school could reduce the time needed on the college or university campus, allowing the student to graduate with a baccalaureate degree in three rather than four years.

Collaboration with local and private entities

Communities and private businesses in Kansas have always taken a strong role in making the decisions and addressing the issues that affect their citizens. With this in mind, the state has collaborated with local entities to reduce costs for students seeking higher education.

Kansas Nursing Service Scholarship Program

Another medical shortage in Kansas, especially in the rural communities, is in nursing. One solution to the problem is the Kansas Nursing Service Scholarship

Program. Created in 1989, the program offers students lower educational costs. Meanwhile communities benefit from committed, skilled nurses.

A medical facility, a state agency that employs nurses, or a psychiatric hospital must sponsor the potential student. The current statutory maximum annual award is 70 percent of the cost of attendance at nursing school. Actual appropriations at this time have dictated a funding level sufficient for annual scholarships of $2,500 for licensed practical nurse (LPN) programs and $3,500 for registered nurse (RN) programs. Rural or small facilities pay $1,000 of the scholarship, whereas urban and larger facilities pay half of the scholarship.

In keeping with the policy of other service scholarships, students must fulfill a service obligation upon graduation. Nurses must work for one year at the sponsoring facility for each year of assistance received.

One student's story

Jamie is a nursing student at Kansas Wesleyan University. She is not a traditional student; she is the mother of four who was out of school for 20 years before returning to pursue an associate's degree to become an RN. She had always considered becoming a nurse because she likes working with and taking care of others, but the educational costs seemed prohibitive. Jamie is only receiving the scholarship for one year because of a filing error on the part of her sponsoring institution. Even one year of assistance, however, made all the difference in her career choice.

Jamie reports, "I wouldn't have been able to do this without the scholarship. It takes a big bite out of the repayment (of educational loans)."

If the service obligation is not met, both the state and the sponsor must be repaid with interest. The state portion of any repayments is used to fund additional awards. Since the beginning of the program, 83 percent of students are fulfilling or have fulfilled their service obligations.

Cooperation between the state and the sponsoring facilities has gone beyond simply establishing the program. These entities continue to collaborate to keep student costs low. Downturns in the economy greatly increase the number of applications submitted for financial assistance, a trend especially apparent in the Nursing Service Scholarship Program since 2001. The average number of applications received annually between 1998 and 2001 was 154. However, from 2001 to 2004, that average rose to 227 applications. Unfortunately, economic downturns also result in reduced state funding. An increase in overall sponsor funding, however, has kept the average number of awards granted relatively stable. In the 2004-2005 academic year, an estimated 137 students received awards at an average of $3,140 per award.

Kansas Career Work Study Program

In 1988 the state legislature enacted a program designed to provide career-related work experience to students enrolled in a state or municipal university. The students work part-time in a job related to their course of study. The employer pays at least 50 percent of the student's wages; the educational institution pays up to 50 percent.

Currently, approximately 13 percent of the educational institution portion of funding for this program is set aside for the Youth Education Service (YES) Program. Participants provide tutoring and mentoring to elementary and secondary students in high-risk schools. School districts are not required to provide the matching funds.

The program has many benefits. Students not only receive income to help defray college expenses, they also get valuable work experience in their chosen fields. The businesses receive manpower at a greatly reduced cost (or, in the case of school districts, at no cost). Moreover, at-risk elementary and secondary pupils receive the extra attention they need to help them succeed.

State funding for the program has remained relatively stable between 1994 and 2004, with an increase of 2.1 percent. The employer contribution increased by 10.9 percent during that period. This difference reflects the statutory language concerning the wage payment: The educational institution pays *up* to 50 percent, and the employer pays *at least* 50 percent.

The state's YES allocation increased by 31.6 percent between 1994 and 2004 because of a recognized need for tutors and mentors for at-risk elementary and secondary students. Although school districts are not required to provide matching funds, they often do; the level of funding therefore has varied considerably from year to year. Estimates for the program for academic year 2004-2005 are state funding of $528,172 and employer funding of approximately $580,000, which will assist approximately 600 students.

Recent access initiatives

The Kansas legislature recently passed or funded initiatives that, while not falling neatly into the categories described above, do improve access and reduce the costs of higher education for students. Two of these initiatives are the AccessUS Program and expanded eligibility for in-state tuition rates.

AccessUS Program

Southwestern Kansas is a sparsely populated rural area. Although the area is home to several community colleges, they are widely dispersed. The opportunities for students to take upper-division courses are very limited. In an effort to increase access to higher education in the area, the 2003 legislature appropriated $200,000 to assist with the implementation of AccessUS, which provides place-bound individuals in the southwestern portion of the state the opportunity to take upper-division courses. This program is often the only way these students can complete a degree. Six community colleges and three state universities now participate in the program.

Some courses are presented in the traditional face-to-face classroom (with the instructor driving from location to location). Others are delivered using distance-learning technology, such as interactive television or the Internet. State funding guarantees continuation of the course should the enrollment drop below the financial break-even point. For example, if the break-even point for a class is 10 students and the enrollment for that class drops to eight, the university is paid an amount equal to the tuition for two students.

Because the program is still relatively new, course offerings are fairly limited. Individual courses are available throughout the network, and two baccalaureate degrees are offered: a bachelor's degree in Technology Leadership through Pratt Community College and a bachelor's in General Studies in Business through Dodge City Community College. The universities, community colleges and the Board of Regents are examining the feasibility of offering additional degree programs, such as nursing.

Of the total of $400,000 of state funding appropriated over two fiscal years, approximately $14,000 has been transferred to universities to cover courses with low enrollments. To further increase access, the Board of Regents is considering using some of the remaining funds for need-based scholarships or for marketing the program. Currently, students must be enrolled full time to receive assistance from state scholarship programs. Although the funds are now available only to full-time students, the board is considering expanding financial

One student's story

Andrea is an architecture student at Kansas State University. She was born in Chihuahua, Mexico, but graduated from Wyandotte High School in Kansas City, Kan. Because Andrea is an undocumented immigrant, she would not have been eligible for in-state tuition without the 2004 legislation. The difference between in-state and out-of-state tuition for Fall 2004 was $4,380, a difference that Andrea could not afford.

Andrea offers: "I consider the state of Kansas my home now because this is the place where I live in and the place where I am achieving my goals. Kansas, beyond being the place that has provided me with opportunities to have a higher education, is also the place where I have met awesome people and a community where I feel that I belong."

assistance to part-time students as well. Dodge City Community College has used private-sector funds to provide scholarships on a course-by-course basis and has increased student participation.

Expanding eligibility for in-state tuition rates

Kansas' demographic profile has changed dramatically in recent years. The Census Bureau has estimated that in the 1990s, Kansas had a net international migration of 28,233 people. However, nearly as many immigrants—25,497 people—moved to Kansas between 2000 and 2003 alone. According to the Census Bureau, foreign-born residents constituted 5 percent of the total population in 2000. The portion of the population born outside the United States has not been that high in Kansas since the 1920s. Many of the

children of recent immigrants were raised in Kansas and have no memory of living in another country, yet they did not qualify for in-state tuition rates because they were not U.S. citizens.

In 2004, legislators established criteria for determining students' eligibility for in-state tuition and fees at Kansas' postsecondary educational institutions. This legislation was not based on residency but on attendance and graduation from Kansas high schools.

An individual is eligible to pay in-state tuition if he or she meets the following criteria:

- Attended an accredited Kansas high school for three or more years.

- Graduated from an accredited Kansas high school or obtained a GED in Kansas.

- In the case of students who are without lawful immigration status or have legal, nonpermanent immigration status, have filed an affidavit stating that the person has applied to legalize his or her immigration status, or has filed for U.S. citizenship, or that the person's parents have filed such an application.

Because of this legislation, eligible undocumented immigrants pay in-state tuition rates rather than much higher out-of-state or international rates. For the Fall 2004 semester, 37 eligible individuals enrolled in postsecondary educational institutions. Of those, seven are enrolled at the state universities, and 30 are enrolled in community colleges.

Conclusion

As the economy continues to improve, legislators will continue to seek ways to provide access and affordability for students seeking higher education in Kansas. Some service-related scholarships, such as the Teacher Service Scholarship and those described in this

essay, have waiting lists; a joint legislative committee recommended additional funding to address this need, but budgetary constraints prevented an increase in appropriations in the 2005 session.

Kansas' history of addressing other higher education issues such as the recruitment and retention of medical professionals has fostered fruitful collaboration to meet students' and communities' needs. Those practices have enabled the state to implement a variety of programs specifically designed to assist students with the cost of continuing their education. Cooperative efforts with other states, local entities and private businesses as well as between state agencies have helped reduce the cost of higher education for the students of Kansas. ■

Avoiding a collision course:

A state policy agenda for increasing high school students' college readiness

Kristin D. Conklin

Kristin Conklin is program director in the Education Division of the National Governors Association's Center for Best Practices, where she leads the center's work on higher education and high school redesign. Conklin has published and spoken nationally on issues of higher education finance and financial aid, productivity, cost containment and P-16 linkages. She also is the co-author of the NGA/Achieve *Action Agenda for Improving America's High Schools*. Conklin has a bachelor's degree from Cal Poly San Luis Obispo and a master's degree in public policy from Georgetown University.

Executive summary

In the last year, high school redesign has risen to the top of nearly every governor's agenda. The high dropout rate and stagnant test scores are two often-cited reasons for improving high schools. Policy-makers and the public also cite the critical role that high school plays in preparing graduates for an increasingly complex workplace. As a major part of the educational pipeline to success, high schools have become one of the weaker segments. The National Governors Association (NGA) is trying to reverse this trend through an effort begun in 2004 to strengthen the nation's high schools.

There is another important but less often cited goal of high school reform—curbing the high cost of education, chiefly, college completion. The NGA argues that improving college-readiness also can help lower postsecondary expenses for both the student and the institution.

The college cost crisis has many causes, including the poor preparation of students for college-level work. Poorly prepared students need remediation before taking credit-bearing work, and they are less likely to complete college. Redesigning American high schools can improve students' readiness for college and thus reduce remediation costs and the per-student cost of providing a college credential or degree.

As state after state acknowledges the need for a more highly skilled workforce, with every high school graduate ready to succeed in college or a good job, the question becomes: How can states make good on that commitment with limited financial resources? The answer lies in a policy agenda that can simultaneously improve student achievement and increase the efficiency of public secondary and postsecondary sectors.

While a high school improvement agenda far exceeds the range of solutions Lumina Foundation and higher education stakeholders should consider for addressing the college cost crisis, the legislative and education outcomes achieved in a number of states—such as Arkansas, Iowa, Louisiana, Michigan, Minnesota, New Mexico, Ohio, Oklahoma, Texas, Virginia and Washington—suggest the value of a state policy agenda aimed at cost-effectively increasing high school and college completion rates. The NGA/Achieve *Action Agenda for Improving America's High Schools* outlines this state policy agenda, and its potential for reducing college costs is described herein. Collectively, these five strategies have not been adopted at a statewide scale; therefore, quantifying precisely how this comprehensive agenda could contribute to educational saving is impossible. However, independent cost savings for some of the strategies have been calculated, and the scale is promising. Each strategy is also grounded in evidence that it not only accomplishes cost savings but also increases students' preparation for and success in postsecondary education.

The costs of a leaky education pipeline

In the next 20 years, the fundamental challenge for states will be to increase the share of the population with a postsecondary credential—be it an industry-recognized certification, a two-year degree, or a traditional four-year college education—in a constrained state fiscal climate. The greatest public and private returns to educational investment are realized when students earn a postsecondary credential. For example, increasing postsecondary completion rates would add more than $230 million to the nation's gross domestic product and $80 billion to states' tax coffers.[1]

But the benefits of college completion are diminished if the costs of education rise faster than the economic value of a diploma. Meeting this challenge will require more than containing costs from year to year at individual institutions; it also will require a concerted effort to reduce the cost per degree awarded across the entire educational pipeline. States will have to change the conventional view of the K-12 and higher education systems as distinct entities and instead see the education system as a single pipeline leading to postsecondary credentials.

Right now, high schools are an inefficient and weak part of the educational pipeline and therefore present excellent opportunities for cost savings. Nationally, only 32 percent of all students leave high school qualified to attend four-year colleges. Furthermore, only 23 percent of African-American students and of Hispanic students leave high school college-ready.[2] These weaknesses in the American high school drive college costs upward.

One out of three college students needs remediation, and half of all students fail to complete a degree within six years. Not surprisingly, this lack of preparedness is costly to U.S. taxpayers, businesses, colleges and students. Each year taxpayers pay an estimated $1 billion to $2 billion to provide remedial education to students at public universities and community colleges.[3] Deficits in basic skills cost businesses, colleges and underprepared high school graduates as much as $16 billion annually in lost productivity and remedial costs. Employers in Michigan, for example, spend about $40 million a year just to teach workers how to read, write and perform basic math operations.[4] Governors and college leaders will need to look for ways to improve high schools as a way to contain the overall cost of awarding postsecondary credentials.

The state policy agenda for improving students' college preparedness

The cornerstone of state efforts to improve high schools is the *Action Agenda for Improving America's High Schools*. Taken together, the *Action Agenda's* five statewide strategies point the way toward higher attainment and increased productivity and cost savings across the educational pipeline.[5] Those five strategies are:

1. Restore the value of the high school diploma.

2. Redesign high schools.

3. Give high school students the excellent teachers and principals they need.

---

[1] Carnevale, A. and R. Fry (2001). "Economics, Demographics, and the Future of Higher Education Policy," in *Higher Expectations I*, National Governors Association, Washington, D.C. 15.

[2] Greene, J.P. (2005), *Public High School Graduation and College Readiness Rates: 1991-2002* (New York, N.Y.: Manhattan Institute). Available: http://www.manhattan-institute.org/html/ewp_08.htm.

[3] Breneman, David and William Haarlow (1998). *Remediation in Higher Education*, Thomas B. Fordham Foundation, Washington, D.C.; and Ronald Phipps (1998). *College Remediation: What It Is, What It Costs, What's at Stake*, Institute for Higher Education Policy, Washington, D.C.

[4] Greene, Jay P. (2003). The Cost of Remedial Education: How Much Michigan Pays When Students Fail to Learn Basic Skills, Mackinac Center for Public Policy, Midland, Mich.

[5] *An Action Agenda for Improving America's High Schools* (2005). Achieve, Inc. and the National Governors Association, Washington, D.C.

4. Set goals, measure progress, and hold high schools and colleges accountable.

5. Streamline and improve education governance.

Where available, calculations of cost savings generated by tactics within each of these major strategies are encouraging. This early evidence suggests that existing efforts can be scaled to help reduce the cost of earning a college degree for students, families, institutions and taxpayers.

Restore the value of the high school diploma

In every state today, students can meet the requirements for high school graduation and still be unprepared for success in college or the workplace. Simply put, our standards have not kept pace with the world our students are entering after high school. To restore value to the high school diploma, governors, legislators and state education leaders need to raise standards for all students and tie high school graduation tests and course-taking requirements to the expectations of colleges and employers. Colleges and employers must then honor and reward student achievement on state tests through their admissions, placement and hiring policies. These measures will send a powerful signal to students that it pays to meet higher standards in high school.

> Simply put, our standards have not kept pace with the world our students are entering after high school.

Arkansas and Texas are examples of states that are demanding rigorous high school courses across the board. All students in these states will be automatically enrolled in a college- and work-preparatory curriculum, unless they opt not to participate.

In these and other states, there is growing evidence that high expectations make a real difference in student achievement. When the San Jose Unified School District required all students to follow the college-preparatory curriculum required for admission to the University of California system, test scores of black 11th-graders increased nearly seven times as much as those of other black students across the state. Over time, the increased college readiness of these students will translate into lower remediation costs and will enable more students to complete a credential within six years.

