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Public Systems and the Financing of Postsecondary Education

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In the 1970s the Chair of the Proprietary Advisory Committee of the Illinois Board of Higher Education gave this short speech at every meeting of the Board. “The capital basis of an institution, whether it be public capital, philanthropic capital, or investment capital,” he said, “should have no bearing on the eligibility of its students for state financial aid.”

His memorable and eventually persuasive argument, implied, but did not engage deeper questions that face legislators, governors, and the board and leaders of public systems: How *much* should postsecondary education cost? What are the appropriate roles of student tuition and fees, and of public, philanthropic, and investment capital in financing postsecondary education? What are the contributions and limitations of each source of funding? What about the financing of research and public service? What should govern student aid? What public policies and what institutional practices are needed to meet the needs of individuals and the broader society for effectiveness and efficiency in postsecondary education?

This chapter will not settle these questions, but it will address them drawing on the accumulated experience of postsecondary education in the U.S. and around the world.

How Much is Enough?

Expenditures per student among postsecondary institutions vary enormously. And for many years the various prices charged to students have increased faster than inflation. Although the law of supply and demand and its effects on prices and quantities available for purchase apply to postsecondary education, the complexities of postsecondary education make its effects far from simple. Both the variation in costs and their upward trajectory are driven by several interrelated factors.

According to Howard Bowen’s “revenue theory of costs” (1980) every institution, for profit or non-profit, public or private, will raise and spend all the revenue it can. Non-profit institutions maximize prestige-enhancing activities rather than profit-maximizing ones. Both prestige and their missions – the advancement, transmission, and utilization of knowledge – know no bounds. For-profit institutions act as traditional profit maximizing firms, pursuing all the marginally productive dollars the market will provide and spending them on programs that yield higher returns for the shareholders.

From the perspective of Bowen's theory, the only restraint on postsecondary spending is what the market of buyers is willing to provide through tuition and fees, and public, philanthropic, or investment capital. That hasn't been much of a restraint. The growing value of education in the global knowledge economy has yielded steadily expanding revenues to the industry. Although resistance to spiraling prices is increasing, students from prosperous families remain willing to pay very high prices for an education at prestigious institutions.

The ability to raise revenues is not, of course, the only factor driving increases in costs and prices. Other factors play important roles. First, the economic benefits of being well-educated, translate into higher costs for both students and all employers of well-educated people. Colleges and universities compete with each other and with the private sector for talent. The "market-rate" for people with advanced degrees has increased steadily for over fifty years, driving up the cost of postsecondary education as well as its value.

Second, although technological change generally improves productivity, it also imposes costs in postsecondary education. Compared to 50 years ago colleges and universities currently employ very few clerical workers, but substantially more information technology professionals. Postsecondary education must stay current with and lead technological change, it cannot lag behind. This imperative tends to increase its cost.

Third, the "customers" of postsecondary education are demanding shoppers. As the general quality of life has improved, students increasingly value expensive amenities (good food, roomy accommodations, and recreational opportunities and facilities), they care about the personal attention made possible through low student/faculty ratios, and they are attentive to prestige and convenience. All these demands tend to increase cost and price. Although not every student can afford high-cost amenities, those who can set expectations for the industry that drive up cost and price.

Fourth, institutional viability and prosperity depend on enrollments. Marketing and recruiting expenses, both direct and indirect are an important cost center in most institutions. For example, even small institutions that struggle to meet enrollment targets, provide significant subsidies for inter-collegiate athletics. Elaborate "enrollment management" strategies, have been devised to enhance enrollment levels, revenues, and institutional attractiveness.

Fifth, non-profit postsecondary institutions have traditionally "bundled" activities and services with costs that vary substantially. The cost of lower division instruction courses tends to be less than upper division or graduate courses because of class size. The cost of laboratory courses and courses requiring clinical practice and supervision is higher than for courses primarily employing lecturing and independent study. High demand areas (business courses, for example) permit larger class sizes and tend to be less expensive than courses with lower enrollments, such as foreign languages, philosophy, or physics. And institutions that support research and public service as well as instruction will have costs not borne by institutions that focus only or primarily on instruction.

Finally, an elaborate system of publicly and privately funded grants and loans has been constructed to enable students to pay the price of higher education and to influence their choices of institution. The availability of financial assistance reduces the price of postsecondary education for many students, increases the number who enroll, and influences the decisions they make about where to enroll. Such third-party payments likely add to the cost of postsecondary education, because they reduce the sensitivity of students to price and enables institutions to offer higher cost services. In this respect, financial aid functions much like sale prices and other incentives provided to build market share or encourage the production or consumption of services. In education this is justified by its broad social benefits.

