

Commission Report – Findings & Recommendations 7/14/06 Draft

Findings

1. In today's knowledge-driven society, the value of and need for higher education has never been more important.

America's national capacity for excellence, innovation and leadership in higher education will be central to our ability for economic growth and social cohesiveness. Our colleges and universities will be the source of human capital needed to increase workforce productivity and growth. They will be a primary source for economic development and the major route for social mobility and inclusiveness for new generations of Americans.

- The transformation of the world economy increasingly demands a more highly educated workforce with postsecondary skills and credentials. The industrial economy of the early 20th century has given way to an information and service economy that demands higher levels of academic and technical knowledge, as well as critical thinking, problem solving, and communication skills.
- The value of a postsecondary credential for future employment and earnings is expected to rise. Ninety percent of the fastest-growing jobs in the new knowledge-driven market economy require some postsecondary education. Job categories with the fastest expected growth in the next decade require postsecondary education; those with the greatest expected decline require only on-the-job training.¹ The Department of Labor projects there will be two million new job openings in the fields of engineering, computer science, mathematics and the physical sciences.
- Changing skill requirements are not the only pressure on education. We need to increase national production of new workers just to keep up with the pace of expected retirements from the baby boom generation. In the federal civil service alone, 58 percent of all supervisory workers will be eligible to retire by the end of 2010. Worker shortages are already acute in some areas such as nursing and are expected to get worse.

The benefits of attaining postsecondary education are significant not only to the individual but to the nation as well.

- Major reports and studies conclude that the advantages of attaining higher education include public economic and social benefits (e.g., increased tax revenues, increased quality of civic life) as well as private economic and social benefits (higher salaries and benefits, increased health and life expectancy). Colleges and universities are major economic engines for their local economies and civic as well as cultural centers.^{2,3}

- The earnings premium for postsecondary credentials is significant. In 2003, the median earnings of an American worker with only a high school diploma was \$30,800, 38 percent less than the \$48,800 median for those with a bachelor's degree. The significant positive return to increasing one's education is evident at all levels of educational attainment.⁴

2. There is insufficient preparation for, participation in, and completion of higher education nationally – especially for underserved and nontraditional groups who will be the major source of new workers as the baby boom generation reaches retirement age.

This Commission believes the nation must be committed to building and sustaining a higher-education system that is accessible to all qualified students in all life stages. Unfortunately, while the proportion of high school graduates who go on to postsecondary education has risen in recent decades, the national rate of college completion has failed to keep pace. Most important, and most worrisome, too many Americans who could benefit from postsecondary education do not continue their studies at all, whether as conventional undergraduates or as adult learners furthering their workplace skills.

We found that access to higher education in the United States is unduly limited by the complex interplay of inadequate preparation, lack of information about college opportunities, and persistent financial barriers. Inadequate high school preparation is compounded by poor alignment between high schools and colleges, which often creates an “expectations gap” between what colleges require and what high schools produce. The result is a high level of remediation by colleges (and by employers), a practice that is both costly and inefficient. We are especially troubled by gaps in college access for low-income Americans. Notwithstanding our nation's egalitarian principles, there is ample evidence that qualified young people from families of modest means are far less likely to go to college than their affluent peers with similar qualifications.

- Several national studies confirm the insufficient preparation of high school graduates for *either* college-level work or the changing needs of the workforce. Dismal high school achievement rates nationwide have barely budged in the last decade. Close to thirty percent of all students in public high schools do not graduate – a proportion that rises among low income students.
- The educational achievement levels of our young people who do complete high school are simply not good enough. According to the National Assessment of Educational Progress (NAEP), only 17 percent of graduating seniors are considered proficient in mathematics, and just 36 percent are proficient in reading. In international rankings of learning proficiency of 15 year olds, the United States comes in 24th among OECD nations.⁵
- Although college-going rates of recent high school graduates increased throughout the 1980s and 1990s, they have largely stalled at just below 60 percent since the late 1990s.⁶
- The period from 2000 to 2015 will see the biggest enrollment growth in postsecondary education in our nation's history – upwards of 2 million students,

or 20 percent overall growth. But we are not expanding capacity across higher education to meet this demand. Instead, students are faced with rising costs, tighter admissions requirements, and fewer rather than more opportunities for access. Most of these students will come from low income families; many will be the first in their families to attend college. Historically these are the very students who have faced the greatest academic and financial challenges in getting access to or completing college. Most will work close to full time while they are in college, and need to attend school close to home.