Redesign high schools for all students

It is no longer acceptable for high schools to prepare only some students for college and work. That must be the goal for *all* students. This will require more rigorous coursework and tests that measure college- and work-readiness. It also will require restructuring high schools that may be too impersonal, inflexible and alienating for some young people, particularly those who need extra academic and social supports to catch up and succeed.

States should support different approaches to high school design, but all high schools must share a common goal: to prepare all students for successful transitions to careers, college and citizenship. The need for change is greatest in schools that are failing to educate most of their students up to even minimal standards. Schools in some communities are experiencing dropout rates of nearly 50 percent, and few of the students who manage to graduate are successful in college and careers. These are schools in crisis, and state and local officials must make it a priority to intervene and reorganize them.

Chronically low-performing high schools must be states' top priority, but they are not the only schools that need attention. Governors and legislators should provide incentives for all communities to expand the supply of high-quality high school options.

For example, dual enrollment programs not only generate statewide solutions to K-12 and higher education alignment, they also are a cost-effective way to expand college access and completion rates. Washington's dual enrollment program, Running Start, is the largest in the nation, serving 10 percent of the eligible high school population. In 2002-2003 (the most recent year for data), Running Start students and their parents saved $22.5 million in tuition—an average of $2,500 per participating family. This savings represents almost 20 percent of the estimated four-year tuition bill of $15,500 and also lessens the impact of tuition increases.

Nationally, if 10 percent of high school juniors and seniors enrolled in a dual-credit program such as Running Start, $1.4 billion could be saved in state subsidies for higher education. This savings represents 23 percent of the estimated total needed to provide college access to the larger numbers of students now moving through states' high school and college systems.[6] The ultimate cost savings realized from better high school and college policy alignment are more difficult to quantify, but they surely include lower remediation costs, reduced public subsidy to institutions and students for lengthy time-to-degree, and increased public return from more credentialed workers.

States can also replicate effective models that combine secondary and postsecondary education, as do Ohio and Utah. Each of them has committed to opening more than half a dozen so-called "early-college high schools" in the next few years. Although early colleges are new high school models, initial estimates of costs for fully implementing these schools appear generally on par with costs of regular public high schools.[7] For approximately the same costs, early-college high schools can buy much more by giving students the opportunity to earn an associate's degree within five years of enrolling in high school, while reducing high school dropout rates.

Give high school students the excellent teachers and principals they need

Like the recommendation to increase high school standards and curriculum, efforts to improve the quality of the high school teachers and principals will cut costs because students will be better prepared for college. Several steps are necessary to improve this workforce, but many of those steps can be taken simply by reallocating existing resources.

First, state and local education leaders must do a better job of recruiting and preparing outstanding teachers and principals and deploying them to the schools where they are needed most. Strong teachers and principals are critical to help all students meet higher standards and leave high school ready for college and work.

As states raise standards for students, they need to help teachers upgrade their skills and knowledge in the subjects they teach. For example, if all students are expected to take four years of mathematics at a level that will ensure college- and work-readiness, high school teachers will need advanced knowledge of higher-level math and strategies for teaching it to a diverse group of students. Attention also must be focused on how high school teachers can be better trained to help students with low reading skills.

Higher education leaders should redesign teacher preparation programs so they reflect the new teacher standards. These programs must also better prepare high school teachers to help struggling readers and to teach college- and work-preparatory courses to all students. State officials should pay close attention to teacher preparation programs—both traditional programs for college undergraduates and alternate-

---

[6] Author's calculations and data analyzed by Carnevale and Fry, p. 15.

[7] Webb, M. (2004). *What is the Cost of Planning and Implementing Early College High School?*, Jobs for the Future, Boston.

route programs for college graduates and middle-age career changers. The administrators of these programs need the flexibility to design their programs in different ways, and they must be held accountable for producing a supply of well-prepared teachers in the subjects and for the schools where they are needed most.

Students in high-poverty and low-performing high schools are the ones most likely to have the least-experienced and least-qualified teachers. State leaders should provide incentives for colleges and universities to raise the number of teachers they prepare in subjects with critical shortages and increase the placement and retention of their graduates in the neediest schools. For example, Louisiana has created a new approval system for its teacher-education programs based on performance indicators. The system will eventually include measures of quality as well as growth in the numbers of graduates entering critical shortage subject areas and working in districts that are chronically hard to staff. Retention of graduates after three years and partnerships with school districts also will be measured.

> States need to dramatically improve their ability to collect, coordinate and use secondary and postsecondary data.

Last, leaders from K–12 and postsecondary education should work together to redesign principal training programs to help principals be effective leaders of redesigned high schools. All principal training programs must include in-school clinical opportunities for observing effective principals and gaining on-the-job experience. Like teachers, principals also need better training on how to manage and use data, including how to use test data to change course content and target teaching to address student weaknesses.

Set goals, measure progress, and hold high schools and colleges accountable

Efforts to save college costs must begin with better measurement and a higher attention to accountability. The *Action Agenda's* recommendations for better measurement begin with a cooperative effort among government, business and education leaders to set measurable goals for improving the performance of high schools and postsecondary institutions. Those goals should include raising high school graduation rates, increasing the percentage of students who are prepared for college and work, and improving postsecondary enrollment and completion rates.

To accomplish these goals, states need to dramatically improve their ability to collect, coordinate and use secondary and postsecondary data. Few states have data systems that can gauge how well high schools prepare students for college and work. Only nine states collect student-level high school course-completion information from transcripts, and just six states store the results of SAT, ACT and Advanced Placement exams. Fewer than 10 states have data linking K–12 student records with college enrollment, and only eight states make information available about student remediation in college.[8] Investments in linked data systems are a fraction of states' total educational expenditures. The National Center for Education Accountability has estimated that implementing a statewide K-16 data system in Texas will cost just 1 percent of the state's total educational budget. State strategies such as central depositories for data can help avoid costly duplication of data collection. Florida is one of a few states that have created a unified data system to combine information on the performance of students

---

[8] The National Center for Educational Accountability (2002), *Minimum Requirements for a Student Achievement Information System*, Survey. Available: http://www.nc4ea.org/index.cfm?pg=surveyresults.

in high school with data on their performance in postsecondary education.

Postsecondary institutions have a role to play in high school accountability. Students who get into college but need remediation in math, reading or writing are not college-ready. Two- and four-year colleges should be required to keep track of the incoming high school graduates who need remedial courses. They also should be required to share that information and work with the high schools to make changes in course content and instruction. State officials can also use the college remediation data to hold high schools accountable.

Further, governors and business leaders must insist that colleges and universities pay more attention to their own dropout problems. One of every four students enrolled in a four-year college and nearly half of all community college students fail to return after the first year.[9] Every postsecondary institution should be required to publicly report how many entering students are enrolled in remedial courses, how many drop out after their first year of college, and how many ultimately complete a degree. Governors and legislators should follow the examples of Florida and Tennessee, where financial incentives are provided for colleges and universities that show progress on improving completion rates and that graduate more students with the credentials needed in growing jobs and industries.

Governors and legislators should provide financial incentives for higher education leaders to work with

> Governors and business leaders must insist that colleges and universities pay more attention to their own dropout problems.

local education officials and high school faculty to improve college readiness. These incentives could be used to help strengthen the curriculum, validate graduation standards, assess college readiness, and make it easier for students to earn college credit while in high school. In Kentucky and Oklahoma, for example, a statewide report card tracks how well colleges, individually and collectively, improve college readiness. A portion of state funding is based on campuses' efforts.

Streamline and improve education governance

Perhaps the greatest source of inefficiency in the education pipeline—and a leading cause of weak high school outcomes—is the lack of coordination of policies and resources across education sectors. In almost every state, the K–12 and postsecondary education sectors are governed, financed and operated independently, and they often are supervised by different boards or legislative committees. Further, oversight of higher education often is highly decentralized; this makes it very difficult to get institutions to convey uniform messages about college readiness to parents, high school officials, teachers and students.

The public recognizes that education policy decisions are made separately by statewide K–12 and higher education governing boards. In a 2003 public opinion survey of 1,000 Americans, more than half agreed "the system does not work well, and better coordination is needed to help students go from high school to college and succeed once they are there."[10]

Governors, legislators and business leaders must act now to make elementary, secondary and postsecondary

---

[9] National Center for Public Policy and Higher Education (2004), *Measuring Up 2004* (San Jose, Calif.).

[10] Lake Snell Perry & Associates, (2003) *Leaks in the Postsecondary Pipeline: A Survey of Americans* (Boston, Mass.: Jobs for the Future).

education work more seamlessly. At a minimum, states should set up a statewide P-16 council or roundtable to frame a common education agenda and to track progress. In states such as Indiana and Iowa, employers' board participation has helped prevent turf battles and kept the various education sectors focused on the state's most pressing education needs. Alternatively, states could follow the example of Idaho, Florida and New York—states that have developed a single education governing board and state education agency with authority over early childhood, elementary, secondary and postsecondary education.

We may be seeing the early signs of the next era in education reform, an era that continues to push for K-12 improvement while linking it to strategies that will make attainment of postsecondary credentials more common and expected for students from all ethnic, racial and income groups. But these ambitious goals will not have the benefit of unlimited resources. The future does not need to be a collision course. NGA will continue to lend its policy expertise, its convening authority and its ability to galvanize the will and momentum of the nation's governors to this agenda. By marrying the goals of higher attainment and increased cost savings in the nation's secondary and postsecondary education systems, governors and other state policy-makers will help determine whether states will be vibrant, prosperous places to live. ■

A question of effectiveness:
Michigan's solutions to the college cost issue

Timothy M. Kuehnlein Jr.

Timothy M. Kuehnlein Jr. is an instructor of political science and history at Alpena Community College in Alpena, Mich. Kuehnlein earned a bachelor's degree in political science and history in 1991 from Hillsdale College in Hillsdale, Mich. He earned a master's degree in political science in 1993 and pursued doctoral studies in comparative government and political philosophy at Western Michigan University, Kalamazoo, before arriving in Alpena in the fall of 2001. Kuehnlein has traveled extensively throughout Europe, particularly the former Eastern bloc. His teaching experience is in U.S. and world history and government, comparative European and non-European government and international relations. His academic interests focus on the historical and contemporary essence of democracy/republican government, civil society, federalism, nationalism and European unification.

Olin Joynton

Olin Joynton has served since January 2004 as president of Alpena Community College in Alpena, Mich., where he has led the college to focus on recruitment and retention of students and the strengthening of academic and technical programs. Before coming to Michigan, he worked for the North Harris Montgomery Community College District in the northern suburbs of Houston, Texas, most recently as vice president of instruction at Montgomery College and earlier as professor of philosophy at North Harris College. He has a strong interest in documentation of student achievement of course learning outcomes. He holds a doctorate from Rice University and a bachelor's degree from Wheaton College.

Executive summary

Motivated by Lumina Foundation's *Collision Course* policy brief and Michigan's poor grade for college affordability in the National Center for Public Policy and Higher Education's *Measuring Up 2004: The National Report Card on Higher Education,* this paper examines the effectiveness of two of Michigan's state-sponsored initiatives to contain college costs. They are: **1.** A state income tax credit for students attending colleges that limit tuition increase rates to the rate of increase for the U.S. Urban Consumer Price Index (CPI) (introduced in 1995). **2.** Gov. Jennifer Granholm's January 2004 offer to return most of a 2003 mid-year cut to public colleges that limited tuition increases to the Urban CPI.

The data surveyed focus on the years 1992 (three years before the tax credit) and 2004. Among the paper's findings are the following indicators of effectiveness for the period under review: **1.** Costs for two-year colleges in Michigan went from higher than the national average to lower than the national average. **2.** Percentage increases for both two- and four-year colleges in Michigan were considerably lower than those for the nation as a whole. **3.** Increases in financial aid further dampened the effect of Michigan tuition increases, so that net tuition between 1999 and 2003 increased at about half the rate of tuition rates. **4.** During an economic downturn that was disproportionately severe in Michigan, residents shifted their preference toward higher-cost four-year colleges. Their perceptions of value caused residents to view even four-year colleges as cost-effective. **5.** The number of rebates in 2004 caused a dramatic one-year increase in colleges restraining tuition within the 2.3 percent limit needed to qualify for the tax credit.

Despite the authors' research and interaction with state government officials, evidence of the initiatives' effectiveness was elusive. For example, we were unable to locate longitudinal data on Pell grant recipients attending college in Michigan through the Fall 2004 semester.

The authors conclude with an affordability case study of their own institution, Alpena Community College. The solution to the affordability problem lies partly in upgrading the image of low-cost community colleges as providers of high-quality liberal arts education and technical training. In pursuit of this goal, this study argues that higher education for low-income students is a public good that requires balanced, multiparty support from government, business, private philanthropy, colleges and students themselves.

Introduction

Recent reports indicate that rising college costs are the main reason students fail to complete baccalaureate education. The College Board reports tuition increases for 2004-2005 as 10 percent for four-year public colleges, 9 percent for public two-year colleges and 6 percent for four-year private colleges. College students are working more to meet the costs of education, and many in higher education consider cost containment a social priority.

Community colleges have led the nation in providing quality, cost-effective liberal arts and technical education since their inception. Champions of community colleges proudly call them "the Ellis Island of the higher education world." Despite their commitment to underprivileged and underprepared students, however, community colleges around the country have struggled to contain costs. Increasing

services while managing costs has been particularly difficult in the past decade. For example, costs of community college education increased 86 percent between 1992 and 2004. The cost of university education, however, increased 120 percent during the same period.

Although some universities have benefited from immense endowment campaigns, the costs of new technical and industrial offerings have challenged many educational institutions. Nonetheless, one might say that students and industry are getting "bang for their buck." Despite its increased costs, higher education benefits students through unprecedented innovation that bridges formal training with practical application for industry and trade. Community colleges have been central to such innovation.

Public sector funds generated from tax dollars facilitate these developments in education; however, as these

Figure 1: Relationship between Michigan tuition and state appropriations
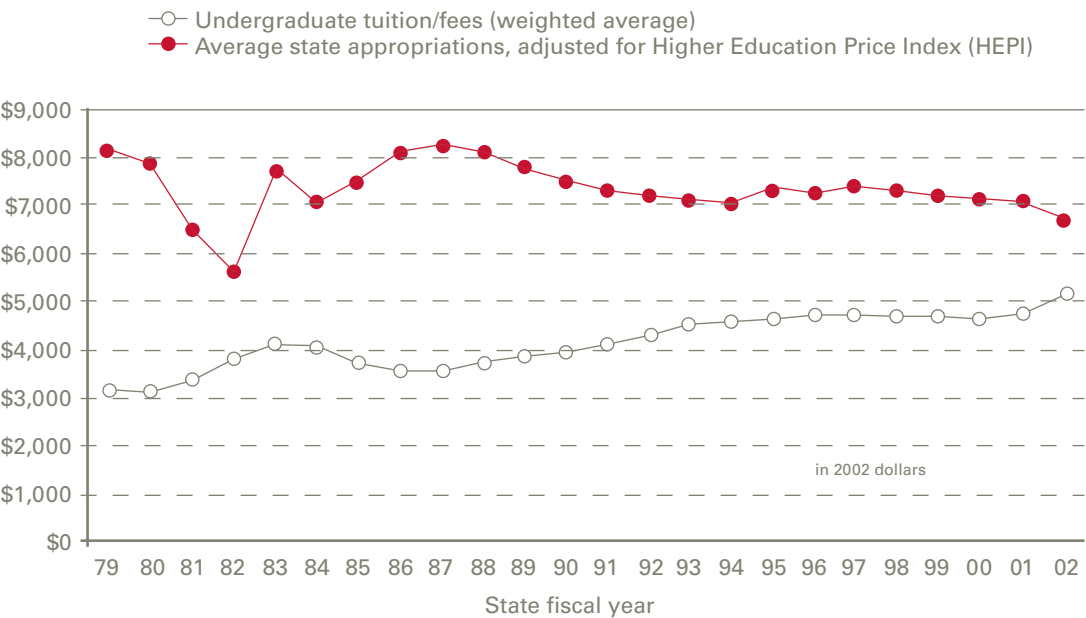
funds become increasingly scarce, students and private interests—especially corporations and foundations—are expected to bear the costs of keeping pace with innovation. Is that burden worthwhile? This question is especially salient as rising costs threaten to prohibit more and more people from participating in higher education. Will higher education become inaccessible to the very people it is intended to benefit?