Actual prices and spending per student vary substantially among sectors and within sectors of postsecondary education. According to the National Center for Education Statistics in 2018-19 average per student revenues from tuition and fees were \$8,000 for public institutions, \$22,700 for private non-profit institutions, and \$17,400 for private for-profit institutions. Appropriations to public institutions mean the average spending for instruction in public institution is approximately \$16,000.

Within each sector per student revenues and spending vary substantially by type of institution. The Delta Cost Project found that in 2103 per student educational spending in the public sector ranged from \$10,804 in community colleges to \$17,252 in research universities. In the private sector, on average bachelors' institutions spent \$23,138 per student and research universities spent \$37,812 per student. Individual institutions in each sector have costs well below and well above these averages. <https://www.air.org/sites/default/files/2021-08/Delta-Cost-Trends-in-College-Spending-January-2016.pdf>

Clearly, there is no "standard" for the cost or price of postsecondary education. Costs and prices vary widely. The value and quality of different programs surely varies as well. Although a positive relationship surely exists between cost and quality, both good value and poor value for money paid are likely at both higher and lower cost institutions.

Who Benefits, Who Pays, Who Should Pay?

The launching of Sputnik in 1957 and a large number of baby boomers entering adolescence stimulated the enormous expansion of postsecondary education in the 1960s. In turn, this launched a vigorous debate on the questions of benefit and responsibility to pay the cost. Some argued that the broad public benefits of postsecondary education justified low or no tuition in public institutions for all students. Others argued that low tuition is a regressive tax – students from more prosperous families disproportionately enroll, while taxes from lower income, non-participating families subsidize their education.

At that time after consulting with several leading economists, the Carnegie Commission concluded: "No precise – or even imprecise – methods exist to assess the individual and societal benefits as against the private and public costs..." The Commission's analysis suggested that for public institutions students and parents were paying approximately 1/3 and the public was

paying 2/3 of the direct monetary outlays for higher education and living expenses during study. When the opportunity costs of not working while enrolled was added, students and parents were paying 2/3 of the total direct and indirect costs.

Believing that the public interest required broad postsecondary participation, the Commission offered modest policy proposals to address these issues: providing need-based assistance to lower income families; charging less for the first two years of higher education, and more for advanced undergraduate and graduate study; narrowing the gap between the tuition fees in public and private institutions; and developing more progressive tax systems. (*Source: Carnegie Commission on Higher Education (1973), Higher education: who pays? who benefits? who should pay? A report and recommendations.* McGraw-Hill.)

(Some countries have addressed this problem by providing large, income-contingent loans to postsecondary students. Students who reap substantial economic benefits eventually pay the full cost of their education; those who choose or involuntarily find themselves in lower-paying employment, will receive a public subsidy.)

Although the Commission's recommendations influenced state and national policies, they did not lead to uniformity. Substantial differences exist among the states in the level of tuition and fees, in the amounts and forms of student aid provided, and in the relative size of their direct and indirect support of public, private non-profit, and for-profit institutions.

Despite differences among the states, for a while, low or moderate tuition in public institutions became the norm. From 1970 to 2000, tuition and fees at public institutions averaged between one quarter to one third of instructional cost. In varying amounts, states also provided financial aid and other grants to help students choosing to attend private institutions. A surge in enrollments at the beginning of the 21st century, accompanied by recessions in 2001 and 2008 and growing health care and retirements costs resulted in states shifting the cost burden dramatically to students and their families. By 2020 tuition and fees averaged 44% of instructional costs in public institutions. The student share was more than 50% in half the states. (*Source: SHEF: State Higher Education Finance 2020.* State Higher Education Executive Officers, Boulder, CO. https://shef.sheeo.org/wp-content/uploads/2021/05/SHEEO_SHEF_FY20_Report.pdf)

The Strengths and Limitations of Difference Sources of Funding

Student Tuition and Fees and Financial Assistance

Students benefit economically and in many other ways from the knowledge and skills they gain in postsecondary education. "Traditional students" also may benefit from an enjoyable transition from living with parents to becoming an independent adult. Beyond these personal benefits, competition for students also tends to improve the quality and diversity of institutional offerings. Accordingly, student payments are a legitimate and appropriate source of funding postsecondary education.

Despite these advantages, only a few students come from families who can afford the price of the most expensive institutions, most students have some difficulty affording the average price, and many potential students cannot afford even the least expensive postsecondary opportunities. Without student aid and/or public subsidies, only a small fraction of the population would obtain a postsecondary credential.

With mixed success over the past fifty years, student financial aid has significantly undergirded the role of tuition and fees in financing the enterprise. More than 85% of full-time undergraduate students receive financial aid of some kind.