- More than half of today's postsecondary students are financially independent; more than half attend school part-time; almost 40 percent work full-time; 27 percent have children themselves.⁷ More and more adults are looking for ways to upgrade and expand their skills in an effort to improve or protect their economic position. Many are choosing credential or degree-granting programs in colleges and universities.⁸
- Access and achievement gaps separating low-income and minority students not only persist, but have become wider. Despite years of funding student aid programs, family income and the quality of high school education remain the best predictors of college-level success. Nationwide, for every 100 white ninth graders, only 23 persist from high school graduation through a college degree. The proportions are less than half of that for black and Hispanic students.
- Low-income high school graduates in the top quartile on achievement tests attend college at the same rate as high-income high school graduates in the bottom quartile on the same tests.⁹ Additionally, low-income families need to spend about a third of their annual income to send a student to community college and 43 percent to send him or her in a public four-year institution.¹⁰ Only 21 percent of college qualified low-income students complete bachelor's degrees, compared to 62 percent of high-income students.¹¹
- For first-time, full-time students seeking baccalaureate degrees, only about 55 percent obtain a baccalaureate degree within six years. Twenty percent of four-year institutions graduate less than one-third of their freshmen within six years.¹²
- In 2004, 9.4 percent of all bachelor's degrees were awarded to blacks and 6.8 percent to Hispanics, compared to the 73.3 percent that were awarded to whites.¹³

The nation can no longer afford to have K-12 and higher education systems operate independently of one another.

Too much evidence has accumulated that shows that insufficient alignment between K-12 and higher education is at the root of our national achievement problems. While a number of states are working to improve alignment, higher education has not sufficiently engaged with high schools on the level of preparation needed to succeed at the university level. Studies show the overwhelming majority of *both* college *and* high school officers are unaware of the standards and assessments being used by their counterparts in the other sector.

- Only eight states require high school graduates to take at least Algebra II – a threshold course for college-level success in math-placed disciplines including engineering and science.¹⁴
- Fewer than 22 percent of the 1.2 million students who took the ACT college-entrance examinations in 2004 were ready for college-level work in the core subjects of mathematics, English and science.¹⁵ Forty percent of faculty members say students aren't well prepared for college-level writing, in contrast to the 90 percent of high school teachers who think they are prepared.¹⁶
- The consequences of substandard preparation and poor alignment between high schools and colleges persist in college. Remediation has become far too common an experience for American postsecondary students. Some 40 percent of four-year college students, and 63 percent of two-year college students, end up taking at least one remedial course – at an estimated cost to the taxpayers of \$1 billion.^{17,18}

3. The system of financing higher education is increasingly dysfunctional: state subsidies are declining; tuitions are rising; cost per student is increasing faster than inflation or family income; need-based financial aid is not keeping pace; the student aid system is playing roles it increasingly can't support; and public concern about rising costs is contributing to the erosion of public credibility in higher education.

There is no issue that concerns the American public more about higher education than the soaring cost of attendance and the associated rapid increase in the cost of operating institutions. While the pattern of cost increase varies (it has been much less pronounced, for example, at the community colleges), it is in general unacceptably large and contributes to problems of access discussed elsewhere in this report. Affordability is directly affected by a financing system which provides no incentives for colleges and universities to take aggressive steps to improve institutional efficiency and productivity.

- College and university finances are complex, and made more so by accounting habits that confuse costs with revenues and obscure production costs. The lack of transparency in financing is not just a problem of public communication or metrics – it reflects a deeper set of issues of inadequate attention to cost measurement and cost management within institutions.
- Institutions have no real incentive to contain costs, as prestige is measured by resources, and managers who hold down spending risk losing their academic reputations. As public subsidies for higher education decline, institutional attention to cost – and price – control becomes an urgent priority and a matter of concern both as it affects internal institutional accountability and public credibility. It also will require new attention to the relationship between resource use and quality – or value for money. Otherwise, the potential exists that the richest institutions will continue to add revenues (and costs), while the others will cut into core capacity, eroding quality and damaging educational outcomes.
- The problem doesn't seem to be a lack of money – certainly not for the best financed private and public research universities. Our colleges and universities have historically been generously financed. By international measures, we spend

more than almost any other country in the world, averaging total per student spending of over \$22,000 annually, almost twice the OECD member nation average, and more than twice the average of \$8,779 spent in U.S. secondary schools.¹⁹