This problem is mirrored in unfortunate trends in the health-care industry, where unprecedented innovation in medical services leads to higher costs. Those costs, in turn, exclude an increasing number of Americans from quality health care. Education faces a similar dilemma: the degree to which development and innovation can occur before it outpaces the ability of individuals—and even public institutions—to pay for services, especially as public assistance dwindles.

The State of Michigan has been especially hard-pressed to address these issues in the last 15 years. Political trends have favored streamlined government and lower taxes, and the resulting structural reform has limited state education funding. These cuts translate into higher costs for students and greater reliance on the private sector for public goods. Moreover, declines in the state's manufacturing-based economy and corresponding losses in state revenue have shifted much attention and many resources away from higher education.

As Michigan trailed further behind other states in providing solutions for higher education, newly elected Gov. Jennifer Granholm created the Commission on Higher Education and Economic Growth, chaired by Lt. Gov. John Cherry, in 2004. Among the commission's goals is "doubling the percentage of citizens who attain postsecondary degrees or other credentials that link them to success in Michigan's economy." Because of its acknowledged importance in improving the state's

economy, higher education now enjoys a higher profile among state policy-makers.

Like many states, Michigan operates a host of financial aid programs designed to improve access to higher education, especially for low-income students and their families. However, two state policy initiatives deserve special consideration as cost-containing measures: the **College Tuition Income Tax Credit** and the **Higher Education Tuition Restraint Program**. This paper will assess the effects of such policies within the context of higher education trends and will highlight the role of community colleges. In emphasizing the need for restraint, we also highlight the need for greater resources leading to low-income student access to higher education.

We hold that Michigan's policies are effective in containing costs of higher education but that more needs to be done, especially for low-income students. Stakeholders need to gather more data to show effectiveness of existing measures and recognize educational quality in the state's affordable community colleges. Moreover, finding a proper balance of funding sources for higher education remains essential. Increasing pressure to find alternative revenue sources—aside from the public coffers and student tuition—will force institutions to rely more heavily on the private sector. However, that strategy could compromise the mission of public education if narrow private interests reshape important public institutions. Therefore, public education will need to determine how its mission is best funded. Should we finance education through tax dollars distributed for the public good, through students who value education or through the private sector's benevolence? Forming a complete solution—not only in Michigan but also around the nation—will require investment from all of these sources. Meeting that challenge, however, will mean creating a more sophisticated world that offers excellent, affordable education to as many people as possible.

Table 1: Degrees and revenue ratios

Measure	Type of institution	1992	2004
Enrollment	Two-year US	5,038,000	5,969,000
	Two-year MI	227,480	199,258
	Four-year US	6,045,000	6,658,000
	Four-year MI	259,879	282,896
Degrees granted	Two-year US	477,000	660,000
	Two-year MI	21,156	18,768
	Four-year US	1,081,000	1,333,000
	Four-year MI	42,428	47,929
Tuition and fees	Two-year US	$1,022	$1,905
	Two-year MI	$1,124	$1,810
	Four-year US	$2,137	$4,694
	Four-year MI	$2,635	$5,494
Tuition/state/local revenue ratios	Two-year US	N/A	20%/38%/17%
	Two-year MI	34%/36%/29%	29%/28%/41%
	Four-year US	16%/39%/3%	18%/31%/0%
	Four-year MI	39%/53%/0%	50%/42%/0%

Michigan college affordability in the national context

Table 1 provides comparative data for the years 1992 and 2004 on enrollment, degrees and revenue ratios for the nation and for Michigan's two- and four-year colleges.

Interestingly, despite the increasing costs of education throughout the country, enrollment at four-year universities increased from 1992 through 2004, up 10 percent for the nation as a whole and up 9 percent in Michigan. Similarly, the number of degrees granted at four-year institutions also has increased in Michigan and throughout the nation. As one might expect, tuition has risen as well. Tuition and fees at the nation's four-year public institutions averaged $2,137 in 1992. By 2004, the costs had more than doubled, to $4,694. In Michigan's four-year public schools, tuition and fees grew from an average $2,635 in 1992 to $5,494 in 2004,

a 109 percent increase. The national increase was 120 percent. Michigan's comparatively low rise suggests that its cost-containment measures are working for its four-year institutions.

However, during the same period, although two-year college matriculation and graduation rates increased at the national level, those numbers decreased in Michigan. This decline occurred even though two-year college costs are rising less dramatically than four-year college costs in the state and around the U.S. Between 1992 and 2004, costs of higher education at two-year schools throughout the nation increased by only 86 percent. At 61 percent, Michigan's rate of two-year college cost increase was even lower—another preliminary sign of the effectiveness of Michigan's cost-containment measures.

These statistics indicate that, although two-year education is more affordable, especially in Michigan,

students nonetheless are choosing the more expensive four-year institutions. Why are cheaper two-year institutions not more desirable in the current economic climate? Rather than affordability, *perception* of value seems to drive the market. Although President Bush received a standing ovation from both sides of the aisle when he mentioned "America's fine community colleges" in his 2004 State of the Union address, and although business leaders understand community colleges' critical role in training the workforce, community colleges continue to take cheap shots from media, advertising and students themselves. Jay Leno, Bill Cosby and Burger King commercials, to name a few, portray community colleges as homes for feckless underachievers. Community college faculty members often hear students mention their hopes to transfer to a "real college" before long. Community College of Southern Nevada Vice President Robert S. Palinchak observes: "We live in a brand-name society. 'If it's free or inexpensive, how good could it be?' is the attitude that prevails when parents and students consider community colleges." Such misperceptions mean that students are neglecting an important resource for an affordable education.

Michigan college affordability has been criticized in a national forum. In September 2004, the National Center for Public Policy and Higher Education issued its biennial *Measuring Up* report, which grades systems of higher education in all 50 states according to six categories: preparation, participation, affordability, completion, benefits and learning. Michigan joins 35 other states in receiving an "F" in affordability, with another 11 states receiving a "D." In awarding this grade, the Center considers three primary factors: family ability to pay, strategies for affordability and reliance on loans.

The report states: "Michigan has made no notable progress in the provision of affordable higher education opportunity over the past decade." It continues, "The state's investment in need-based financial aid is very low when compared with top-performing states." Although *Measuring Up 2004* offers valuable information, we cannot accept its account of Michigan's college affordability. Heartened by Michigan's high rates of college enrollment, comparatively low college costs, increased allocation of financial aid, comparatively low student loan debt and high levels of educational

Table 2: Affordability measures

Affordability measures	Michigan 1994	Michigan 2004	Top states 1994
1. Family ability to pay (weighted at 50 percent)—percentage of family income needed to pay for college.	23% at community colleges 28% at public four-year universities	22% at community colleges 32% at public four-year universities	15% at community colleges 16% at public four-year universities
2. Strategies for affordability (weighted at 40 percent)—state investment in need-based financial aid in comparison to federal investment.	33%	36%	89%
3. Reliance on loans (weighted at 10 percent)—the average yearly loan amount for undergraduate students.	$2,684	$2,963	$2,619

attainment by low-income residents, we feel that the report's "F" in affordability is unwarranted. The following discussion of cost containment in Michigan—specifically at Alpena Community College—will offer incomplete but hopeful evidence of success.

Michigan's special initiatives to address college affordability

Among the factors not calculated into the Center's report are measures such as Michigan's attempt to contain tuition and fees charged by public colleges. Within the past decade, two such measures call for special attention: the College Tuition Income Tax Credit and the rebate program that determines higher education appropriations. Both provide incentives for tuition restraint—the former by direct benefit to students and their families, and the latter by direct benefit to public colleges:

The Michigan legislature modified the state income tax code to provide credits of up to $375 to those paying tuition on behalf of students attending certain institutions of higher education.

1. College Tuition Income Tax Credit. In 1995 the Michigan legislature modified the state income tax code to provide credits of up to $375 to those paying tuition on behalf of students attending certain institutions of higher education. For the payer to qualify for the credit, the student must have attended a college or university that limits its yearly tuition increase to the percentage increase of the urban Consumer Price Index, as determined by the U.S. Department of Labor's Bureau of Labor Statistics and as certified by the state treasurer. State Treasurer Jay B. Rising certified the urban CPI rate of increase at 2.3 percent for the calendar year 2003. This rate falls far below the average of 10 percent reported by the National Association of State Universities and Land Grant Colleges and also is lower than the 4 percent-9 percent range reported for community colleges. Accordingly, no Michigan institution appears among a sampling of 13 schools with the highest percentage increases.

2. Higher Education Tuition Restraint Program. Best viewed as a sweetener to the College Tuition Tax Credit, the other major state government initiative to counter college costs consists of a rebate program structured into state appropriations to public colleges and universities. In response to unexpectedly low revenues during fiscal year 2004 (October 1, 2003 to September 30, 2004), Gov. Jennifer Granholm ordered a mid-year 5 percent cut to appropriations already approved for public institutions of higher education. Almost immediately thereafter, during the annual State of the State Address in January 2004, the governor offered a rebate that restored 3 percent of those cuts for colleges and universities that limited tuition increases to 2.3 percent. Despite opposition from the Michigan Community College Association, the governor's linkage between tuition restraint and rebates probably accounts for the recent one-year jump in the number of community colleges whose students qualify for the tuition tax credit from five to 26 (see Appendix A).

These Michigan initiatives are surrounded by a host of other approaches to promote access to higher education for low-income students (see Appendix B). In the 2003-2004 academic year, the state spent more than $211 million on financial aid for college students, according to the annual survey conducted by the National Association of State Student Grant and Aid Programs. Of this, more than $97 million was dedicated to need-based grants.

Measuring the effectiveness of the Michigan initiatives

The following changes between 1992 and 2004 illustrate the effective cost-containment potential for higher education in Michigan:

1. Costs for two-year colleges in Michigan went from higher than the national average to lower than the national average.

2. Percentage increases for both two- and four-year colleges in Michigan were considerably lower than those for the nation as a whole.

3. Increases in financial aid further dampened the effect of Michigan tuition increases so that net tuition between 1999 and 2003 grew half as much as actual tuition.

4. During an economic downturn that disproportionately affected Michigan, residents shifted their preference toward higher-cost four-year colleges. Their perceptions of value caused them to view even four-year colleges as cost-effective.

5. The governor's rebates caused a dramatic one-year increase in colleges restraining tuition within the 2.3 percent limit needed to qualify for the tax credit.

These indicators of effectiveness fall short of *proving* the effectiveness of the tuition tax credit and tuition-restraint programs, of course; still, they are hopeful signs.

We can offer few other data to show how the tuition tax credit and the tuition-restraint policies have helped low-income students to attend college. The promise of these

Table 3: Alpena Community College (ACC) degrees and revenue ratios

Measure	Type of institution	1992	2004
Enrollment	ACC	3,325	2,704
(duplicated headcount for ACC)	Two-year MI	227,480	199,258
	Four-year MI	259,879	282,896
Degrees granted	ACC	436	378
	Two-year MI	21,156	18,768
	Four-year MI	42,428	47,929
Tuition and fees	ACC	$880	$1,842
	Two-year MI	$1,124	$1,810
	Four-year MI	$2,635	$5,494
Tuition/state/local revenue ratios	ACC	34%/49%/15%	34%/44%/20%
	Two-year MI	34%/36%/29%	29%/28%/41%
	Four-year MI	39%/53%/0%	50%/42%/0%
Spending on student aid (Pell grants)	ACC (Pell grants)	$1,568,183	$2,095,700
	Two-year MI	N/A	$258,230,000 (total)
	Four-year MI	N/A	
Low-income student enrollment	ACC	1,179	863
(Pell recipients)	Two-year MI	N/A	N/A
	Four-year MI	N/A	N/A

policies is tremendous, but systematic, longitudinal data are needed to evaluate their effectiveness. Attention should focus on how complementary forms of financial aid for low-income students (e.g., Pell grants) can contribute to cost containment. Educational leaders and policy-makers simply need to gather and monitor this information. Unfortunately, Michigan has not yet done so.

Alpena Community College affordability in context

We are naturally curious about where our own institution stands in regard to the state and national trends reviewed thus far, especially with respect to affordability for low-income students. Table 3 (Page 75) introduces Alpena Community College (ACC).

These data show that ACC used the tuition tax credit and the tuition cap to contain costs for low-income students within its service district, one of the most impoverished areas of Michigan. ACC is making inroads toward cost containment thanks to these and other initiatives. Perhaps other community colleges could contribute to affordability by observing such restraints.

Enrollment patterns at ACC are consistent with national and state norms. ACC's enrollment has declined by about 500 students from 1992 to 2004, and the number of degrees granted has declined by 58 over the same time period. Michigan's two-year schools experienced a similar trend in enrollment and graduation rates. As noted earlier, however, four-year schools increased

these rates. During this time period, two-year colleges have controlled costs most effectively; the average tuition increase was 61 percent. Tuition at four-year schools increased by 108 percent, on average. ACC's tuition increase was 109 percent. Despite this large percentage increase, ACC remains only one-third as expensive as four-year schools, as it was in 1992. Although Michigan's community colleges are underused, they remain a cost-effective option.

Unfortunately, the burden of cost in higher education is being shifted toward the student. At ACC, the cost per student as a portion of operating expenses has remained relatively static, despite decreasing state revenues. In 1992 the ACC operating budget was $7.9 million. In 2004 it was $10.9 million, a 39 percent increase. However, the overall percentage of total budget revenues from the state declined by 4.8 percent over those 12 years. The ratio of tuition to total revenue sources increased by only 0.4 percent, whereas the ratio of local tax revenue to the total increased by 4.7 percent. Decreased state allocations meant a tuition hike for ACC students. As this burden is shifted toward the student, one must question how much more students and taxpayers can afford, especially in impoverished communities such as that served by ACC.

Determining how many low-income students have taken advantage of the tuition tax credit is difficult, but ACC recently took steps to curtail tuition rate increases to the threshold of 2.3 percent as established by Gov. Granholm's tuition restraint policy. As a result of ACC's tuition restraint, the college received $148,000 back from the funds taken away with the December 2003 reduction.

> The burden of cost in higher education is being shifted toward the student. ... One must question how much more students and taxpayers can afford, especially in impoverished communities.

Tuition restraint, however, is not the only way to make college affordable for ACC students. Other programs play significant roles in making higher education accessible to low-income students. While the federal Pell grant program amounted to $250 million for Michigan as a whole, including two- and four-year institutions, ACC received slightly more than $2 million in 2004. This number represents a 34 percent increase over the $1.5 million in Pell grant funds ACC received in 1992. Interestingly, the funds helped 1,179 students in 1992; in 2004, only 863 students received the financial aid from this larger allocation. In other words, fewer low-income students received more money as a whole at ACC over 12 years. As a result, their cost was significantly lower than alternative four-year institutions in Michigan. Although one might question whether numbers reflect quality of education, such evidence clearly demonstrates that fewer low-income students are gaining access to an increasingly large pool of money. If this trend is true at ACC, what is happening at state and national levels?