<https://nces.ed.gov/fastfacts/display.asp?id=31>

The provision of public financial aid generally has been guided by two different goals:

1. Assisting students who cannot afford the price – need-based aid;
2. Assisting students who demonstrate higher levels of academic ability – merit-based aid.

Such programs have become quite complex in efforts to address different levels of financial need, the widely varying costs at different institutions, differences in academic ability and effort, and the interests of all families in lower-cost postsecondary education. Need-based programs have been criticized for using too-low standards of a student's ability to benefit or inadequate requirements for student effort and achievement once enrolled. Merit-based programs have been criticized for subsidizing students who would enroll and succeed without financial assistance, a waste of public resources.

Financial aid from institutions supplements public programs, and it is based on an array of criteria – need, academic ability, and other factors, ranging from athletic ability to giving preference to the children of alumni. Meeting enrollment targets through tuition discounts is frequently an overarching goal of institutional aid.

Philanthropic contributions

Philanthropy has always played an important role in the financing of postsecondary education in the United States. The names of donors appear on many campus buildings and on a few institutions. Annual giving and endowment returns provide a significant fraction of the budget at many, but far from most colleges and universities. Philanthropic income is most significant at private, non-profit institutions, and at the more selective institutions, both public and private.

Although philanthropy has added to the scope and quality of programs at traditional colleges and universities, its benefits are unevenly distributed. Both personal priorities and an affiliation with the institution tend to be important motivations for donors. Institutional prestige is the most visible priority, as evidenced by the plea at an alumni event I attended: "Give so the university can attract the best students and faculty in the world."

The interests of donors also shape the impact of philanthropy. Some donors will focus on specific areas of research or instruction, some are looking for a building project to memorialize the family name, and others will support intercollegiate athletics. Although institutions work to attract philanthropy to institutional priorities, donor priorities greatly shape institutional behavior.

In short, philanthropy contributes to the quality and the level of spending at the highest cost institutions and to wide variation in the quality of the student experience among institutions. It adds both value and complexity to postsecondary education.

Private Investment Capital

During the deliberations of Secretary of Education Margaret Spellings' Commission on the Future of Higher Education a prominent business leader told me that the best way to address the nation's educational problems was to get more private capital involved. His belief, I surmised, was based on both an ample supply of private capital and a conviction that investment capital would be more efficient and innovative than public or philanthropic sources of funding. The record of for-profit postsecondary education in the United States provides some support for this view.

Proprietary apprenticeships and schools have trained practitioners in business and in trades and service occupations (initially including law and medicine) for much of U.S. history. Traditional educational institutions initially avoided these "non-academic" areas of study. The demarcation between "practical" and "academic" education began to blur with the passage of the Morrill Act in 1862, and by the mid-20th century "academic" knowledge had become vital to the training in many "practical" professions. Consequently, "traditional" institutions expanded their curricula to include practical education in a wide range of fields. With growing demand for postsecondary education over the past 40 years, entrepreneurs saw opportunities for profit by competing with programs offered by public and non-profit colleges and universities.

First, academic institutions tended to structure their offerings according to the habits and preferences of faculty and full time, traditional students aged 18-24. Proprietary institutions met the needs of working adults by offering more flexible options – evening and weekend classes, credit for prior learning, and innovative approaches for distance learning. Second, proprietary institutions tended to focus on vocational programs with high student demand (business, education, computer technology, etc.), combined with little, or substantially less intensive instruction in general education. Third, proprietary institutions avoided investing in research or public service, focusing entirely on instruction. And finally, proprietary institutions largely standardized the curriculum and instructional practices. Courses designed by a small core of full-time faculty are typically taught by part-time faculty who may have other full-time jobs or, for other reasons, are willing to work for lower rates of pay.

These practices enabled for-profit institutions to secure an ample profit margin by reducing the actual cost of instruction while charging prices that were competitive with the price at non-profit private institutions. Although investment capital “seeded” for-profit institutions, public capital was key to the business model, because students in for-profit institutions disproportionately rely on publicly funded grants and loans to pay for their education. Data from 2018-19 demonstrate the significant role of federal grants and loans in financing for-profit institutions.

Table 1. Percentage of Students with Financial Aid and the Average Award

Sector	% with Federal Grants	Average Federal Grant	% with Institutional Grants	Average Institutional Grant	% with Loans	Average Loan
Public	42.1 %	\$5,054	40.3%	\$5,666	35.6%	\$6,639
Private Non-profit	35.4%	\$5,385	78.8%	\$21,794	59.3%	\$8,224
Private For-Profit	68.5%	\$4,689	19.2%	\$4,099	72.4%	\$7,553

While the profit motive has been beneficial in fostering innovation and reducing the cost of instruction, it has been much less successful in meeting the postsecondary goals of students and society. A common for-profit business strategy has emphasized recruiting and enrolling, rather than retention and graduation. In some cases, deceptive or fraudulent recruitment practices have been employed, and students have received inadequate support to foster their success. As a consequence, private, for-profit institutions have had the most disappointing rates of student failure to complete and student loan defaults among all postsecondary sectors. (See Figures 1, 2, and 3 below.)