- Over the 10-year period from 1995 to 2005, average tuition and fees at private four-year colleges and universities rose 37 percent after adjusting for inflation. Average tuition and fees at public four-year institutions rose 54 percent.²⁰ According to College Board and Census Bureau figures, the price of a public four-year college education increased by more than 200 percent from 1981 to 2003. The Consumer Price Index rose by 80 percent during the same period.²¹
- One of the reasons tuition and fees have increased is that state funding has been declining on a per-student basis to a 25-year low in 2005.²² State funding for higher education has always followed a zig-zag course – going up in times of growth and down during recessions. The prospects for a return to a time of generous state subsidies are not good. Fully 50 of the 50 states are expected to experience long-term structural deficits in funds for postsecondary education, caused by the squeeze of revenues and pressures on spending from rising health care costs.²³ The bottom line is that state funding for higher education will not grow enough to support enrollment demand without some change in spending. Instead, the major source of “new” revenue for most institutions will come from money they already have – reprogrammed to allow for selective investments in new initiatives.
- But funding cuts are not the only reason costs are rising. Institutions are spending more money, particularly the wealthiest institutions with the greatest access to capital. And the greatest growth has been in administrative costs, for improvements in student services (including state of the art fitness centers and dormitories) and for merit- rather than need-based aid.
- In addition, the prevalence of third-party payment in higher education, whether from student-loan agencies or from private donors, means that colleges and universities are somewhat insulated from the consequences of their own spending decisions. They lack incentives, for instance, to substitute capital for labor by using technology to lower their instructional costs.
- At present, institutions of higher education must comply with more than 200 federal laws – everything from export administration regulations to the Financial Services Modernization Act. At their best, federal regulations are a mechanism to support important human values on campuses. At worst, regulations can absorb huge amounts of time and waste scarce campus financial resources with little tangible benefit to anyone.²⁴

4. The entire financial aid system – including federal, state, institutional, and private programs – is inefficient, duplicative, and frequently does not direct aid to students who truly need it.

Most public discussions of college affordability are framed solely in terms of the financial strain faced by students and families, which is appropriate and understandable in an era when for 25 years average tuition and fees have increased faster than inflation,

per capita personal income, consumer prices, and even health insurance. Yet because students and families only pay a portion of the actual cost of higher education, affordability is also an important public policy concern for those who are asked to fund colleges and universities, notably federal and state policymakers, but also private donors.

- The complexity of the system is confusing to consumers and institutional leaders alike and contributes to a lack of internal and external accountability about costs and prices.
- Growth in institutional discounting means that net tuition – the amount students pay after grant aid has been taken into account – has not risen as rapidly as “sticker” price.²⁵ Studies of tuition discounting among private colleges show that almost 40 percent of entering freshmen receive an institutional discount.²⁶ The reality is that the money to pay for this growing aid doesn’t come from governments or from institutional endowments, but from redirected tuition revenue from “full-pay” students.
- States and institutions have increasingly focused financial aid awards on the basis of merit rather than need. Seventy-seven percent of all aid is non-need based.
- Over half of today’s undergraduates take out loans to finance part of their college work. Nearly three-quarters of undergraduate students in private, non-profit institutions graduate with some debt, compared to 62 percent in public institutions. According to the most recent College Board figures, average debt levels were \$10,600 for graduates of public institutions and \$16,000 for graduates of private, non-profit colleges and universities.²⁷
- While 80 percent of adults say a college education is more important today than it was a decade ago, two-thirds say that affording college is harder now – and 70 percent say they expect it to be even more difficult in the future. Large majorities of adults – 59 percent overall and 63 percent among parents of college students – say students today graduate with too much debt.
- There are 17 separate federal programs providing direct financial aid or tax benefits to individuals seeking postsecondary education. The system is overly complex and its multitude of programs sometimes redundant. For the typical household, the Free Application for Federal Student Aid, or FAFSA, is longer and more complicated than the federal tax return. Moreover, the simplest IRS tax form, the 1040EZ, already collects most of the key pieces of data that determine aid eligibility.²⁸
- The current system does not provide definitive information about freshman year aid until the spring of the senior year in high school, which makes it difficult for families to plan and discourages college attendance.
- Unmet financial need among the lowest-income families (those with family incomes below \$34,000 annually) grew by 80 percent from 1990 to 2004, compared to 7 percent for the highest-income families.²⁹ The Advisory Committee on Student Financial Aid estimates that in the first decade of the new century, financial barriers will keep nearly 2 million low and middle income college qualified high school graduates from attending college.³⁰

5. At a time when we need to be increasing the quality of learning outcomes from a college education, there are too many signs that suggest we are moving in the opposite direction.