Data on economically based special populations grants (Perkins grants) offer another way to identify service to low-income students. In 1995-1996, 159 ACC students were eligible for special populations grants. Of these, 123 shared in $140,616 of economically based aid. By contrast, in 2003-2004, 159 again were eligible, but only 109 students shared in $157,343 of economically based aid. Again, the trend appears to be more dollars awarded to fewer students. Nonetheless, ACC's costs are on par with those of other community colleges, and ACC is clearly less expensive than four-year institutions.

Conclusion

Everyone benefits from cost containment, as long as the services and quality of education are not adversely affected. Although the data are insufficient to determine precisely the effect of tuition tax credit and tuition caps, they clearly show that Michigan's initiatives are, in principle, successful at containing higher education with respect to inflation.

What is not clear is whether low-income students benefit directly from such policies. Although more funds are available from the federal government and private sources, fewer people are benefiting from them—especially low-income students. Therefore, cost-containment measures and availability of funds need to be considered together to address the problem properly for low-income students.

Is cost containment truly higher education's primary concern? Higher enrollment rates at institutions of higher education are creating increased demand. Demand, of course, drives the market and the costs. The real affordability challenge is providing funds for low-income students, especially as students shoulder a greater burden for the costs of education. Making more public and/or private funds easily accessible to low-income students is a crucial component of the affordability solution. The critical question then becomes: Which is more desirable—public or private funds?

These issues demonstrate that we need adequate data to monitor the effectiveness of the tax credit and tuition cap, especially for low-income students. However, we also must move to a larger philosophical view of quality education as a public good created through redistribution of wealth. This vision must include a commitment to serve as many people as possible. By reducing state allocations, we create a greater burden on individuals; these high costs may bar many citizens, especially those who are low-income, from postsecondary education.

College affordability will require support from public and private funds as well as from students. Reliance on private benevolence could subject public institutions to narrow private interests, thus compromising the institutions' integrity. Therefore, a proper balance of funding sources is essential. Furthermore, community colleges need to be better understood as a neglected source of quality, cost-effective education, especially for low-income students. Community colleges have a great deal to offer, not only to underprepared and underprivileged students, but also to the solutions of affordability in higher education. People simply need to notice what these institutions already provide as models of quality education and fiscal restraint.

Ultimately, college affordability must be addressed by containing costs without jeopardizing high-quality, innovative education; by ensuring access to education through reducing the financial burden on students, especially those of low income; and by balancing the sources of funding. Public education is a public good that must be protected so all students who seek higher education can achieve their goals. ▪

Appendix A

Michigan tuition credit for qualifying colleges and universities, Revised October 12, 2004

Qualifying colleges and universities	2000	2001	2002	2003	2004
Alpena Community College					•
Andrews University			•		
Ave Maria College (Ypsilanti)	•				
Baker College		•			
Bay De Noc Community College		•			•
Bay Mills Community College	•	•	•	•	•
Concordia University					•
Cornerstone University					•
Delta College	•	•			•
Glen Oaks Community College	•				•
Grace Bible College		•			
Grand Rapids Community College		•	•		•
Great Lakes Christian College	•				
Henry Ford Community College	•	•			•
Jackson Community College		•			•
Kellogg Community College	•				•
Kendall College of Art & Design	•	•			
Kirtland Community College	•	•			•
Lake Michigan College					•
Lake Superior State University	•				
Lansing Community College	•	•	•		•
Lewis College Of Business				•	
Macomb Community College	•	•	•		•
Marygrove College		•			
Michigan Technological University					•
Mid-Michigan Community College	•	•			•
Monroe County Community College	•				•
Montcalm Community College		•			•
Mott Community College		•	•		•
Muskegon Community College	•	•			•
North Central Michigan College		•			•
Northwestern Michigan College	•	•			•
Oakland Community College	•	•	•	•	•
Oakland University					•
Olivet College	•				
Schoolcraft Community College	•	•			•
Southwestern Michigan College					•
St. Clair County Community College	•	•		•	•
Walsh College		•			•
Washtenaw Community College	•	•	•		•
Wayne County Community College	•	•	•	•	•
West Shore Community College		•			•
William Tyndal College				•	

Appendix B

Financial aid/scholarships

Public Act 591 of 2002 (2002)	Establishes an educational scholarship for eligible resident students enrolled in certain nursing programs
Mich. Comp. Laws § 390.973 (2001)	Competitive examinations; qualifying scores; scholastic achievement; certificates of recognition; renewal of scholarships; rules [M.S.A. 15.2097(33)]
Mich. Comp. Laws § 390.975a (2001)	State competitive scholarships; award of honorary scholarships; publication of names [M.S.A. 15.2097(35a)]
Mich. Comp. Laws § 390.991-997a (2001)	Tuition grants; establishment; purpose; qualifications
Mich. Comp. Laws § 390.991-999 (2001)	Tuition grants; independent institutions
Mich. Comp. Laws § 390.1251-1253 (2001)	Waiver of tuition for North American Indians; qualifications; participation of federal tribally controlled community college; eligibility for reimbursement [M.S.A. 15.2114(1)]
Mich. Comp. Laws § 390.971 (2001)	State competitive scholarships; establishment; purpose [M.S.A. 15.2097(31)]
Mich. Comp. Laws § 390.1281-1288 (2001)	Part-time independent student grants
Mich. Comp. Laws § 390.1301-1307 (2001)	Legislative Merit Award Program Act
Mich. Comp. Laws § 390.975 (2001)	First-year scholarships; number awarded; renewal; duration; limitation on appropriation; award of residual scholarships [M.S.A. 15.2097(35)]
Mich. Comp. Laws § 390.981 (2001)	Allotment of scholarships to high schools; eligibility of students; implementation of awarding procedure; award of remaining scholarships
Mich. Comp. Laws § 390.1401-1409 (2001)	Michigan Educational Opportunity Grant Program
Mich. Comp. Laws § 390.1451-1459 (2001)	Michigan Merit Award Scholarship Program
HB 5317 (2001)	Ed Saving Account; clarifies penalty provision of tax deferred education savings account
Mich. Comp. Laws § 390.1271-1278 (2001)	Tuition differential grants; independent institutions
Mich. Comp. Laws § 390.355 (2001)	Michigan College of Mining and Technology; scholarships based on financial need
Mich. Comp. Laws § 389.123(b) (2001)	Community College Act; may waive tuition for exchange of education services
Mich. Comp. Laws § 388.1051-1055 (2001)	Special education scholarships
Mich. Comp. Laws § 390.951-961 (2001)	Michigan Higher Education Assistance Authority; creation [M.S.A. 15.2097(1)]

Other financial assistance

Mich. Comp. Laws § 390.1323 (2001)	Graduate or professional school work-study program

Targeted scholarships for low-income students

Mich. Comp. Laws § 390.1251-1253 (2001)	Waiver of tuition for North American Indians; qualifications; participation of federal tribally controlled community college; eligibility for reimbursement [M.S.A. 15.2114(1)]

Tuition savings plan

Mich. Comp. Laws § 390.1471-1486 (2001)	Michigan Education Savings Program Act

References

Almanac Issue 2004-05, Chronicle of Higher Education. August 27, 2004.

Almanac Issue 1992-93, Chronicle of Higher Education. August 26, 1992.

Evelyn, Jamilah (2004). "2-Year Colleges Face an Identity Crisis." *The Chronicle of Higher Education.* Vol. LI, No. 9 (October 29, 2004). B1-4.

Fleming, Brendon (2004). "Public Colleges Raise Tuition Sharply, but Not as Much as in Recent Years." *Chronicle of Higher Education.* Vol. LI, No. 4 (September 10, 2004). A22-23.

Harkins, Christopher (2004). "Number of Pell Recipients." Michigan Senate Majority Policy Office.

Higher Education Institutional Data Inventory (HEIDI). https://mcgiweb1.mcgi.state.mi.us/heidi/home/welcome.htm.

Hoover, Eric (2004). "Public Colleges See a 10 percent Rise in Tuition for 2004-5: *Chronicle of Higher Education.* Vol. LI, No. 9 (October 29, 2004). A1, A38-45.

Jen, Kyle I. (2004). *Net Tuition Costs After Financial Aid at State Universities.* Lansing: Michigan House Fiscal Agency Report.

La Prad, Jeannine M. (2004). "Expanding Postsecondary Educational Opportunities for Working Adults." National Governors Association Pathways to Advancement Policy Academy.

Lt. Governor's Commission on Higher Education and Economic Growth (2004). *Background Briefing for Commission Members.* http://www.cherrycommission.org/resources.htm.

Michigan College Tuition Income Tax Credit Certification. Department of Treasury. www.michigan.gov.

Michigan Department of Labor and Economic Growth (2004). *Activities Classification Structure 2002-2003 Data Book.*

Michigan Department of Treasury (2004). "Qualifying Colleges and Universities: Michigan Tuition Tax Credit."

NASSGAP (National Association of State Student Grant and Aid Programs) at http://www.nassgap.org/index.aspx. 35th Annual Survey 2003-2004.

The National Center for Public Policy and Higher Education. "Michigan Report," *Measuring Up 2004: The National Report Card on Higher Education.* San Jose, CA.

_____ (2004). NEA Higher Education Advocate. Vol. 22, No. 1.

Prince, Hank (2004). "Best Approximations of Resident Undergraduate 'Net Tuition Costs' for the Period of FY 1998 through FY 2003." A report prepared for the Presidents Council, State Universities of Michigan.

_____ (2003). The Long View: *State University Enrollments, Revenues, and Expenditures FY 1977 through FY 2002.* Michigan House Fiscal Agency.

SPIDO: State Policy Issues Database Online. http://www.wiche.edu/policy/SPIDO/detail.asp?domain=9&submit=Search&state=MI&searchby=state. Technical Guide at http://measuringup.highereducation.org/technicalguide.cfm.

United States Census Bureau (2002). "The Big Payoff: Educational Attainment and Synthetic Estimates of Work-Life Earnings." U.S. Department of Commerce, Economics and Statistics Administration. Washington, D.C.

Approaching the dilemma from both sides:
PROMISE credits for young students and creating an environment conducive to controlling costs

Sandy Baum

Sandy Baum is a senior policy analyst for the College Board and is a professor of economics and a financial aid consultant at Skidmore College in Saratoga Springs, N.Y. She manages Trends in Student Aid and Trends in College Pricing for the College Board and has served as a consulting economist to the College Board's Financial Aid Standards and Services Advisory Committee since 1988. She has worked with a variety of higher education organizations and with individual colleges and universities on the issues of college affordability and student financial aid. Baum earned her bachelor's degree in sociology at Bryn Mawr College and her doctorate in economics at Columbia University.

Executive summary

Any solution to the college affordability problem must involve reductions in the cost of producing quality higher education as well as increased and better-targeted subsidies for students with high levels of economic need. There is no magic bullet, and no single approach will provide the full solution. This essay makes an innovative proposal for increasing the effectiveness of federal subsidies to college students and discusses a fundamental but often ignored aspect of reining in costs on college campuses.

Under the program of PROMISE credits for low-income students, the federal government will award credits annually, beginning in the seventh grade, to students who are eligible for free and reduced-price school lunch programs or who are on Temporary Assistance for Needy Families (TANF). The credits will accumulate, accruing interest, and will be available only for the financing of postsecondary education expenses. The PROMISE program will provide early assurance for low-income students that adequate funds will be available to allow them to continue education after high school. It will also allow subsidies to be based on family income levels over the long term, rather than on just a snapshot of financial circumstances from the year preceding college enrollment.

Improved communication about financial issues among the various constituencies participating in the shared governance process on college and university campuses will create an environment more conducive to controlling costs. The widespread perception of conflict between the fundamental academic mission and the bottom line must be altered if strategies to rein in costs are to be implemented successfully. For example, facilitating the completion of a bachelor's degree in three years would allow the faculty to preserve academic integrity yet make college more affordable for students. But the success of this type of program requires all constituencies on campus to accept the reality that the ongoing viability of higher education institutions depends on integrating the educational mission with realistic financial considerations.

Introduction

The college cost dilemma will be solved only with efforts on both the supply side and the demand side of the higher education market. Slowing the spiraling published tuition levels is critical, but costs of attendance will always be too high to make college accessible to students from low-income families without innovative and generous programs of grant aid. In other words, any solution to the college affordability problem must involve reductions in the cost of quality higher education as well as increased and better-targeted subsidies for students with high levels of economic need. There is no magic bullet, and no single approach will provide the full solution. This essay makes an innovative proposal for increasing the effectiveness of federal subsidies to college students and discusses a fundamental but often ignored aspect of reining in costs on college campuses.

PROMISE credits for low-income students will provide early assurance that adequate funds will be available to allow them to continue their educations after high school. This program will also allow subsidies to be based on family income levels over the long-term rather than on

just a snapshot of financial circumstances from the year preceding college enrollment.

Improved communication about financial issues among the various constituencies participating in the shared governance process on college and university campuses will create an environment more conducive to controlling costs. The widespread perception of conflict between the fundamental academic mission and the bottom line must be altered if strategies to rein in costs are to be successful. For example, facilitating the completion of bachelor's degrees in three calendar years could benefit students significantly, but acceptance of this type of innovative program on campus requires successful integration of academic and financial priorities.

Subsidies for students: PROMISE credits

Low-income students face multiple barriers to access and success in higher education. There is no doubt that elementary and secondary education experiences, as well as family support and expectations, create gaps between young people from different backgrounds that cannot be closed by college funding. More attention to the interaction between finances and preparation for college could reduce educational inequities that may be resistant either to simple increases in existing student grant programs or to moderations in tuition and fee levels. A successful approach to the student aid problem must incorporate an early commitment to students, assuring them that the funds will be available if and when they are academically prepared for college.

Although some existing programs are based on the concept of early commitment of grant funds, these programs are not well developed, and no comprehensive effort in this direction has been undertaken on a national level. The first widespread discussion of this approach came in 1981, when Eugene Lang promised a class of sixth-graders in Harlem that

their college tuition would be paid. The I Have a Dream Foundation (IHAD), which now operates in 27 states, probably best represents the most common image of early commitment programs. The promise is simple: Students who complete high school and meet the requirements of the program will receive funding for their college tuition. Unfortunately, the promise is not always a formal, written agreement. Moreover, only a small percentage of the eligible young people in the nation have access to programs such as IHAD.

The state program most consistent with the model of early targeting, academic support, and assurance of financial aid for low-income students is Indiana's Twenty-first Century Scholars program. Students eligible for the reduced-price school lunch program enroll during their eighth-grade year, although financial aid estimates are not provided until the junior year of high school. These estimates, based on family financial information, take the form of general eligibility letters rather than specific guaranteed awards.

The federal government has made some attempts to move toward early-intervention programs—for example, with Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) and previously with National Early Intervention Scholarship and Partnership Programs (NEISP). GEAR UP provides matching funds to states and educational consortia. However, no consistent model for these programs exists, and they certainly cannot be characterized as a coherent national effort to assure every middle school student in the United States that adequate funds for college will be available to him or her.

Unfortunately, the most reliable early guarantee of college funding may be found in the relatively new state merit-based grant programs, which, unlike most need-based state grant programs, generally function as entitlements. The programs, modeled after and epitomized by the Georgia Hope Scholarship

program, are not targeted at—and often do not even reach—students at risk for college access. However, their effectiveness in removing financial concerns for students confident of their eligibility provides a lesson in successful approaches to changing the way young people think about their college options.

The best program would target low-income students, motivating them to complete a college-preparatory curriculum and removing doubt about whether higher education will be within financial reach. At the same time, the program must be designed carefully to ensure fiscal manageability. Making promises of funding years in advance, given the volatility of family circumstances and the uncertainty of long-term public budget projections, is one major concern with early commitment programs.

> **The best program would target low-income students, motivating them to complete a college-preparatory curriculum and removing doubt about whether higher education will be within financial reach.**

The PROMISE credits proposed here combine the effective targeting of the Pell grant program, the early intervention of programs such as I Have a Dream, and the clear commitment of the burgeoning state entitlement-based grant programs, along with President George W. Bush's goal of an "ownership society."