With mixed success accreditors and the U.S. Department of Education have employed various regulatory strategies to address such issues. Although many for-profit institutions have provided instructional opportunities that have benefited students and society, the tension between maximizing profitability and providing quality education has eroded those contributions.

Figure 1.

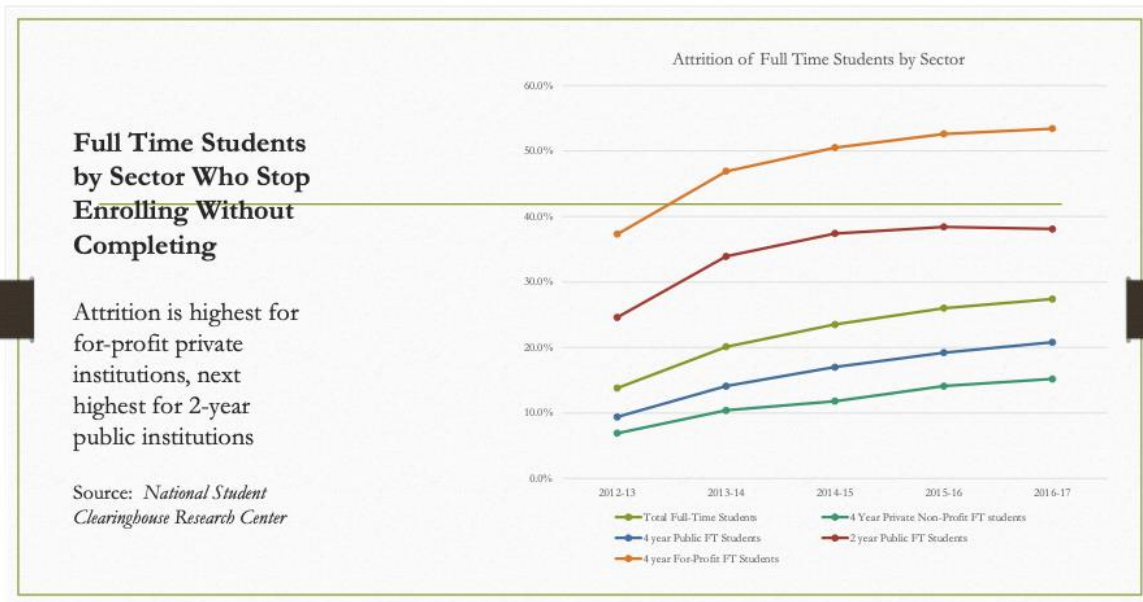
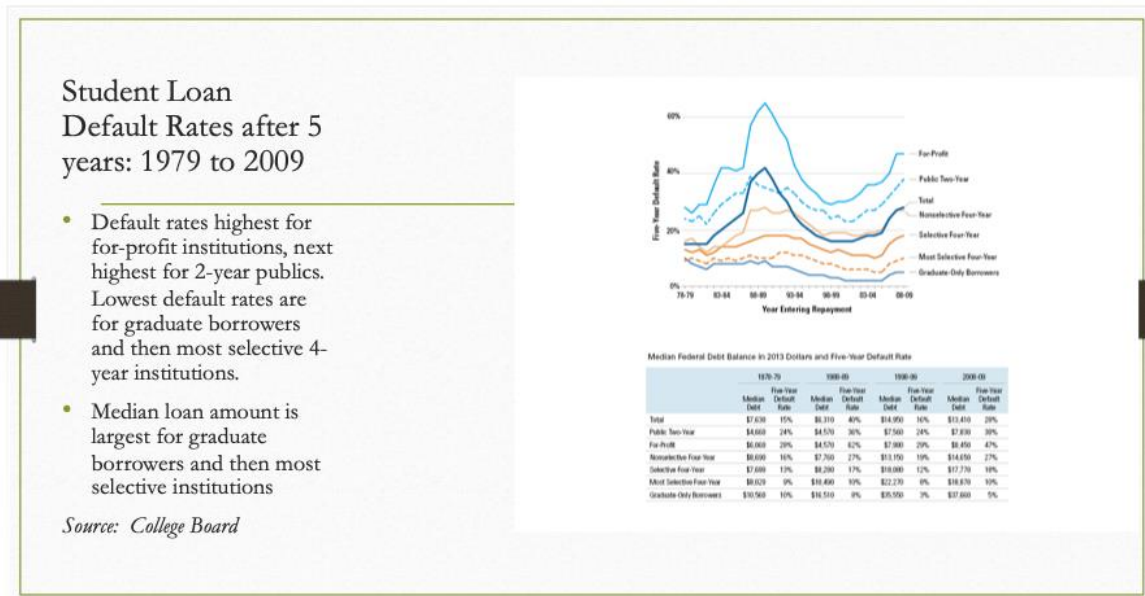


Figure 2.