The combination of enrollment pressures and funding declines is putting great stress on our historic capacity to assess and maintain quality in higher education. Traditionally institutions protect quality through inputs (admissions standards) and resources (low student-faculty ratios and small classes). In today's environment, these techniques are no longer viable, either within individual institutions or across all of higher education. Despite increases in institutional and accreditation agency attention to student learning results, we still do not have good bottom line measures of learning outcomes which allow us to know whether as a nation we are moving forward or backwards in strengthening our attention to student learning.

The quality and relevancy of American higher education and its ability to produce informed and skilled citizens able to compete in the 21st century global marketplace are in question.

- Our continued preeminence is no longer something we can take for granted. The rest of the world is catching up, and by some measures has already overtaken us. We have slipped to 9th in higher education attainment, and 16th in high school graduation rates.³¹ The quality of student learning – as measured by assessments of college graduates – is declining at a time when we need it to be going up.
- While educators and policymakers have commendably focused on getting more students into college, too little attention has been paid to progressing them through completion. The result is that unacceptable numbers of students fail to complete their studies at all, while even those that graduate don't always learn very much.
- There are several national studies that suggest we have a problem as measured by literacy, rising time to degree, and disturbing racial and ethnic gaps in student achievement:
 - The National Assessment of Adult Literacy results show that measures of prose and numeracy literacy for college graduates have declined in the last decade.
 - Only 55 percent of four-year college students complete a baccalaureate degree within six years.
 - Achievement gaps between white and Asian students and black and Hispanic students actually grow larger during the college years.
- Employers assert that the college graduates they hire are not prepared for the workplace, lacking the new set of skills necessary for successful employment and continuous career development.³² These grim results hold for individuals with graduate and post-baccalaureate degrees.

6. There is inadequate transparency and accountability for institutional access, quality, and cost.

There is not a comprehensive accountability strategy in our complex decentralized system of colleges and universities to provide for effective internal accountability systems and adequate public information. Too many decisions about higher education – from the boardroom to the individual – are made based on reputation and funding rather than outcomes. Better data about real performance in relation to current national priorities is absolutely essential if we are to meet national needs and improve institutional performance.

- Beyond lofty vision statements, parents and students have no solid evidence, comparable across institutions, of how much students learn in colleges or whether they learn more at one college than another. Similarly, policymakers need more comprehensive data to help them decide whether the national investment in higher education is paying off and how taxpayer dollars could be used more effectively.
- Colleges and universities can also use more comparable data about the benchmarks of institutional success – student access, retention, learning and success, educational costs (including the growth in administrative expenses including executive compensation), and productivity – to stimulate innovation and continuous improvement.
- Extensive government data on higher education do exist, but they leave out large numbers of students who are increasingly attending our colleges and universities³³ and rarely focus on outcomes.³⁴
- Data collected by the National Center for Education Statistics through its Integrated Postsecondary Education Systems (IPEDS) are limited to full-time, first-time degree- or certificate-seeking students. A significant portion of students – those who enroll on a part-time basis and those who transfer to other institutions – are not counted in the statistics. Additionally, no data exist on family income, time to degree for individual students, or completion for students who, in an increasingly common pattern, begin their studies, drop out, and then restart.
- Accreditation, the large and complex public-private system of federal, state and private regulators, has significant shortcomings. Accreditation plays a gatekeeper role in determining the eligibility of institutions and programs to receive federal and state grants and loans. However, despite increased attention by accreditors to learning assessments, they continue to play largely an internal role. Accreditation reviews are typically kept private, and those that are made public still focus on process reviews more than bottom-line results for learning or costs. The growing public demand for increased accountability, quality and transparency coupled with the changing structure and globalization of higher education requires a transformation of accreditation.³⁵

7. There are barriers to increasing institutional capacity and investment in innovation which will significantly affect our ability to address national workforce needs and compete in the global marketplace.

Government and institutional policies created during a different era in higher education are impeding the expansion of models designed to meet the nation's workforce needs. Program innovations are pushing against powerful traditions of how higher education does business – and point the way toward how the sector's organizational and business models must evolve.