The summary provided here is not prescriptive; some of the specific details could be modified without diminishing the program's effectiveness. For ease of description, not all options are specified. For example, beginning the program in the seventh grade is not absolutely necessary. The program might work even if it began as late as ninth grade, and beginning in fifth grade probably would be an improvement. The critical idea is that the program begins early enough to involve students before they make academic

choices that significantly diminish their future educational prospects.

Beginning in the seventh grade, students whose families are eligible for free and reduced lunches or who are on TANF receive annual PROMISE credits. These federal funds are credited to a personal education savings account. The funds are available to the student to finance postsecondary education, regardless of changes in family circumstances over time. Each year, eligibility for additional credits is determined anew. New accounts are opened for students who become eligible for the first time because of diminished family resources. Students whose family circumstances improve, making them ineligible for federal income support programs, do not receive new credits but do maintain ownership of their existing accounts.

The accounts actually need not be funded in advance. This approach has the advantage of postponing the impact on the federal budget. Moreover, the absence of advance funding eliminates the need to return unused funds to the treasury. Nonetheless, students must receive annual notices of the status of their PROMISE credit accounts.

To make the amount of funding available to students at the time of high school graduation more dependent on recent financial circumstances than on circumstances four or five years earlier, the amount of the basic credit should increase each year. For example, an opening credit of $500 might be made to a PROMISE account for each eligible student at the beginning of the seventh-grade year. Assuming a 5 percent interest rate, this $500 will have grown to $670 six years later, when the

student has graduated from high school and is ready to begin college. If the student remains eligible on the basis of parental resources and eligibility for federal means-tested income support programs, an additional $1,000 will be credited to the PROMISE account at the beginning of the eighth grade. That $1,000 will grow to $1,276 in five years. A student who has received credits in each of these two years but receives no further credits because of improved family financial circumstances will graduate from high school with $1,946 ($670 + $1,276 = $1,946) in a PROMISE account. A student who remains eligible for the maximum PROMISE contribution every year will graduate from high school with a total of $16,516 in the account. This example, illustrated in Table 1, provides the fully funded student with an amount approximately equal to four years of the current maximum Pell grant at the time of high school graduation.

Tables 2 and 3 illustrate alternative credit patterns. In Table 2, the annual credit is the same each year: $2,000. This approach has the advantage of simplicity. Table 3 provides an example of a credit pattern that would allow fully funded students to graduate from high school with funds approximately equal to four years of

current average tuition and fees at a public four-year college or university.

PROMISE funds can be withdrawn only for qualifying postsecondary education expenses. These expenses include tuition, fees and qualifying living costs at accredited postsecondary institutions. It is critical that the funds be applicable to room and board costs. Commuter costs also must be included because those expenses account for the largest share of the cost of attendance at two-year public colleges, where many holders of PROMISE accounts will enroll. Students who do not enroll in college immediately after high school retain access to their accounts until they reach the age of 30.[1]

PROMISE account credits and growth

The PROMISE program is targeted at traditional-aged students because it involves early financial commitments to middle school students. However, it makes funds available to nontraditional students as long as they enroll in postsecondary education before their accounts expire. Although some may argue that the funds should be available at any age people choose

Table 1: Generating current maximum Pell award levels

Year	Credit	End 7th	End 8th	End 9th	End 10th	End 11th	End 12th
Begin 7th	$ 500	$ 525	$ 551	$ 579	$ 608	$ 638	$ 670
Begin 8th	$ 1,000	$ 1,000	$ 1,050	$ 1,103	$ 1,158	$ 1,216	$ 1,276
Begin 9th	$ 1,500		$ 1,500	$ 1,575	$ 1,654	$ 1,736	$ 1,823
Begin 10th	$ 2,000			$ 2,000	$ 2,100	$ 2,205	$ 2,315
Begin 11th	$ 2,500				$ 2,500	$ 2,625	$ 2,756
Begin 12th	$ 3,500					$ 3,500	$ 3,675
Begin college	$ 4,000						$ 4,000
Total							$ 16,516

Note: Totals reflect a 5 percent interest rate growth.

---

[1] The age at which the account expires is one of the aspects of the program that could easily be modified without altering its fundamental nature.

Table 2: Single annual deposit amount

Year	Credit	End 7th	End 8th	End 9th	End 10th	End 11th	End 12th
Begin 7th	$ 2,000	$ 2,100	$ 2,205	$ 2,315	$ 2,431	$ 2,553	$ 2,680
Begin 8th	$ 2,000	$ 2,000	$ 2,100	$ 2,205	$ 2,315	$ 2,431	$ 2,553
Begin 9th	$ 2,000			$ 2,000	$ 2,100	$ 2,205	$ 2,315	$ 2,431
Begin 10th	$ 2,000				$ 2,000	$ 2,100	$ 2,205	$ 2,315
Begin 11th	$ 2,000					$ 2,000	$ 2,100	$ 2,205
Begin 12th	$ 2,000						$ 2,000	$ 2,100
Begin college	$ 2,000							$ 2,000
Total								$ 16,284

Note: Totals reflect a 5 percent interest rate growth.

Table 3: Generating the full price of four years of tuition and fees at a public four-year college

Year	Credit	End 7th	End 8th	End 9th	End 10th	End 11th	End 12th
Begin 7th	$ 2,000	$ 2,100	$ 2,205	$ 2,315	$ 2,431	$ 2,553	$ 2,680
Begin 8th	$ 2,500	$ 2,500	$ 2,625	$ 2,756	$ 2,894	$ 3,039	$ 2,553
Begin 9th	$ 3,000			$ 3,000	$ 3,150	$ 3,308	$ 3,473	$ 2,431
Begin 10th	$ 3,500				$ 3,500	$ 3,675	$ 3,859	$ 2,315
Begin 11th	$ 4,000					$ 4,000	$ 4,200	$ 2,205
Begin 12th	$ 4,500						$ 4,500	$ 2,100
Begin college	$ 5,000							$ 5,000
Total								$ 27,704

Note: Totals reflect a 5 percent interest rate growth.

to use them, equity and efficiency dictate a time limit. After individuals have been in the labor force for a number of years, the income levels of their families of origin become less reliable measures of financial constraints. In addition, providing an incentive to enroll in postsecondary education sooner rather than later is sensible. Younger students have a better chance than adult students of completing their degrees in a timely manner and participating in the labor force as college graduates for a period of time that ensures a healthy rate of return.

A potential problem with the program design described here is the "cliff effect." It is important that

eligibility for PROMISE be simple and that students and their parents not be required to complete detailed financial statements each year. For this reason, eligibility for other federal programs is an appealing criterion. However, this system makes it difficult, or even impossible, to have different levels of annual PROMISE credits for different students. Moreover, the small size of the annual credits, particularly in the early years, would likely make differentiating between recipients inefficient. On the other hand, students whose family income may have been only a few dollars too high to qualify for other federal subsidies over their entire secondary school career should not lose out on the entire subsidy. Therefore, the Pell grant

program, which provides graduated funding levels based on more detailed financial information, would remain vital to the student aid system.

The integration of the Pell grant program with the PROMISE program raises the question of how the federal needs analysis methodology would treat the credits accumulated in the PROMISE account. On one hand, students without PROMISE credits reasonably could be said to deserve larger Pell grants than those with similar current financial circumstances who have the benefit of these accounts. On the other hand, the existence of the accounts signifies long-term financial hardship. One of the shortcomings of the current need analysis methodology is that it cannot measure long-term financial capacity and is forced to rely on one year of financial data as a proxy for capacity to pay.

The most reasonable approach to this quandary is to treat the PROMISE credits as a parental asset in assessing Pell grant need. In other words, the impact would be similar to that of a 529 college savings plan or any other assets parents might have accumulated to help finance their children's college educations. Students with PROMISE accounts are students whose parents do not have adequate resources to contribute to these tax-preferred accounts. It is only equitable that the government makes such contributions to compensate for this difference.

PROMISE credits are designed to encourage academic achievement and preparation for college. However, attaching any specific academic criteria to receipt of the annual credits would violate the essence of the program. Admission to college is the reward

> **Admission to college is the reward for academic achievement. PROMISE funds are the insurance policy that prevents financial constraints from rendering that reward meaningless for low-income students.**

for academic achievement. PROMISE funds are the insurance policy that prevents financial constraints from rendering that reward meaningless for low-income students.

The funds that have been credited to PROMISE accounts belong to the student and cannot be subject to future appropriations. However, the risk of subjecting the overall program to the vicissitudes of the Congressional budget process leads to the notion of operating the PROMISE program through the tax code rather than through the expenditure side of the federal budget. Essentially, PROMISE could provide advance notice of a refundable tax credit that would become available in a future year, when educational costs are incurred. The credit would be determined through the parents but would be assigned to individual students, who would receive annual statements of their accrued PROMISE credits.

The PROMISE approach to subsidizing students is consistent with President Bush's concept of the ownership society. These accounts provide students whose parents are unable to help them finance higher education with a stake in the future. The federal government now subsidizes more affluent parents to encourage them to set aside funds for their children's higher education. PROMISE credits are parallel to funds that middle- and upper-income parents are able to set aside; each young person deserves a transfer from the previous generation.

This reasoning leads to an obvious source of funding for PROMISE credits. Reinstatement of the estate tax would allow funding to come only from taxpayers who have already had the opportunity to provide generously

for their own progeny. The benefit of financial bequests from one generation to the next would be shared by those whose circumstances of birth too often exclude them from the opportunities generated by the transmission of wealth.

Facilitating cost reduction on campus

Providing increased subsidies for low-income students to enroll in college is clearly a prerequisite to increasing college access. However, if the spiral in tuition levels is not moderated, these subsidies will be chasing a moving target, and the gap between ability to pay and cost of attendance will continue to grow for low- and moderate-income students. Innovative approaches are also needed on the supply side.

Implementing even straightforward steps—such as purchasing consortia or sharing facilities and faculty across institutions—is a struggle on many campuses. More innovative measures designed to reduce costs and/or supplement institutional revenues are likely to meet even stronger resistance from faculty members who are committed to preserving the traditional approach of focusing on academic opportunities with minimal attention to financial constraints.

The conflicting perspectives and priorities of various campus constituencies require attention. Implementing innovative cost-control strategies requires that all campus constituencies increasingly accept the notion that the ongoing viability of higher education institutions depends on integrating the educational mission with realistic financial considerations. Gaining this acceptance requires understanding that resistance to innovations designed to cut costs is not necessarily based on either a sense of entitlement or a lack of concern for students and affordability. Rather, it often

results from a strong sense of responsibility for the core mission of the institution.

An example from another arena may be helpful. It is easy to imagine that medical professionals in a public hospital might be ambivalent about a for-profit company taking over their hospital. Although they might welcome the infusion of funds, they would likely be concerned that the quest for profits would overtake sensitive, quality patient care as the top priority. Similarly, faculty members are concerned that a focus on the bottom line might deflect attention from the intellectual and academic values to which they are committed. Only open dialogue, clear information about constraints and trade-offs and respect for this protective attitude toward existing programs and procedures can foster the acceptance of cost-cutting innovations.

The decision-making process on typical college campuses is quite different from that of most businesses. The tradition of shared governance—among governing boards, administration, faculty and, often, students—is deeply entrenched. Faculty members tend to view themselves as responsible for accomplishing the educational mission of the institution rather than as employees subject to directives from above. Engaging faculty in decisions about institutional priorities, curricular design and personnel matters can help create an intellectual and educational community that maximizes the contributions of all its members. Successful shared governance does not require that all priorities be shared or that consensus be reached on all decisions. It does require that everyone be open to thinking in new ways and to engaging with the language and the values of others.

> **The tradition of shared governance—among governing boards, administration, faculty and, often, students—is deeply entrenched.**

To understand and successfully manage enrollments, tuition and fees, compensation and other aspects of institutional revenues and expenditures, financial administrators must think in terms of concepts such as the demand for their services, the incremental cost of new programs and the price sensitivity of potential "customers." The tendency to use this language creates one of the barriers to successful campus conversations about limiting costs. Many college faculty members see the use of for-profit business terminology in the academy as disrespectful of the academic mission. Individuals more immersed in the concrete world of finance are likely to interpret this reaction as irrational and unrealistic. These different perceptions characterize an environment of conflict, rather than a setting conducive to cooperation in meeting challenging shared goals. More open communication about the ways in which people in different roles and with different kinds of training think and talk about decisions and priorities can diminish the barriers.

One constructive measure for reducing the cost to students is the development of programs that allow students to earn a four-year degree in three years. Although attention generally is focused on the price of a year of study, in reality, one of the factors making college more expensive for students is the increasing difficulty of graduating in four years, especially at public colleges and universities where course availability is particularly limited. Facilitating early graduation would not reduce the number of credit hours for which students must pay. However, summer sessions are generally less expensive, both for institutions and for students, than standard academic terms. Moreover, foregone earnings constitute a significant portion of the cost of education for students. Allowing them to enter the labor force earlier—with a

> One constructive measure for reducing the cost to students is the development of programs that allow students to earn a four-year degree in three years.

four-year degree in hand—can significantly affect the true cost of the degree.

A proposal for an accelerated program of this sort on a typical campus would likely generate two separate conversations. The financial side of the community would focus on the dollars and cents, primarily from the perspective of the institution. The extent to which the program would increase applications and the potential for diminishing demands on the financial aid budget would also be central issues. Faculty, however, would likely be concerned only with the academic integrity of this innovation. If the administration pointed out the cost savings involved, faculty might well counter that this justification is inconsistent with institutional values.

The accelerated degree program would have a much better chance of success if everyone on campus viewed the cost problem as an issue affecting students' educational opportunities rather than simply as an institutional finance question. Moreover, if presented with adequate information about existing financial constraints and with outlines of the options and trade-offs available, faculty would likely welcome the opportunity to take responsibility for developing a three-year program that safeguards the academic experience.

Another advantage of the three-year option is that, unlike many reasonable approaches such as sharing of facilities and outsourcing, it does not necessarily involve layoffs. Given the magnitude of compensation as a percentage of total costs in higher education institutions, many cost-cutting measures are likely to involve job losses. Although these events are not uncommon in most of the economy, these steps are difficult on college campuses—and not only because of a sense of privilege or entitlement. Rather, a sense of community and shared responsibility makes them

less common. The solution is not avoiding all layoffs; it is in narrowing the communication chasm on campus, planning in a manner sensitive to the mission of the institution and operating with respect to the priorities of the community.

A variety of concrete steps can be taken to improve the quality of campus conversations about financial constraints. Adequate information, open discussion of the trade-offs involved and attention to the role of language are important. The details of the appropriate processes will differ on different campuses, but in all cases, the focus must be on listening, respecting differences and acknowledging both fundamental shared goals and values and differing priorities. Educating faculty not directly involved in institutional finance about the economic environment in which the campus operates and about the applicability of basic economic concepts to campus circumstances is vital. Similarly, financial administrators and governing boards must understand the fundamental differences between educational institutions and other types of firms and act accordingly. Concerns on campus that the basic mission of the institution will be hindered by attempts to transfer for-profit efficiency measures to the academy must be addressed.

Projects designed to improve communication on campus about financial issues and cost constraints may not appear to belong on an itemized, quantified list of cost-saving measures. However, they are a prerequisite to the innovative approaches designed to curb growing costs of higher education without unduly sacrificing quality.

Conclusion

This essay outlines two concepts. The first is PROMISE accounts to improve access to postsecondary education for low-income students. The second is an approach to more effective communication on college and university campuses—communication that is vital in controlling institutional costs with minimal impact on

educational opportunity. Accelerating the time required to earn a bachelor's degree is one possible way to bridge those goals.