Figure 3.



Public Capital

In theory and in practice, the most appropriate use of public capital is to achieve public purposes which other sources of money will not or cannot achieve. In the United States public funding has shaped the character and scale of postsecondary education much more than student payments, philanthropic donations, or investment capital.

Before the 19th century, public funding provided “seed capital” for the Ivy League and early public universities in order to educate community leaders. In the 19th century when elementary and secondary education became a priority, public funding created “normal” schools to prepare teachers. When research and education in engineering and agriculture became a higher priority, the federal Morrill Act expanded the scope and focus of postsecondary education.

In the mid-20th century public dollars financed the GI Bill which slowed the re-entry of veterans into the job market and dramatically increased the educational attainment and productive capabilities of the workforce. Concomitantly, following World War II the federal government supported major investments in research and development, perhaps motivated primarily as means of national defense, but with side benefits that advanced both scientific knowledge and economic progress. In response to Sputnik, public money financed the National Defense in Education Act, upgrading instruction in science, math, and languages and expanding student financial aid and support for counselors and teachers. Simultaneously at the state level, public funding provided capital investments and operating funding for a massive expansion of postsecondary education, which for the remainder of the 20th century made the United States the world leader in educational attainment.

Federally funded research and development, emphasizing, but not exclusively the physical and life sciences, is a major function of public and private non-profit universities. Basic research in universities and other laboratories is predominantly funded by government and non-profit sources (70% of all spending in the U.S.) Applied research is funded almost equally by investment capital (55%) and government/non-profit sources (45%), and it occurs in both academic and non-academic settings. Private investment in R&D emphasizes the development of particular products (85% of all spending) and occurs largely outside the academy.
<https://sgp.fas.org/crs/misc/R44307.pdf>

The federal Higher Education Act of 1965 (reauthorized in 1968, 1972, 1976, 1980, 1986, 1992, 1998, and 2008) is a major source of student financial assistance for all sectors of postsecondary education. It provides access for students who cannot pay the cost of tuition, fees, and other expenses, and to a significant extent it enables student to have freedom of choice among institutional options.

These contributions of public spending in postsecondary education are evidence of its capabilities. Public investment has enabled lower income students to enroll in postsecondary education, supported research unable to attract sufficient philanthropic or investment capital, and materially advanced human knowledge and well-being. With such benefits, some suggest there is no downside to public investment in postsecondary education. But there are many other public purposes and demands on resources. Limited resources, the complex nature of postsecondary education, and the interactions among public and non-public sources of revenue make the stewardship of public revenues a challenging task.

The Pursuit of Public Purposes

What objectives justify public investment? For instruction they might be: 1) To educate a capable workforce, enough people who have the knowledge and skills necessary for widespread economic prosperity; 2) To develop well-educated citizens to strengthen and preserve democratic government; and 3) To provide equal educational opportunities so all people can realize their potential to lead productive, fulfilling lives. Although all three of these objectives are widely accepted, people differ about the substance of “well educated” for work and citizenship, and some question the existence or the extent of society’s obligation to provide equal opportunities.

Public investment also supports research and service to advance knowledge, address human problems through the application of knowledge, and enrich the cultural life of society. As for instructional objectives, these objectives are widely accepted, but different views exist on questions of substance, sufficiency, and financing strategy.

Each of the four sources of revenue – student payments, philanthropy, private investment capital, and public investments – have contributed to the achievement of these purposes. The non-public sources of revenue, distributed according to the preferences and choices of

individuals, have the advantages of market discipline. But the market fails to meet public educational objectives when individuals lack resources to pay. It also fails to achieve other purposes that benefit individuals only indirectly. Both public investment and public regulation of postsecondary education should be driven by wise and deliberate decisions about where and public resources should be deployed, how they should be allocated, and how much is required.

Where is public investment required?

Although dissent can never be entirely ruled out, it has been fairly easy to achieve a working consensus on the need for tax-supported spending and governmental leadership for some purposes. Such purposes include national defense, public safety, and establishing necessary conditions for the rule of law. For other purposes, such as transportation, food production and security, education, energy production, public utilities, and health care, the United States and other nations have employed a mixture of governmental funding, incentives, and regulations that shape the choices and spending decisions of individuals and organizations in the marketplace.