- Innovation is crucial to our economic prosperity, national security, and global competitiveness, but institutions as well as government have failed to sustain and nurture innovation in our colleges and universities. Reports from those working at the grassroots level in fields such as teacher preparation and math and science education indicate that the results of fundamental research are rarely translated into practice. Little of the significant research of the past decade in areas such as cognitive science, neurosciences, and organizational theory is making it into American classrooms, whether at the K-12 level or in colleges and universities.
- With the exception of several promising practices, many of our postsecondary institutions have not embraced opportunities for innovation, from new methods of teaching and content delivery to technological advances to meeting the increasing demand for lifelong learning. For their part, both state and federal policy makers have also failed to make supporting innovation a priority by adequately providing incentives for individuals, employers, and institutions to pursue more opportunities for innovative, effective, and efficient practice.
- For existing institutions, the traditional and limited use of the physical plant – traditional work hours and a rigid institutional calendar year and schedule – result in programs designed to meet the needs of faculty, not students.
- Barriers to the recognition of transfer credits between types of institutions pose challenges to students and prevent institutions from increasing capacity. Students too often receive conflicting information about credit-transfer policies between institutions, leading to an unknown amount of lost time and money (and additional federal financial aid) in needlessly repeated coursework. Underlying the information confusion are institutional policies and practice on student transfers that are too often inconsistently applied, even with the same institution.
- Accreditation and federal and state regulations, while designed to assure quality in higher education, impede innovation in the delivery of higher education and limit outside capital investment affecting expansion and capacity building.
- Fewer of America's students pursue degrees in science, technology, engineering, mathematics, medicine, and other disciplines critical to global competitiveness, national security, and economic prosperity. Even as the Bureau of Labor Statistics projects that 16 of the 30 fastest growing jobs in the next decade will be in the health professions, current and projected shortages in physicians, registered nurses, and other medical specialties may affect the quality of care for the increasingly aging population of Baby Boomers.³⁶

- In addition to these broad demographic and competitiveness trends, the racial and ethnic diversity of our citizens is also changing. The U.S. must respond with public policies which encourage and channel capable students from diverse populations into the health care pipeline to become doctors, nurses, dentists, public health officers and related health professionals and similarly into the pipelines of science, technology, engineering and mathematics.

Recommendations

We have laid out a challenge: the promise of the future, and the many obstacles we must collectively face and overcome to ensure that we get there. America's colleges and universities are treasured national assets, but unless we as a nation concentrate considerable attention on what higher education can become, in addition to cherishing its past, we will not achieve the greatness of which we are capable. To ensure that we protect and rebuild the very best system in the world, we have to construct an agenda of change. This will require institutional leaders and public policy officials to take some risks, and to put aside defensiveness and accusations that have too often led to stalemate. It will require institutional leaders to step up to their responsibility to serve a public as well as an institutional agenda – something that is true for public, non-profit, and for-profit institutions, all of which benefit from public subsidies, and each with a role to play.

But individual institutions acting separately, while important, won't be sufficient to move the system as fast or as far as it needs to go. To galvanize action and to ensure that higher education continues to play the critical role we all need it to play, the Commission calls for a comprehensive national strategy to ensure that our country gets what it needs from our higher education system. That means agreeing on directions, recognizing the distribution of responsibilities, using solid data to refine the diagnosis and identify solutions, and maintaining our focus. Doing this will require an unprecedented degree of collaborative capacity between institutional leaders, state elected officials, the business community, and federal policy leaders.

Toward that end, we offer the following specific recommendations as a starting place for action.

1. To meet the challenges of the 21st century, higher education must change from a system based on reputation to one based on performance. We recommend the creation of a robust culture of accountability and transparency throughout higher education. Every one of our other goals, from improving access and affordability to enhancing quality and innovation, will be more easily achieved if higher education embraces and implements serious accountability measures.

Create a consumer-friendly information database on higher education with useful, reliable information on institutions, coupled with a search engine to enable students, parents, policymakers and others to weight and rank comparative institutional performance

- The Department of Education should collect data and provide information in a common format so that interested parties can create a searchable, consumer-friendly database that provides access to institutional performance and aggregate student outcomes in a secure and flexible format. The strategy for the collection and use of data should be designed to recognize the complexity of higher education, have the capacity to accommodate diverse consumer preferences through standard and customizable searches and make it easy to get comparative information including cost, price, admissions data, college completion rates and, eventually, learning outcomes.
- Third party organizations should be encouraged and enabled to publish independent, objective information using quality measures for institutions. Reports such as the *Measuring Up* state evaluations, which measure how successful states are at preparation, participation, affordability, completion, and learning, should be encouraged and strengthened.