The concepts discussed here will not solve all of the problems of access and affordability in higher education. Other changes in the way all of the partners in higher education financing operate are certainly necessary. One approach that straddles the supply and demand sides of the market is the idea of federal subsidies for institutions that enroll and graduate low-income students. This policy is likely to encourage institutions to direct more of their own aid dollars to low-income students; it also provides an additional source of revenue to institutions to meet the higher costs commonly associated with educating students from less privileged backgrounds. Integrated approaches of this sort, designed with incentive effects in mind, will remain critical, no matter how much progress we make in improving access and affordability in higher education.

The approaches discussed here are directed at some of the barriers to college access and affordability that have not received adequate attention in policy discussions. PROMISE accounts combine necessary dollar subsidies targeted at low-income students with early commitments of financial assistance, an improved approach to determining the appropriate allocation of subsidies across students by relying on long-term income patterns and a sense of ownership and opportunity among students who cannot view access to college as their right under current practices.

Subsidies for students will never be adequate if college prices are not held in check. However, cost-saving measures and sanctions against excessive tuition increases will not solve the problem in the absence of collaborative efforts on college campuses to restrain the cost spiral without sacrificing the fundamental mission of providing the highest-quality educational experiences for students.   ■

Tipping point:
Controlling college textbook prices

Merriah S. Fairchild

Merriah S. Fairchild is a higher education advocate for the California Public Interest Research Group (CALPIRG). Based in Los Angeles, she works with the CALPIRG student chapters on higher education issues with an eye toward increasing financial aid for college students. She got her start with the state PIRGs as a student at the University of Oregon, where she served as chair of the OSPIRG Student Chapters. She received a bachelor's degree from the University of Oregon in 2000 and then joined the staff of the state PIRGs as a campus organizer for CALPIRG.

Executive summary

Providing the opportunity to attend institutions of higher learning is the most efficient way to develop a more educated, skilled and engaged citizenry. Given the economic challenges that face states such as California, however, the amount of state funding available for higher education is highly unlikely to meet the population's needs in the next few years. For example, tuition at the University of California will increase again in 2005-2006, a 79 percent increase since 2001-2002.[1] As a result, many students and their families will bear a greater portion of the cost, and other students will be excluded completely.

Now is an important time to implement new, innovative strategies for maintaining access to higher education by reducing smaller, ancillary college costs that can act as a "tipping point" for students on the economic margins. The cost of textbooks has always constituted a meaningful portion of higher education costs. In the past two decades, however, the price of textbooks has soared to unprecedented levels. According to the National Association of College Stores, the wholesale price of college textbooks has gone up 32.8 percent since 1998, almost double the 18 percent increase in the wholesale price of ordinary books over the same period.[2]

This dramatic increase in textbook costs, combined with increases in tuition and cuts to financial aid, has many students worried about how they will afford a college education. As a result, scrutiny of the textbook industry has intensified. In October 2003, *The New York Times* ran a feature story on the industry's opaque pricing practices, sparking news stories around the country and prompting calls from Congress and state legislatures for policy solutions.[3]

In January 2004, the CALPIRG Education Fund released a report entitled *Rip-off 101: How the Current Practices of the Publishing Industry Drive Up the Cost of College Textbooks*. The report found that part of the reason students pay close to $900 on average each year for textbooks is that publishers artificially inflate the price of textbooks. They do this by adding unnecessary bells and whistles, and by forcing cheaper used books off the market in favor of new editions that are similar to the previous editions.

Based on these findings, the following recommendations summarize the reforms that the CALPIRG Education Fund is supporting and working to achieve:

- Textbooks should be priced and sold to students at a reasonable cost.

  —Publishers should keep the cost of their books as low as possible without sacrificing educational content.

  —When publishers sell textbooks bundled with other items, they also should sell the same textbook separately.

  —Publishers should pass on to students the cost savings achieved from creating online textbooks in lieu of print editions.

  —Faculty should have the right to know how their textbook choices will affect students financially.

- **Publishers, faculty and universities should build a vibrant used textbook market.**
  - **Each textbook edition should be kept on the market as long as possible without sacrificing the educational content so that students can buy and sell used copies.**
  - **Faculty should give preference to the cheapest textbook when the educational content is equal.**
  - **Students should be able to secure textbooks in multiple forums.**

Because the cost of textbooks can act as a "tipping point" for many students, discussion focused on the larger challenge of increasing access to college as state and federal aid fails to keep pace with rising college costs must include strategies for controlling textbook costs.

Context

Providing the opportunity to attend institutions of higher learning is the most efficient way to foster the development of a more educated, skilled and engaged citizenry. Offering this opportunity to talented students is essential to the long-term economic and social health of our country and should therefore be given a high priority during the nation's current economic struggles. However, given the economic challenges facing states such as California, the amount of state funding available for higher education is highly unlikely to increase in the next few years. For example, tuition at the University of California will rise again in 2005-2006, a 79 percent increase since 2001-2002.[4] As a result, many students and their families will bear a greater portion of the cost, and other students will be excluded completely.

Now is an important time to implement new, innovative strategies for maintaining access to higher education by addressing affordability and reducing smaller, ancillary college costs that can act as a "tipping point" for students on the economic margins.

Background

The cost of textbooks has always constituted a significant portion of higher education costs. In the past two decades, however, the price of textbooks has soared to unprecedented levels. According to the National Association of College Stores, the wholesale price of college textbooks has gone up 32.8 percent since 1998, almost double the 18 percent increase in the wholesale price of ordinary books over the same period. The average annual increase was 5.9 percent

[1] Rebecca Trounson (2004). "UC Fee Hikes Ok'd Again," *The Los Angeles Times*, November 19.

[2] California Performance Review (2004). "Make Higher Education More Affordable by Lowering the Cost of Textbooks." A copy of the report is available at: http://report.cpr.ca.gov/cprrpt/issrec/etv/etv17.htm.

[3] Tamar Lewin (2003). "Students Find $100 Textbook Cost $50, Purchased Overseas." *New York Times*. October 21.

[4] Rebecca Trounson. (2004). "UC Fee Hikes Ok'd Again," *The Los Angeles Times*, November 19.

for college texts, whereas other books saw an average annual increase of 3.1 percent for other books.[5]

The National Association of Independent Colleges and Universities reports that the national average cost of books and supplies for a first-time, full-time student was $867 in the 2002-2003 academic year.[6] Some students, particularly science and math majors, spend more than $800 in just one semester. A single chemistry text, *Solid State Chemistry and its Applications*, currently sells for $275 at the University of California—Santa Barbara (UCSB) bookstore.[7]

These dramatic increases in textbook costs, combined with increases in tuition and cuts to financial aid, have many students worried about how they will afford a college education. As a result, scrutiny of the textbook industry has intensified. In October 2003, *The New York Times* ran a feature story on the industry's opaque pricing practices, sparking news stories around the country and prompting calls from Congress and state legislatures for policy solutions.[8] In January 2004, Sen. Chuck Schumer (D-N.Y.) urged the U.S. Department of Education to encourage schools to sell materials separately and urged publishers to sell books unbundled from CD-ROMs and other materials.[9] In March 2004, the Connecticut legislature directed the state Commissioner of Higher Education to investigate the publishing industry's practices.[10] In April 2004, Illinois Gov. Rod Blagojevich asked the Illinois State Board of Education to investigate the textbook industry for price-gouging.[11] In July 2004, the House Committee on Workforce and Education held a hearing called "Are Textbooks Priced Fairly?" Witnesses included

representatives of the National Association of College Stores, the Association of American Publishers and the CALPIRG Education Fund, a 501 (c)(3) organization that works to promote affordable education, consumer protection and good government in the state of California. Most recently, in September 2004, California Gov. Arnold Schwarzenegger signed a bill urging textbook publishers and universities to offer more used textbooks and change many of the practices that increase costs to students, including bundling books with expensive add-ons such as CD-ROMs.[12]

Meanwhile, on campus, an increasing number of students and faculty members are calling for action that will hold the textbook industry accountable and lower textbook prices. In January 2004, the CALPIRG Education Fund released *Rip-off 101: How the Current Practices of the Publishing Industry Drive Up the Cost of College Textbooks*. The report surveyed cost information about the books most widely adopted at colleges and universities in California and Oregon and surveyed faculty members who taught from those books.[13]

The report found that part of the reason students pay close to $900 on average each year for textbooks is that publishers artificially inflate the price of textbooks by adding unnecessary bells and whistles. Simultaneously, they force cheaper used books off the market by producing new editions of textbooks that are very similar to the previous editions. The report also found that most faculty members surveyed think that many of the items added to the new editions do little to enhance the educational value of the book. In fact, faculty members often support efforts to

---

[5] California Performance Review (2004). "Make Higher Education More Affordable by Lowering the Cost of Textbooks." A copy of the report is available at: http://report.cpr.ca.gov/cprrpt/issrec/etv/etv17.htm.

[6] California Performance Review.

[7] California Performance Review.

[8] Tamar Lewin (2003). "Students Find $100 Textbook Cost $50, Purchased Overseas." *New York Times*. October 21.

[9] Senator Schumer Homepage. January 15, 2004. http://schumer.senate.gov/SchumerWebsite/pressroom/press_releases/PR02308.html.

[10] Connecticut Public Interest Research Group (ConnPIRG) Newsletter (Summer 2004). Available at: http://connpirg.org/newsletters/CTsummer2004.pdf pg. 2.

[11] *The Chicago Tribune* (2004). Editorial, "A Textbook Case of Inflation," *The Chicago Tribune*, April 16.

[12] Conor Dale (2004). "Governor Decides on Education Bills," *The Daily Californian*, September 20.

[13] Author's report. Available at: http://www.maketextbooksaffordable.com/newsroom.asp?id2=14221. Pg. 4

One calculus professor from UCLA wrote about his experience with calculus textbooks:

"The subject of calculus did not change much in the last 100 years! And there are no reasons why the textbooks have to be updated every five years or even more frequently. New illustrations are sometimes added, exercises are shuffled and so on, but these do not substantially affect teaching/learning. Textbook publishers produce new editions solely as a means to sell more books and make more profit."[14]

streamline costs and extend the shelf life of current editions. Lastly, the report found that, although 91 percent of students looked for used books each semester, fewer than half actually found them. The report, which was peer reviewed by multiple academics who supported its methodology, is available online at www.calpirgstudents.org or www.maketextbooksaffordable.com.

Thomson Learning, one of the nation's largest and most prominent publishers, produces a widely taught series of introductory calculus textbooks that offers a prime example of how publishers artificially inflate textbook prices. An inspection of one of its most popular books, *Calculus: Early Transcendentals*, revealed only cosmetic changes between the current edition, produced in 2003, and the previous edition, produced in 1999. However, the price difference was significant: A new copy of the current edition sells for about $125; a used copy

of the previous edition sells for between $20 and $90, depending on the seller and the condition of the book.

Thomson Learning also charges American students significantly more than their British and Canadian counterparts for the same books. According to the Web site of Thomson Learning's math and science division, Brooks/Cole (www.brookscole.com), *Calculus: Early Transcendentals* costs American students $125, but Canadian students pay only $97 ($125 C). British students pay about half the American price at $65 (€35). Although the problem is not limited to calculus texts or to Thomson Learning, these are particularly egregious examples of publishers' improper practices and of why student costs continue to escalate.

Solutions

Motivated by the findings of the *Rip-off 101* report, the CALPIRG Education Fund, working in close alliance with faculty at a variety of California institutions of higher education, is advocating for change at every level. CALPIRG Education is striving to reform the views and practices of everyone involved: publishers and their sales representatives, the faculty who choose the books, the administrators and student government leaders who run the campus, bookstore managers who order and sell the books and the students themselves.

The following recommendations summarize the reforms that the CALPIRG Education is supporting and working to achieve:

- Textbooks should be priced and sold to students at a reasonable cost.

  — Publishers should keep the cost of their books as low as possible without sacrificing educational content.

  — When publishers sell textbooks bundled with other items, they also should sell the same textbook separately.

---

14   Author's report. Available at: http://www.maketextbooksaffordable.com/newsroom.asp?id2=14221, pg. 14.

— Publishers should pass on to students the cost savings achieved from creating online textbooks in lieu of print editions.

— Faculty should have the right to know how their textbook choices will affect students financially.

— Publishers should disclose to faculty all of the different products they sell—including both bundled and unbundled options—and list how much each of those products cost. This information should be made available to faculty and departments when they are ordering textbooks.

— Publishers should disclose to faculty how the newest edition of each textbook is different from the previous edition. This information should also be readily available to faculty and students on an insert inside the books and posted where textbooks are sold.

• Publishers, faculty and universities should build a vibrant used textbook market.

— Each textbook edition should be kept on the market as long as possible without sacrificing the educational content so that students can buy and sell used copies.

— Publishers should give preference to creating paper or online supplements to current editions over producing entirely new editions of the whole textbook.

— Publishers should disclose the length of time they intend to produce the current edition so that professors know how long they can use the same book.

— Faculty should give preference to the cheapest textbook when the educational content is equal.

> Colleges and universities should encourage students to consider using online book swaps so that students can buy and sell used books to other students.

— Many avenues for students to secure needed books should be available.

— Colleges and universities should consider implementing rental programs similar to those at several universities in Wisconsin and Illinois. In these programs, students pay a quarterly or per semester fee that would support the cost of sharing books in the same way that K-12 students do.

— Colleges and universities should encourage students to consider using online book swaps so that students can buy and sell used books to other students and set their own prices.

Progress to date

Recently, students and faculty have worked together to implement these recommendations at seven University of California campuses in order to test the effectiveness of the CALPIRG Education Fund platform. We have already seen progress on a number of fronts.

In addition to the action taken by state legislatures and by Congress, students and faculty are also seeing progress with the publishers. On April 6, 2004, nearly 500 mathematics faculty from 100 of the largest and most prestigious universities around the country issued a joint call to action to Thomson Learning, asking that the company make four changes to the calculus book, *Calculus: Early Trancendentals*. First, the company should continue to publish each edition until sufficient new content in the field warrants a new version of the book; second, it should establish a transparent and fair pricing policy so American students are charged the same as their counterparts in other countries; third, Thomson should ensure that its sales representatives disclose textbook prices to faculty; and fourth, it should

produce a less expensive online version of the textbook and pass the savings on to students. A full copy of the letter and the ongoing correspondence with Thomson Learning is available at www.maketextbooksaffordable.com.

On April 19, 2004, Thomson Learning quietly negotiated a deal with the UCLA Mathematics Department and the UCLA bookstore. The agreement reduced the cost of three calculus books by 25 percent for the 2004-2005 academic year. Thomson Learning will now sell *Calculus: Early Transcendentals* to UCLA for $80 instead of $101. Although Thomson Learning denies that the efforts spearheaded by CALPIRG Education Fund motivated this price change, math faculty have told the students otherwise. Immediately after Thomson Learning's negotiation with UCLA, UCSB requested a similar deal and secured a 20 percent discount on calculus texts for UCSB students. After the UCLA deal, the CALPIRG Education Fund informed all 500 of the math professors who joined the call to action in April about the contract renegotiation. Students and faculty hope this trend will continue to spread to even more campuses and more publishers.

The CALPIRG Education Fund has also made progress with other publishers. In May 2004, some of the students who researched *Rip-off 101* and staff members who authored the report met with Pearson Education, another major American publisher. Soon after the students and staff reviewed the company's new series of online textbooks, Pearson publicly launched this series of digital books, which are half the cost of the equivalent printed editions. Pearson plans to make more than 300 textbooks available online by the end of the year.[15]

At the same time, the students and staff of the CALPIRG Education Fund have developed alternatives to expensive new textbooks by launching numerous free campus book swaps so students can buy and sell used books directly. To date, 20 campuses in nine states (California, Colorado, Connecticut, Oregon, New Jersey, Ohio, Massachusetts, Washington and Missouri) have launched book swaps.