The classic book *Politics, Economics, and Welfare* by Robert A. Dahl and Charles E. Lindblom (1953) comprehensively considers the capabilities and limitations of four social mechanisms—the price system (markets), bureaucracy, hierarchy, and bargaining – for allocating resources purposefully. Polyarchy, the democratic control of leaders by the people, is the means through which public purposes and the means of pursuing them are determined in a democracy. To different degrees the price system, hierarchy, bureaucracy, and bargaining dominate resource allocation in different countries or situations, but all of them tend to be in play everywhere. Likewise, the degree of democratic influence over leaders varies among nations.

Assessing the need for public investment in postsecondary education requires considering public objectives, examining the status quo in terms of those objectives, and then considering what is required and what mechanisms should be employed to meet those objectives. This is the subject of an ongoing conversation among citizens and political and educational leaders. The remainder of this chapter is a contribution to that conversation.

Postsecondary objectives requiring attention in the United States

Workforce Capability. In the last half of the 20th century the United States led the world in postsecondary degree attainment, a key indicator of workforce capability. For adults 55 to 64 years old, the U.S. *still* ranks high with 43% postsecondary attainment, exceeded only by Canada at 48% and tied with Japan. The OECD average postsecondary attainment rate for older adults, is 27%, substantially lower than the U.S. figure.

For younger adults, aged 25 to 34 years old, the United States has lagged progress elsewhere in the world. The U.S. postsecondary attainment rate for younger adults is 49%, just a bit above the OECD average of 44%, one of a cluster of 12 countries with attainment rates between 45% and 51%. Six countries, led by Korea (70%) and Canada (62%) have attainment rates of 55% or

higher. https://nces.ed.gov/programs/coe/pdf/coe_cac.pdf For this age group the U.S. falls in the middle of 18 countries whose postsecondary attainment is higher than the OECD average.

For those who *do* receive a postsecondary credential, AAC&U periodic [surveys](#) of business leaders generally have found both a reasonable degree of satisfaction with the capabilities of college graduates and room for improvement. From the perspective of business leaders, the most notable areas for improvement are in oral and written communication skills and the higher-level skills (real-world problem-solving and critical thinking/analytical reasoning) required for advancement above entry level positions.

Improving workforce capability clearly needs increased and continuing attention in the United States. The evidence provides no justification for complacency about either the numbers of citizens completing postsecondary education or the quality of the education they receive.

Education for Citizenship. Poor education is a treacherous foundation for government by the people. Among the nation's founders, both Thomas Jefferson and John Adams valued education as an essential foundation for viable democratic government. But their agreement on the importance of education didn't preclude significant differences of opinion between them or severe, sometimes violent conflict over political questions among their followers.

Education does not prevent disagreement; it frequently fosters it. In the 21st century well-educated leaders differ sharply on political and policy questions, just as they did as when the nation was founded. Although contentiousness is more common than consensus in American history, the nation's greatest achievements have occurred when there was a sense of common purpose that transcended difference. Perhaps the proper role of education is to help people inform contention, understand different perspectives, and discover common purpose.

Effective citizenship requires skill in critical thinking and the evaluation of information. It also requires knowledge of history and of different people, cultures, and perspectives. Such differences need not be destructive; they can be productive when tempered by respect, understanding, and civil dialogue. Education needs to strengthen democracy by fostering understanding and the ability to bridge differences for mutual benefit.

Intolerance for difference, emerging from divergent interests and perspectives and passionate competition within the marketplace of ideas, can be found everywhere, including in the academy. Precisely because of diversity, freedom of inquiry, thought, and expression – core educational values – should be sacrosanct in postsecondary education. Some ideas will prosper, and some will be marginalized in the marketplace, but none should be denied a hearing. Publicly supported institutions should be exemplars of these values and effective education for citizenship.

Education for Opportunity. The GI Bill after World War II became an engine for upward social and economic mobility. By the time the post-war baby boomers were in high school the expansion of community colleges, state universities, independent colleges (at a smaller but

significant rate), and federal aid to education shifted the engine of upward mobility into overdrive. Both the capabilities of the U.S. workforce and the prosperity of its workers grew substantially.

During the ensuing half century from 1970 to the present, the rewards of postsecondary attainment and the penalties of non-attainment have grown steadily. Adults with a high school education or less have experienced dramatic losses of earning power and difficulty in finding and keeping employment. People with postsecondary education earn more, live longer, have better health, lower rates of incarceration, and more stable families. Although the economic returns of postsecondary education vary substantially by field of study, all these positive outcomes tend to be higher with greater levels of educational attainment.