Increase publicly available information on the quality and cost of higher education

- The Secretary of Education should require the National Center for Education Statistics to prepare timely annual public reports on college revenues and expenditures, including analysis of the major changes from year to year, at the sector and state level. Unlike the current system, institutional comparisons should be consumer-friendly, and not require a sophisticated understanding of higher education finance.
- Policymakers, the public and prospective students lack basic information on graduation patterns and labor market outcomes for postsecondary institutions. This is particularly true for those institutions that serve the growing proportion of nontraditional students who do not begin and finish their higher education at the same institution within a set period of time. The Commission supports the development of a privacy-protected higher education information system which collects, analyzes and uses longitudinal progression data from individual students as a vital tool for accountability, policy-making, and consumer choice. Technology already widely deployed in banking and other fields in which the security of data is critical could be used to construct a system that would not include individually identifiable information such as names or social security numbers at the federal level, but would provide an accurate measure of individual institutions' retention and graduation rates and net tuition price for different categories of students.
- The philanthropic community and other third-party organizations are urged to invest in the research and development of instruments measuring the intersection of institutional resources, student characteristics, and educational value-added. Tools should be developed which aggregate data at the state level, and which also can be used for institutional benchmarking.
- Accreditation agencies should make performance outcomes including completion rates and student learning the core of their assessment as a priority over inputs or processes. A framework that aligns and expands existing accreditation standards should be established to (i) allow comparisons among institutions regarding

learning outcomes and other performance measures, (ii) encourage innovation and continuous improvement, (iii) require institutions and programs to move toward world-class quality relative to specific missions and report measurable progress in relationship to their national and international peers. In addition, this framework should require that the accreditation process be more open and accessible by making the findings of reviews easily accessible to the public and increasing the proportion of public and private sector representatives in the governance of accrediting organizations and as members of review teams.

Encourage higher education institutions to measure and report meaningful student learning outcomes

- States should require higher education institutions to measure student learning using quality-assessment data from instruments such as the Collegiate Learning Assessment, which measures the growth of student learning taking place in colleges; and The Measure of Academic Proficiency and Progress, which is designed to assess general education outcomes in order to improve the quality of instruction and learning.
- The federal government should provide incentives for states, higher education associations, systems, and institutions to develop outcomes-focused accountability systems designed to be accessible and useful for students, policy makers, and the public, as well as for internal management and institutional improvement.
- The results of student learning assessments, including value-added measurements that indicate how much students' skills have improved over time, should be made available to students and reported in the aggregate publicly. Faculty should be at the forefront of defining and helping achieve educational objectives for students as measured by evidence-based assessment. Higher education institutions should make aggregate summary results of all postsecondary learning measures, e.g., test scores, certification and licensure attainment, time to degree, graduation rates, and other relevant measures, publicly available in a consumer-friendly form as a condition of accreditation.
- The collection of data allowing meaningful interstate comparison of student learning should be encouraged and implemented to all 50 states. By using assessments of adult literacy, licensure, graduate and professional school exams, and specially administered tests of general intellectual skills, state policymakers can make valid interstate comparisons of student learning and identify shortcomings as well as best practices. The federal government should provide financial support for this initiative.
- The National Assessment of Adult Literacy (NAAL), should be administered by U.S. Department of Education at five, instead of ten, year intervals. The survey sample should be of sufficient size to yield state-by-state as well as national results. The NAAL should also survey a sample of graduating students at two and four-year colleges and universities and provide state reports.

2. The nation should establish postsecondary education as an opportunity for every student. We recommend, therefore, that the U.S. commit to an unprecedented effort to expand college access and success by improving student preparation and persistence, addressing non-academic barriers to college and providing significant increases in aid to low-income students.