Faculty members are also moving forward on these issues. The University of California-Irvine (UCI) Academic Senate on Student Affairs passed a resolution in May 2003, after a group of students interning with the CALPIRG Education Fund met with the faculty chair to encourage all faculty to order textbooks unbundled and to use the same edition of the same text as long as possible so that students will be able to buy and sell used copies.[16] The Academic Senate at UCSB passed a similar resolution in May 2004.[17] At the University of Missouri, faculty members are now making a concerted effort to increase the availability of used books for students. For example, faculty submitted early orders for 85 percent of the books they used in Spring 2005. Early book orders allow the bookstore to buy more used books from students because they know in advance which books they should buy back.[18] Faculty members are also writing their own textbooks and offering them to the public for free by posting them online.

These are important steps in the right direction, but we still have a long road to travel before we see wholesale decreases in textbook costs for students across the country. The progress with Thomson Learning needs to spread throughout the industry. Rental programs, which hold great promise for cutting student costs by 60

---

[15] http://www.pearsoned.com/safarix/index.htm.

[16] UCI Academic Senate Committee on Student Affairs 2003-2004 Report. Available online at http://www.senate.uci.edu/8_Reps&Pubs/AnnRep02_3/CSA.htm.

[17] UCSB Academic Senate Minutes May 27, 2004 Available online at http://senate.ucsb.edu/meetings/view.cfm?VIEW=MINUTES&ID=B3967A0E938DC2A6340E258630FEBD5A.

[18] Lee Logan (2004). "Bookstore Officials Anticipate Lower Costs" *The Maneater, University of Missouri Newspaper*, November 16.

Sam Nedler, a mathematics professor at West Virginia University, wrote Thomson Learning a letter describing his new textbook:

"I am writing a first-year calculus text that I will put on the Web for any university to adopt, free of charge. It's my belief that mathematics has a power all its own and that, when given a choice, a book that gets at the meat of the subject in a friendly but professional way will succeed. And who benefits? The students." [19]

percent or more, exist at only a handful of schools; they should be commonplace. More and more students are bargain shopping online, but it is important to provide them with nonprofit sites that allow them to go outside of the commercial market and sell books directly to each other. Instructors are highly energized to help, but only a fraction of the nation's faculty members have taken action; most have not yet been exposed to the workable solutions being circulated by the CALPIRG Education Fund program.

The CALPIRG Education Fund is committed to implementing the reforms described in this essay. California has served as an effective testing ground for the effort; it is manageable in size but significant enough to test the model and draw national attention. This project could expand beyond this state—and that step is vital if we are to see the type of sweeping, national change that is needed.

Conclusion

The progress on this issue in California is just the first step. Throughout the nation, publishers, educators and students must fundamentally shift their thinking about textbooks. We need a higher standard for the production and pricing of textbooks than we do for other consumer goods because these products affect the quality and affordability of higher education. These changes will not come easily; a whole industry of publishers and bookstores profits by selling new, expensive textbooks to students. However, if all stakeholders—including students, faculty, bookstores, publishers and college administrators—come to the table determined to lower textbook costs while maintaining educational excellence, textbook costs will drop at other schools, as they have at UCLA and UCSB.

Because textbook costs can act as a "tipping point" for many students struggling to afford college, discussion focused on the larger challenge of increasing access to college must include strategies for controlling those costs. ■

---

[19] Sam Nedler (2004). Letter to Thomson Learning. April 16. A copy of the letter is available online at http://www.maketextbooksaffordable.com/newsroom.asp?id2=13057.

Other ideas of note:
Thoughts on cost-cutting gleaned from unpublished essays

Corinne Wohlford Taff

Corinne Wohlford Taff is a freelance writer and editor and an affiliate assistant professor of English at Fontbonne University in St. Louis, Mo. A poet, she recently served as guest editor of *Delmar* magazine, a literary annual, and has published her poems in many venues.

When Lumina Foundation for Education issued its *Call for Solutions*, it hoped for a variety of responses from people with differing stakes in the college cost problem. The submitted essays indeed spoke with many voices. Although the responses differed and the solutions varied, one thing was clear: The cost of a college education is simply too high. On this point, there is no debate. Although only eight essays were selected for publication, many others offered ideas that deserve mention in this conversation; this final chapter will summarize several of the most thought-provoking ideas from those essays not chosen for publication.

Several respondents noted that a partial solution may be found in our nation's high schools. Like Bill Coplin and Virginia Gov. Mark Warner, Nancy Hoffman suggests that dual-enrollment programs in which high school students earn college credits may reduce college costs. She describes Florida's success with its dual-enrollment program, in which all the state's community colleges and four-year institutions must participate. However, Hoffman writes that the implementation of most dual-enrollment programs reflects parent or teacher pressure to challenge advanced students. She suggests that other students could also benefit, yet Maine is the only state specifically to have targeted academically underprepared students for its concurrent-enrollment programs. The more college credit is earned while the student is in high school, the less time and money he or she must spend on campus as a college student.

> The more college credit is earned while the student is in high school, the less time and money he or she must spend on campus as a college student.

When high school students apply to college, admissions and financial aid decisions engender another set of cost issues. Roy F. Heynderickx contends that merit-based discounting of tuition must be eliminated. Heynderickx argues that, because of merit aid, full classrooms no longer mean financial stability for most institutions, which necessitates higher tuition rates. Heynderickx proposes an association of college presidents, CFOs, admissions officers and financial aid staff address this issue; the collaboration, he suggests, is essential to navigating concerns over antitrust law. Another suggestion for financial aid strategies comes from J.C. Strauss, who writes that selective independent colleges might agree jointly to moderate tuition costs. Strauss points out that parents and students likely would be more drawn to these institutions. He makes the unlikely but intriguing suggestion that federal monies compensate institutions that pursue such a strategy for some of their lost tuition revenue.

Admissions considerations are complex. Harry C. Stille says the quality of admitted students is more important than their financial means. Thanks to what Stille calls higher education "cheerleaders," pursuit of a four-year college degree is almost *de rigeur* in the United States today. Stille accuses colleges and universities of capitalizing on this standard, pursuing enrollment over quality and serving only their pocketbooks in the process. Stille points to the increasing numbers of unprepared college freshmen and wonders why institutions continue to accept these students, especially because underqualified students are expensive for the institution, necessitating additional attention and services from faculty and staff. Moreover, more selective institutions have higher retention and graduation rates. Quality, Stille writes, should be the bottom line.

Like Timothy M. Kuehnlein Jr. and Olin Joynton of Alpena Community College in Michigan, Stille suggests that many students would benefit from two-year colleges. Stille therefore proposes that some four-year institutions be transformed into two-year schools that

would provide technical and job training and thus better serve students who are ill prepared for the academic rigors of a four-year college. Matching students to the learning environments best suited for them would save not only their money but taxpayers' as well.

Once students are on campus, they can reduce their costs with on-campus employment. This idea is not new; however, Forrest M. Stuart sheds new light on the concept. Stuart describes Rhodes College's innovative Student Associate Program (SAP) as more than just a traditional work-study program. SAP significantly reduces tuition by allowing students to fill staff positions. The program benefits the university by saving it the cost of a regular employee's salary and benefits, and students gain meaningful work experience designed to complement their classroom experiences.

For many institutions, retaining students is a key concern. In part because of high college costs, more than half of students who begin college at one institution finish at another, and these transfers sometimes occur with little or no planning. Michael Riccards therefore suggests a broad partnership that would create "articulation compacts" among colleges across the country. Riccards argues that overlapping the requirements of certain core courses—especially in common entry-level or general education courses in English, biology or mathematics, for example—would save money for students by allowing them to transfer credits from institution to institution with impunity, thus saving time and money.

Another curriculum suggestion is Harry C. Stille's contention that universities should offer a limited number of majors in order to concentrate faculty in specific areas. He believes that duplication of efforts

> **Matching students to the learning environments best suited for them would save not only their money but taxpayers' as well.**

and ineffective use of faculty are two major hindrances to reducing college costs. The latter idea in particular echoes similar ideas expressed by Bill Coplin, Carol Twigg, Mary F. Bushman and John E. Dean in the preceding essays.

Authors also pointed to graduate programs as part of the problem. Robert Berdahl, like Coplin, suggests curricular reform at this level. Berdahl would like to see doctoral degrees offered jointly between institutions in areas that public interest deems valuable. Moreover, Stille is concerned that universities emphasize faculty's research over their undergraduate teaching; he therefore advocates separate state funding for graduate and institutional research. Thus the money that currently funds this research would have its own revenue stream, independent of undergraduate tuition.

Many of the respondents to Lumina Foundation's *Call for Solutions* ultimately advocate reconceiving the very mission of higher education. Stille worries that universities are growing too concerned with image rather than quality; he points to expensive athletic programs—almost always funded by tuition revenue—as one particularly egregious example of prioritizing image over substance. However, the need to address a core mission permeates higher education. Berdahl calls for a highly differentiated public system of higher education. Concerned about mission drift and unconvinced that current regulatory practices will suffice, Berdahl calls for state policies to enforce public institutions' distinctive missions. He suggests state incentives to reward institutions that respond to the public's needs and collaborate with the K-12 system and with other sectors of society. Stille also calls for adherence to a state mission for its colleges and universities, with accountability built into that system. He argues that

boards of trustees often are narrowly focused on the particular institution they serve and therefore lack a sense of higher education's broader social mission. Stille contends that state oversight would help counter that problem.

The essays that Lumina Foundation received in response to its call—whether selected for publication or summarized in this chapter—range from modest, practical changes to paradigm-shifting overhauls. Both types of solutions should be considered in the important work of addressing burgeoning college costs. College costs cannot be cut solely in financial aid offices, as these essays vividly demonstrate. The discussion—and the solutions—must be carried out in all corners of the campus, at every level of society. Let's hope that these essays help catalyze that discussion and hasten the solutions. ▣

Toward a new way of thinking:
Quality, productivity and college costs

Dewayne Matthews

Dewayne Matthews is senior research director at Lumina Foundation for Education and leads the Foundation's research on student access and success in postsecondary education. Matthews has served in higher education policy roles at the Education Commission of the States, Western Interstate Commission for Higher Education, and the New Mexico Commission on Higher Education. He started his career as a first-grade teacher in Taos, N.M. Matthews is a graduate of the University of New Mexico, earned a master's degree in bilingual education at New Mexico Highlands University and has a doctorate in educational leadership and policy studies from Arizona State University.

Gordian knot: (n) any very difficult problem, insoluble in its own terms

Introduction

A Gordian knot binds higher education in the United States. Demand for higher education is exploding as both population growth and fundamental shifts in the economy produce more prospective students seeking some form of postsecondary education. If current participation rates do not increase, 2.3 million more students between 18 and 24 years old will need to be accommodated in postsecondary education by 2015, an increase of 13 percent. Increasing rates of college participation—a goal both nationally and in states—will increase enrollment even more. If the rates of college enrollment in all states were raised to the rate already reached by the highest-performing state, college enrollment nationwide would increase by 8 million students. This would represent more than a 50 percent increase in college enrollment.[1]

The demand for college is not limited to traditional-aged students. Adults need postsecondary education to meet the ever-increasing skill demands of the job market, and they already account for nearly 40 percent of undergraduate enrollment. It is likely that most adults will need to return to the postsecondary education system several times during their life to gain new skills and knowledge. The scale of the ultimate demand for postsecondary education from adults is unknown, but only 5 percent of adults in the United States are now enrolled. Significantly increasing college participation and graduation rates, for both traditional students and adults, is a growing national priority.

However, a lack of resources constrains higher education's ability to expand to meet this need. Colleges and universities that rely on state appropriations continue to face sharp limits, even reductions, in funding. The budgetary crises of the last five years have made it abundantly clear to almost everyone that policy-makers will be focused on a host of other priorities—from Medicaid and corrections to tax relief and K-12 education. Expansion is also restrained by the fact that American higher education is a particularly costly enterprise. By any measure (including cost per student or percent of GDP), the United States already spends more on higher education than any other industrialized nation.[2]

It is not that today's colleges and universities are suffering, though—far from it. While budgets have been very tight, steadily increasing student demand has allowed most institutions to maintain fiscal stability by turning to student tuition and fees to make up revenue shortfalls. But the money needed to expand higher education's role in society, and to accommodate all those who would seek postsecondary education, is not there.

Other countries seem to be doing a better job in responding to the need to provide postsecondary education to a larger share of the population. For the first time in history, the U.S. is no longer the leader among member states of the Organization for Economic Cooperation and Development (OECD) in the percentage of young adults obtaining a

---

[1] Education Commission of the States; *Closing the College Participation Gap*; October 2003.

[2] Organization for Economic Cooperation and Development; *Education at a Glance 2004*.

baccalaureate degree.[3] The United States is actually below the OECD average in the rates of entry by young adults into postsecondary education.[4] Rates of American participation and graduation have not fallen—they have been flat or increased modestly over the past 10 years. But other countries are raising their rates more rapidly, and we are falling behind.

The original Gordian knot was "untied" by a stroke of Alexander's sword—an early example of thinking outside the box. A similar conceptual breakthrough will be needed to solve higher education's conundrum. If one accepts the premise that the world economy is now based on knowledge—its acquisition, analysis and application—then what higher education has always professed is actually coming true: More and more people need and will demand advanced education. As more people seek postsecondary education, and as the economy depends on its availability, systems must be developed to deliver it, if not through the existing network of public and private higher education institutions, then by other means.

The need for new models

The sword that may cut through higher education's Gordian knot is the revolution in organizational structures that is sweeping through entire industries. As documented by Thomas Friedman, a convergence of forces, driven by information technology, has made new organizational structures not only possible, but also necessary in an increasingly globalized world.[5] Friedman calls these new organizational models "global

> The United States is actually below the OECD average in the rates of entry by young adults into postsecondary education.

work-flow platforms," and describes how almost any job can be divided up into component functions and distributed to efficient and effective knowledge workers anywhere in the world. According to Friedman and others, the quality of a nation's education system, including higher education, is of critical importance in maintaining economic competitiveness. However, higher education will also be affected and changed by these same forces. Industry after industry has been transformed by the introduction of new organizational models, and Friedman explains how the rate of change is accelerating. But for the most part, higher education has not yet begun this process of change.

Traditional higher education operates under an organizational model in which individual colleges and universities develop and deliver their own programs, with little cross-institutional collaboration or sharing of resources. Within institutions, individual faculty members generally develop courses and programs, deliver them to students, and assess learning. It is further assumed that the "best" way for learning to take place is for faculty and students to meet face-to-face at a scheduled time, for the professor to deliver much of the course content orally while students write it down, and for most assessment of learning outcomes to be done by the professor alone through exams taken at the end of discrete blocks of instruction. This organizational model is so ingrained in U.S. higher education that alternative approaches are seldom even considered as possibilities. As the former vice-chancellor of Great Britain's Open University, Sir John Daniel, said, "The U.S. system is peculiarly wedded to the technologies

---

[3] Among Organization for Economic Cooperation and Development (OECD) member states, the United States ranked fourth in baccalaureate (or equivalent) degree completion rates in 2000, behind Norway, the United Kingdom, and the Netherlands. Organization for Economic Cooperation and Development; *Education at a Glance 2002*.

[4] Organization for Economic Cooperation and Development; *Education at a Glance 2004*.

[5] Friedman, Thomas L. *The World Is Flat: A Brief History of the Twenty-first Century*, Farrar, Straus and Giroux, 2005.

of real-time teaching and to the outmoded idea that quality in education is necessarily linked to exclusivity of access and extravagance of resource."[6]

How have many other countries been able to increase college participation and graduation rates more rapidly than the United States? Part of the reason is that they have moved away from the assumption of traditional models of higher education in their educational planning. Most other industrialized countries have large universities that develop postsecondary programs centrally and deliver them at a much lower cost per student on a scale that is unimaginable here. India's Indira Gandhi National Open University enrolls more than 1.1 million students.[7] The Open University of the United Kingdom enrolls more than 200,000,[8] and France's Centre National d'Enseignement à Distance (CNED) enrolls 350,000.[9] These institutions, and countless other initiatives on a smaller scale, are using this organizational model (usually referred to as distributed education) to expand access to higher education.