While these benefits have led an increasing number of people to seek postsecondary education, the upward mobility engine has stalled. Students from families with higher incomes and levels of educational attainment (social-economic status, or SES) enroll and complete postsecondary education at high rates, even high SES students with average or below average academic potential. Students from lower SES strata with comparably measured academic potential enroll and complete degrees at substantially lower rates.

High SES families have both the financial resources and the experience/information required to make certain their children have the best possible opportunity to realize their potential. They work to ensure that their children are well prepared to succeed academically in postsecondary education. Even the most able students from lower SES strata are less likely to benefit from ample parental incomes and know-how, and many lower SES students suffer the disadvantage of inadequate preparation in elementary and secondary education.

The world-leading educational attainment the U.S. achieved for the baby boom generation has not been sustained for the succeeding generation, those in the 25-34 age group. The health care and retirement costs generated by the baby boom generation, combined with its resistance to both tax increases and entitlement decreases, appears to be largely responsible for lower state appropriations, higher public tuitions, and inadequate support for student aid.

Students from lower SES families who enroll in postsecondary education have lower completion rates and higher student loan debts, and they have been most likely to be harmed by the aggressive recruitment practices and poor supports of many for-profit institutions. Both the capabilities of the U.S. workforce and opportunities for social and economic mobility must be renewed as public priorities.

Discovery and the application of knowledge. The vital role of universities in research and development is well-established and widely accepted. That said, the extent to which R&D should be supported and the means by which resources should be allocated are continuously debated.

A half-truth about the relationship between instruction and research – the assertion that competence in research is essential for excellent instruction – is a factor in driving up the cost of postsecondary education. This assertion is true to the extent that each instructor should understand research methods, be familiar with current developments in their field, and be able to support the early development of students who have the potential of becoming skilled researchers. Also, some great teachers are also accomplished researchers. But it is not true that excellent instruction can be delivered only by an active, competent researcher.

The legitimate connection between research and instruction, the importance of advancing knowledge, and the difficulty of predicting the returns from research have been used to justify substantial allocations of faculty time to research in public and non-profit institutions of higher education. Although rigorous, wise decision-making about investing in research is difficult, it is not impossible to make good judgments about priorities and the likely return on investments in research.

As other nations increasingly emulate the achievements of the U.S. research universities, more attention should be paid to increasing the development of American researchers and the continued attractiveness of our research institutions to international talent. Also, a broader conception of scholarship, as advocated by Earnest Boyer, would help improve both instruction and research productivity everywhere, most especially at institutions where teaching is the primary mission. (cf. p. 28 in [Accountability for Results](#), SHEEO, 2005)

The roles and responsibilities of public systems

Although student payments, philanthropic support, and private investment capital are important sources of revenue for postsecondary education, they lack focus on public purposes and consequently are less effective in addressing public needs. Federal funding for student assistance *is* focused on public purposes, but the federal government needs partners. It lacks the flexibility and control over institutional instructional practices necessary to achieve public purposes. Federal regulation and voluntary accreditation have proved to be only partially effective in assuring quality and continuous improvement in postsecondary education. Although the peer review system gives federal funding for research a meaningful degree of quality control, the effectiveness of federal research is deeply dependent on the graduate programs and research infrastructure of public and private research institutions.

As they have throughout history, state financed state postsecondary systems must continue to play a leadership role in addressing public needs in the United States. To meet the needs evolving in the 21st century states and the leaders of public systems must become a more effective force for:

- Increasing the successful participation in postsecondary education;
- Improving the cost-effectiveness of instruction, research, and public service; and

- Raising the quality of postsecondary education.

Increasing Successful Participation

More widespread educational attainment in the United States is essential for the global competitiveness of its workforce, for providing opportunity for and the means of social mobility to its citizens, and for strengthening democracy. Public systems must address the barriers to attainment facing both young people and older adults.

Those barriers and the means of surmounting them are well-known. [*More Student Success: A System Solution*](#) published by SHEEO in 2007 outlines six essential strategies for increasing the attainment of students moving through the educational system:

1. Early outreach in elementary school and junior high school to encourage parents and students to have high aspirations, to learn what is required for postsecondary success, and to be confident about their ability to attain it;
2. Curriculum and assessment systems that make clear the knowledge and skills that students need to acquire;
3. Effective teaching at every level to engage students and enable their academic achievement;
4. Adequate, reliable, and clearly understood financial assistance to remove real and perceived financial barriers to postsecondary enrollment and completion;
5. Data and accountability systems to monitor progress, identify issues requiring attention, and provide guidance for continuous improvement; and
6. Postsecondary policies, programs, and practices intentionally designed to increase attainment.

The last of these strategies includes “high-impact” instructional practices to increase student engagement, counseling support to help students cope with life challenges, and flexible scheduling and means of instruction to meet the needs of adult students, including many of the innovations emerging from the for-profit sector.