- A high school degree should signify that a student is college and/or work ready. States must adopt high school curricula that prepare all students for participation in postsecondary education and should facilitate seamless integration between high school and college. The Commission believes higher education must assume responsibility for working with the K-12 system to ensure teachers are adequately trained, curricula are aligned and entrance standards are clear. The effort underway in a number of states to align K-12 graduation standards with college and employer expectations should be implemented in all 50 states. States should provide incentives for higher education institutions to make long-term commitments to working actively and collaboratively with K-12 schools and systems to help underserved students improve college preparation and persistence.
- The Commission strongly encourages early assessment initiatives that determine whether students are on track for college. One prominent chancellor testified to the Commission that the 12th grade is often a “vast wasteland” rather than a time to ensure that students are prepared for college or are enrolled in college-level courses. We endorse the expansion of early college/dual enrollment programs, as well as Advanced Placement/International Baccalaureate courses.
- Students must have clearer pathways among educational levels and institutions and we urge colleges to remove barriers to student mobility and promote the emergence of new learning paradigms (e.g., distance education, adult education, workplace programs) to accommodate a far more diverse student cohort. States and institutions should review and revise standards for transfer of credit among higher education institutions, subject to rigorous standards designed to ensure educational quality, to improve access and reduce time-to-goal.
- The Commission recommends support for initiatives that help states hold high schools accountable for teaching all students and that provide federal support for effective and timely intervention for those students who are not learning at grade level. Such initiatives would include requirements for state assessments in high school to ensure that diplomas mean students are prepared to enter college and/or the workforce with the skills to succeed. In addition, the current 12th grade NAEP test should be redesigned to explicitly measure college and workforce readiness and provide disaggregated data in state-by-state reports. (Currently the 12th grade NAEP is the only NAEP survey for which there is only a national report. This is of little value for either improvement or accountability.)
- The federal government should significantly increase student need-based aid, subject to simplification and restructuring of the system. The financial aid needs of part-time students should be attended to as part of this agenda.
- Too few students understand the importance and possibility of a college education. Non-academic barriers to college access must be addressed by developing partnerships among schools, colleges and the private sector to provide

early and ongoing college awareness activities, academic support, and college planning and financial aid application assistance. Such efforts should include developing students and parents' knowledge of economic and social benefits of college through better information, use of role models and extensive career exploration.

3. Higher education is becoming increasingly unaffordable for students, their families, states and the federal government – and too many low income students are shut out from college altogether. In order to address the spiraling cost of a college education and the fiscal realities affecting government's ability to finance higher education in the long run, we recommend that the entire student financial aid system be restructured and new incentives put in place to improve the measurement and management of costs and institutional productivity.

The current maze of financial aid programs, rules, and regulations should be reformed in favor of a system more in line with student needs and national priorities. Public providers of student financial aid should commit to meeting the needs of students from low-income families.

- Federal grant programs should be consolidated to increase the purchasing power of the Pell Grant. Additionally, administrative and regulatory costs of federal aid programs should be streamlined through a comprehensive review of financial aid regulations.
- The present student financial aid system should be replaced with a strategically oriented, results-driven system built on the principles of (i) increased access, or enrollment in college by those students who would not otherwise be likely to attend and non-traditional students; (ii) increased retention, or graduation by students who might not have been able to complete college due to the cost, and (iii) decreased debt burden.
- Public providers of financial aid, state and local governments and institutions should give the highest priority to need-based aid in order to provide equitable access to higher education to qualified students from underserved communities.
- The Commission recommends the reexamination and redesign of the federal financial aid system – from grants, to loans, to the tax system. The new system should aim to eliminate the current federal aid form (the Free Application for Federal Student Aid, or FAFSA) in favor of a small, one page application form. The applications process should be substantially simplified by analyzing student need through a simple criterion such as family income. Students should have information about financial aid eligibility sooner, with early estimates of likely aid available as soon as the eighth grade.

Develop, at the institutional level, new and innovative means to control costs and improve productivity.

- State governing boards, entrusted with the responsibility to ensure both internal and external accountability, should work with colleges to improve information

about costs as well as prices for the consumer, public policy makers and institutional leaders.

- Higher education institutions should improve institutional cost management through the development of performance benchmarks. Also, better measures of costs, beyond those designed for accounting purposes, should be provided to enable consumers and policymakers to see institutional results in the areas of academic quality, productivity and efficiency. An important benchmark, for example, would be that the growth in college tuition would not exceed the growth in median family income over a five-year period.
- Colleges should help lower per-student educational costs by reducing barriers for transfer students. This has the likelihood of reducing costs to the overall system of higher education and can eliminate a great deal of redundancy within the system.
- States should be encouraged to change funding practices, providing financial incentives to institutions (and sectors) that show they are increasing productivity and cutting costs. States can drive improvements in educational learning productivity by encouraging more high school based provision of college courses, both through such traditional means as Advanced Placement and encouraging students to participate in early college programs, including electronically-based ones.
- Federal and state policymakers should support the dissemination of technological advances in teaching that lower costs on a quality-adjusted basis. Institutions that reduce instructional costs generally on a quality-adjusted basis should be financially rewarded. States should provide similar incentive payments to institutions and educational leaders who significantly reduce academic attrition and increase graduation rates within the traditional period for the degree (e.g., four years for a bachelor's degree).
- Federal and state policy makers should work to relieve the regulatory burden on colleges and universities by undertaking a review of the hundreds of regulations with which institutions must comply and recommend how they might be streamlined or eliminated. Additionally, nearly every federal agency is involved in regulating some aspect of higher education and each ought to create a compliance calendar to assist colleges and universities with identifying the myriad of regulations and meeting their requirements. Finally, the federal government should work closely and cooperatively with institutions and higher education associations to develop compliance materials when new regulations are issued and to develop a system for notifying institutions when they are covered by a new law or regulation.