There is at least one example of a similar American institution. While many are aware that the University of Phoenix is the largest private university in the United States, most are still surprised to hear that its enrollment now totals 283,000 students on more than 150 campuses. More than half of its enrollment is now in online programs. Enrollment in online degree programs at the University of Phoenix has increased from 1,346 students in 1995 to 143,000 this year, and increased by 45 percent from 2004 to 2005.[10]

> Distributed learning is not a new concept. In this country, it goes back at least to the mid-19th century.

Distributed learning is not a new concept. In this country, it goes back at least to the mid-19th century, and requires technology no more advanced than a reliable postal system. However, advances in information technology are greatly expanding the potential reach of postsecondary education and the ways it can be organized, developed and delivered. These new organizational models are breaking up the core activity of higher education—instruction—into functional units that can be performed wherever the necessary expertise can be found. This ability to "unbundle" postsecondary instruction is a genuine revolution with enormous potential to fundamentally change the way people learn, gain new skills and gain access to academic content.

New organizational models and higher education

Eventually the delivery of higher education must be re-engineered on a large scale to increase productivity. When this happens, quality (which will be measured in terms of learning outcomes) will be increased and costs (per any unit of measure) will be reduced. While college campuses will look much the same, what goes on inside and outside the walls of the campus will change in fundamental ways.

The new organizational models that will transform higher education can be defined because many other industries have already been through the process of reinvention, and the changes they have experienced have been well documented. Transformation will not

---

[6] Daniel, Sir John S. "Why Universities Need Technology Strategies," *Change*, July/August 1997.

[7] http://www.ignou.ac.in/

[8] http://www3.open.ac.uk/media/factsheets/index.asp

[9] http://www.cned.fr/en/index.htm

[10] http://www.apollogrp.edu/

be limited to campuses; state and national systems of higher education funding, planning and governance will need to be reinvented as well.

These are the essential realities of the new organizational models for higher education:

- **Courses and programs do not need to be developed by a single institution, much less a single faculty member.** The unbundling of instruction means that cross-functional teams will become the norm for the development and delivery of educational programs. A typical design team will consist of one or more content specialists, an educational technologist, a graphic or media designer, a psychologist or other expert in learning styles, and perhaps even a market researcher. The Open University of the United Kingdom recently developed a new introductory course in science. It was developed by a team headed by a full-time faculty member (with tenure, by the way), who was given a budget of $6 million. This course included multimedia learning materials, instructional guides and assessment instruments. This level of investment in a single course was justified because it was estimated it would be delivered to more than 100,000 students over the course's projected three-year life span. The qualitative improvements permitted by course development on this scale are impossible to ignore.

  Most U.S. higher education institutions believe they are unable to generate the economies of scale that would justify the up-front costs of developing high-quality courses and programs. However, a few large institutions have applied these approaches to large-enrollment courses, such as required introductory courses, with encouraging

> Cross-functional teams will become the norm for the development and delivery of educational programs.

results. The potential economies of scale are much greater than most realize. A recent study of course enrollments in a mid-sized state by the National Center for Higher Education Management Systems (NCHEMS) found that only 25 courses accounted for 45 percent of total undergraduate credit hour production in the state. NCHEMS recommended that the state look first to pool resources for course development for these high-enrollment courses.

Since only a few institutions in the nation are large enough to justify developing courses and programs in isolation, cross-institutional collaboration should become the norm. Because of the high up-front costs of program development, there are powerful incentives for institutions to pool their resources and share development costs or to purchase programs that have been developed elsewhere. One existing model that illustrates both dimensions of collaboration is, ironically enough, sponsored university research. Major research projects are often team-based, and increasingly multi-institutional, multidisciplinary and multinational, so that the quality of the research can be enhanced and costly facilities can be shared. Such projects are far more competitive for grants. All of these conditions are becoming true for the development and delivery of academic programs as well.

- **Programs can be structured around asynchronous learning.** It is no longer necessary for educational programs to be built around the assumption that students and teachers will meet as a group for learning to take place. Because telecommunications allows people to share virtual space as well as physical space, many of the activities that have traditionally been conducted in classrooms can now occur over

telecommunications networks. It is already feasible to distribute the content of most educational programs over networks. E-mail, telephony and videoconferencing allow high levels of interaction between and among teachers and learners, but don't require schedules to be synchronized.

This change affects on-campus students as much or more than it does those participating in distance education. The Center for Academic Transformation has shown that many on-campus courses can be re-engineered into "studio" courses that incorporate technology-based delivery of content, highly interactive lab-type experiences, and significant faculty-student contact. The use of asynchronous content delivery frees faculty to concentrate on active interaction with students. The Center's research has shown that courses designed in this way lead to significantly improved learning outcomes at lower cost. While some higher education programs are already primarily asynchronous—doctoral programs, for example—most undergraduate programs rely on rigidly scheduled seat time for the delivery of course content. Through widespread application of information technology, all students can share the advantages of asynchronous learning.

> The content of the college curriculum is rapidly becoming universally available.

- **Distance doesn't matter.** The Internet allows the widespread delivery of higher education to individuals at home or work, but more importantly it permits the development of curricular models that are media-rich and asymmetrically interactive. It is not just instruction that is being transformed by information technology—support services and learning resources such as advising and libraries are increasingly available over networks. As a result, markets for higher education programs will be larger and not defined simply by geography. Likewise, no market for higher education will be secure because of its geographic isolation.

- **Content is a commodity and doesn't add value to programs.** Because of telecommunications and inexpensive computing power, the content of the college curriculum is rapidly becoming universally available at little or no cost to the user. Many in higher education were shocked when the Massachusetts Institute of Technology (MIT) announced that it would make the content of every MIT course available for free over the Internet. The MIT OpenCourseWare initiative is continuing to work to accomplish that audacious goal, and just as MIT surmised, the demand from students to gain admission to the institution has not wavered in the slightest. Course content is just another form of data, and there are more efficient ways to deliver it to people than to have them sit in a room and write it down as someone reads it to them. Since content is rapidly becoming ubiquitous, value is added to educational programs by packaging and delivering content to meet the needs of specific groups of individuals. Program structure will no longer be determined by content-based disciplines, but will instead be determined by the characteristics and needs of the target population (market) of students.

- **Delivery will be customized to the needs and schedule of the student.** Programs can be adapted to meet the needs and interests of the recipient instead of the scheduling and resource needs of the provider. Local knowledge—derived from a strong relationship between a higher education institution and its market—becomes a key strategy for adding value to educational programs. Programs will be organized around flexible course modules, which

can be combined by students into a variety of forms based on their particular needs. Distributed instruction makes traditional academic calendars and curricular structures at best irrelevant, and, at worst, a barrier to effective education.

- **Most programs will be based on learner outcomes.** Several factors are driving the shift toward learner outcome-based education; including the fact that more and more jobs demand specific technical skills, and students and employers expect higher education to ensure that students master them. Another factor is the increasingly competitive environment for both consumers and providers of higher education. Both the increasing demand for postsecondary education and the feasibility of technology-based delivery are making the higher education market attractive to new private-sector providers. Likewise, existing institutions are now looking to offer programs beyond their traditional, geographically defined service areas. As a result, the consumer of higher education (both individuals and corporate clients) can now choose from multiple providers. In this environment, being able to make some judgment about the quality of competing program offerings becomes critical. Traditional site-based measures of quality, such as accreditation, are having a very difficult time coping with new network-based program models. Learning outcomes, as measured by student competencies, represent the quality measure that makes the most sense to consumers.

- **Student costs.** State and federal discussion of student costs has focused almost entirely on

> Colleges and universities believe they operate in a competitive environment, but they do so only on the margins. They are protected from true competition.

the perceived need to keep higher education affordable for traditional, full-time, residential students. States have, for the most part, assumed that students served by distributed instruction will pay all or most of the cost of their programs. It is further assumed, for no good reason, that off-campus students should pay more than on-campus students. (Shouldn't the reverse be true?) State policies regarding tuition rate setting, student fees and financial aid have not kept up with new models of education.

- **True competition comes to higher education.** Colleges and universities believe they operate in a competitive environment, but they do so only on the margins. They are protected from true competition by the physical constraints of geography on student mobility, accreditation (with its burly bodyguard, financial aid eligibility), protectionist state policies such as designated service areas, and the financial subsidy of public institutions. These barriers are falling so rapidly that it is hard for public institutions to even know what is happening, much less develop a response. The new competitive environment is characterized by multiple providers—private for-profit institutions, industry-based education (which has grown beyond training), the emerging so-called "edutainment" industry, and public and private institutions that are seeking to serve students outside their traditional service areas.

Conclusion

Higher education in the United States faces a classic good news/bad news situation. The good news is that

the need for higher education has never been greater, the demand for it is growing rapidly, and the higher education system will play an increasingly important role in the functioning of the U.S. economy. The bad news is that the ability of the system to respond to these needs is constrained by a perceived lack of resources, pressures caused by the perception that higher education is a scarce resource that needs to be allocated, and a preponderance of obsolete organizational models that inhibit higher education's response to the challenges it faces.

Fortunately, alternatives to the current stasis do exist. Distributed education models could be used to reach far more students at a significantly lower cost. Other countries are already using these approaches on a large scale to expand higher education access and to increase the number of college graduates in their societies and economies. New instructional technologies can make higher education available to all, independent of constraints of time and geography.

Unfortunately, significant barriers are preventing our nation from reaping the benefits of these approaches.

Some of the barriers are rooted in the organizational culture of higher education, particularly the deeply held dogma that quality in higher education is inevitably tied to its scarcity and high cost. Other barriers are rooted in public policy toward higher education, such as the incentives and disincentives that the higher education finance system provides both institutions and students.

All those with an interest in supporting the vitality of higher education would do well to consider the need to transform the structure and delivery of higher education. As the world economy becomes increasingly based on information and knowledge, only those individuals and nations with the skills to use knowledge effectively will thrive. In the United States, more people will seek postsecondary education, and the nation's economy will depend on its availability. Without change, higher education will not be able to expand to meet increased demand caused by these fundamental demographic and economic shifts. Although the task will be difficult, higher education can and must adopt the organizational models that will enable it to respond to this challenge. ■

National Editorial Advisory Panel

In selecting the papers included in this volume, Lumina Foundation for Education relied on the analyses and recommendations of a panel of seven nationally recognized experts in higher education and financial aid. We at Lumina Foundation convey our sincere thanks to these experts, all of whom are featured here. We deeply appreciate their work, and we look forward to their continued involvement in College Costs: Making Opportunity Affordable.

David W. Breneman is university professor and dean of the Curry School of Education at the University of Virginia, where he has served since 1995. He was a visiting professor at the Harvard Graduate School of Education from 1990 to 1995; he taught graduate courses on the economics and financing of higher education, on liberal arts colleges, and on the college presidency. He was president of Kalamazoo College from 1983 to 1989 and was the Brookings Senior Fellow in Economic Studies from 1975 to 1983. Breneman earned his bachelor's degree in philosophy from the University of Colorado and his doctorate in economics from the University of California at Berkeley.

Carol D'Amico is executive vice president of Ivy Tech Community College of Indiana and chancellor of its Indianapolis campus. She is a recognized expert on education and workforce development issues, co-author of the nationally recognized *Workforce 2020*, and frequent lecturer. Appointed by President Bush in 2001, D'Amico served as the Assistant Secretary of Education for the Office of Vocational and Adult Education until 2003. From 1999 to 2001, she served as the dean of Workforce, Economic, and Community Development at Ivy Tech. Prior to 1999, she was at the Hudson Institute, serving as a senior fellow in education and co-director of the Center for Workforce Development. D'Amico holds a doctorate in higher education leadership and policy studies and a master's degree in adult education and organizational development from Indiana University.

Joni Finney is vice president of the National Center for Public Policy and Higher Education in San Jose, Calif. She oversees the research, communication and administration of the center. She has directed research related to higher education finance, governance and performance, including developing *Measuring Up*, the nation's first state-by-state report card for higher education. Finney consults with state policy leaders and speaks frequently to legislative leaders, education associations and regional and national organizations.

Brian K. Fitzgerald is executive director of the Business-Higher Education Forum, a nonprofit membership organization of leaders of American corporations, universities, museums and foundations. The purpose of the Forum is to harness the talent and energy of its members to examine issues of national importance, develop recommendations and advocate for their adoption by federal and state officials, the corporate and academic communities and the general public. Previously, Fitzgerald served as staff director of the Advisory Committee on Student Financial Assistance and was an adjunct associate professor of government at American University. He received his master's and doctoral degrees from Harvard University and a bachelor's degree from the Massachusetts College of Liberal Arts.

Juliet V. Garcia joined the University of Texas system as president of the University of Texas at Brownsville in 1992, after serving as president of Texas Southmost College for six years, where she had been an instructor and dean. Garcia serves on the board of directors of the Ford Foundation, Campus Compact and Public Welfare Foundation. She has won national and state awards for her work in higher education. She and her husband, Oscar, have two adult children and four grandchildren.

Paul Lingenfelter has been executive director of SHEEO, the national organization of State Higher Education Executive Officers, since 2000. Prior to that, he worked 15 years at the John D. and Catherine T. MacArthur Foundation, where in 1996 he was appointed vice president to establish and lead the foundation's program on human and community development. He was a deputy director of Illinois Board of Higher Education from 1980 to 1985, and for 12 years prior to that appointment held other administrative positions at the Illinois Board and at the University of Michigan. Lingenfelter holds a bachelor's degree from Wheaton College, a master's degree from Michigan State University and a doctorate in higher education from the University of Michigan. His graduate work in higher education administration emphasized political science and policy analysis, and he has written numerous policy studies and articles related to his work in higher education and philanthropy.

Kenneth E. Redd is director of research and policy analysis for the National Association of Student Financial Aid Administrators (NASFAA) in Washington, D.C. In his position, he provides research and data analysis on numerous issues in higher education, particularly trends in financing, student enrollments, access and degree completion. Prior to joining NASFAA in November 2000, Redd was director of higher education research for USA Group Foundation, predecessor to Lumina Foundation for Education. He also served in various research and policy analysis positions for the National Association of Independent Colleges and Universities and the American Association of State Colleges and Universities. Redd is the author or co-author of numerous research reports, book chapters and journal articles on a wide variety of issues in higher education. He holds a bachelor's degree in English and political science from Tufts University and a master's degree in public affairs from the University of Minnesota.

Acknowledgments

About Lumina Foundation

Lumina Foundation for Education, an Indianapolis-based, private, independent foundation, strives to help people achieve their potential by expanding access and success in education beyond high school. Through grants for research, innovation, communication and evaluation, as well as policy education and leadership development, Lumina Foundation addresses issues that affect access and educational attainment among all students, particularly underserved student groups, including adult learners. The Foundation bases its mission on the belief that postsecondary education remains one of the most beneficial investments that individuals can make in themselves and that society can make in its people.

About the College Costs initiative

College Costs: Making Opportunity Affordable is a multiyear initiative launched by Lumina Foundation for Education to develop and promote solutions to the alarming rise in the cost of college. It serves as an ongoing forum for higher education officials, policy-makers, business leaders, families and students to work together in addressing the varied and interrelated causes of rising college costs, and to replicate approaches that have proved effective in reducing those costs.

For more information about the initiative, visit **www.collegecosts.info**.

Helping People Achieve Their Potential®

LUMINA
FOUNDATION FOR EDUCATION