Because they educate teachers and school leaders and establish expectations for postsecondary readiness, public postsecondary systems play a critical role in all of these strategies, including those focused on K-12 education. The “school reform” initiatives of the past 20 years have produced both instructive failures and many good ideas for increasing education attainment. The good ideas include Common Core Standards and assessments, strategies for improving the recruitment, preparation, and retention of teachers and school leaders, and the continuous improvement strategies developed by the Carnegie Foundation.

Public systems should contribute to more widespread implementation of such effective practices.

Increasing Cost-Effectiveness

The perception and the reality of inefficiency in postsecondary education is an obstacle to more widespread attainment and the acquisition of essential, reliable public support. Effective postsecondary education is inherently costly, but it must be affordable to both students and society. Public systems can be and should be leaders in demonstrating productivity gains in postsecondary education.

An obvious strategy, increasingly being employed, is the effective use of technology for delivering instruction and improving administrative efficiency. Some have imagined that super-efficient, robotic professors could be cheaper, easier to manage, and more effective than human professors. Experience suggests otherwise. Personal involvement remains critically important to effective instruction, but employing technology can substantially increase both quality and cost-effectiveness.

The more extensive use of technology is often accompanied by collaborative faculty efforts and a division of labor in course design and delivery. These can yield both cost savings and quality improvements if carefully managed to draw on the strengths of different faculty while providing flexibility for individual instructors to add innovative, personal contributions.

A more difficult challenge for public systems is mitigating the cost-escalating effects of competition among institutions. Institutions naturally pursue prestige, market position and market share. Competition plays a useful role in education, but it needs to be buffered by other values, the broader public interest and the welfare of the educational enterprise as a whole.

Public systems, more than any other part of American postsecondary education, are able to temper the perverse effects of excessive competition. It is their responsibility to take advantage of their “system-ness” to share resources and allocate programs among institutions for greater cost effectiveness. They should also continue efforts to moderate excessive expenditures for intercollegiate athletics as a means of advancing student recruitment and institutional prestige.

Another opportunity to increase cost-effectiveness is to “unbundle” instruction, research, and public service where co-mingling these functions increases cost and reduces accountability for effectiveness. All three functions are integral, and somewhat interrelated parts of the mission of public systems. But their interconnections in the work of individual faculty often have obscured clarity about the allocation of resources to and the effectiveness of each function. Is the faculty time allocated to research and service generating scholarship and contributions of commensurate quality and value? Is the time and talent allocated to instruction sufficient to meet student needs and goals? Both quality and cost-effectiveness could be enhanced by more transparent expectations and appropriate divisions of labor according to the different capabilities of faculty members.

Finally, cost-effectiveness will improve only when it receives continuous attention. Inertia is the enemy of efficiency and effectiveness in every organization. Public systems can improve both their cost-effectiveness and public support by visibly and continuously re-allocating resources based on priorities and opportunities to improve quality.

Improving the Quality of Postsecondary Education

More educational attainment and more efficient operations in postsecondary education are false progress if quality declines or fails to improve. Although the size of the nation's investment in postsecondary education is fundamentally important, the use of available resources and their effectiveness in meeting the goals of students and society is even more important.

The metaphor of an "iron triangle" with the points, Access, Cost, and Quality, has been used to describe difficult trade-offs in health care and higher education. The theory holds that it is difficult to achieve desirable improvement in all three simultaneously. Expanding access, for example, tends to lead to higher costs and lower quality. Improving quality tends to require higher costs and less access. Lower costs can be achieved only by reducing access and quality.

These inter-relationships are real, but the trade-offs are not ironclad. In postsecondary education access and success can be improved without diminishing quality *if* student preparation and instruction are improved. Costs can be reduced without impairing access or quality if unproductive resources are reallocated to productive use. Quality can be improved by employing the techniques of continuous improvement within existing resources.

For much of the 21st century public investment in postsecondary education has not kept pace with enrollment growth and inflation. To the extent that spending per student *has* kept pace with inflation, students and their families have borne the cost. This fact is an argument for increased public spending, but only if greater public support leads to higher levels of participation and attainment for students for whom the cost has become unbearably burdensome.

Some "solutions" for controlling or reducing the cost of postsecondary education essentially propose to reduce the definition of acceptable quality to the acquisition of temporarily marketable workforce skills. Workforce skills are essential, but the most valuable workforce skills are the ability to learn, to solve problems, and to adapt to changing conditions. The [essential learning outcomes](#) identified by AAC&U, and the closely related [Degree Qualifications Profile](#) provide a framework to guide the pursuit of quality in postsecondary education.

Achieving these outcomes for students and improving the quality and value of research and public service are worthy objectives for those who finance and lead public postsecondary systems.

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