4. With some exceptions, higher education has yet to address the fundamental issues of how academic programs and institutions must be transformed to serve the changing needs of a knowledge economy. We recommend that America's colleges and universities embrace a culture of continuous innovation and quality improvement by developing new pedagogies, curricula, and technologies to improve learning, particularly in the area of science and mathematical literacy.

- The Department of Education should revitalize the Fund for the Improvement of Postsecondary Education's (FIPSE) original mission of promoting improvement and innovation in higher education. The Commission recommends FIPSE prioritize proposals focused on innovative teaching and learning models as well as the application of high-quality learning-related research in the rapidly growing areas such as neuroscience, cognitive science and organizational sciences. Successful models and practices identified through the program should be disseminated in an effort to promote best practices and innovative programs throughout higher education.
- Institutions should harness the power of information technology by sharing educational resources among institutions, and use distance learning to meet the educational needs of rural students, adult learners and enhance workforce development.
- Effective use of informational technology can improve student learning and reduce instructional costs. We urge states and institutions to establish course redesign programs using technology-based, learner-centered principles drawing upon the innovative work already being done by organizations such as the National Center for Academic Transformation.
- The Commission encourages the creation of incentives to catalyze the development of open-source and open-content projects at universities and colleges across the United States, enabling the open sharing of educational materials from a variety of institutions, disciplines, and educational perspectives. Such a portal could stimulate innovation, and serve as the leading resource for teaching and learning. New paradigms manifested in initiatives such as OpenCourseWare, the Open Knowledge Initiative, the Sakai Project, and the Google Book project hold out the potential of providing universal access to both knowledge and higher education.

5. In order to prosper in an ever more competitive global economy, America must ensure our citizens' access to high quality and affordable educational, learning, and training opportunities throughout their lives. We recommend the development of a national strategy for lifelong learning designed to keep our citizens and nation at the forefront of the knowledge revolution.

- The nation must focus on keeping U.S. workers at the forefront of the global knowledge economy by creating a system that encourages knowledge and skills to be obtained and continuously updated on a regular basis through a lifetime of learning. Emphasis should be placed on innovation incentives, development of tailored, digital delivery of knowledge, ability to transfer credits among institutions easily (subject to rigorous standards designed to ensure educational quality), and the ability to acquire credits linked to skill certification that could lead to a degree.
- Expand the nationwide pilot program for Lifelong Learning Accounts (individual asset accounts to finance education and training) would allow workers to continuously upgrade their skills while helping to advance their own careers and earnings potential. A national demonstration project would provide an incentive

to lower and middle-income earners to save and spend for education and training to improve their career related skills and knowledge. The accounts would be financed through tax incentives to individuals and employees.

- The Commission encourages institutions to expand their reach to adults through distributed learning, technology, workplace learning, alternative scheduling programs, interim credentialing.
- Make federal, state, and private financial aid available for part-time learners and in line with the realities of today's economy.
- A national strategy should be developed, in partnership with state-based organizations, that would result in better and more flexible learning opportunities, especially for adult learners. The comprehensive plan should include better integration of policy, funding and accountability between postsecondary education, adult education, vocational education, and workforce development and training programs. The plan should include specific recommendations for legislative and regulatory changes needed to create an efficient, transparent and cost-effective system needed to enhance student mobility and meet U.S. workforce needs.

6. The United States must ensure the capacity of its universities to achieve global leadership in key strategic areas such as science, engineering, medicine, and other knowledge-intensive professions. We recommend increased federal investment in areas critical to our nation's global competitiveness and a renewed commitment to attract the best and brightest minds from across the nation and around the world to lead the next wave of American innovation.

- The Commission supports increasing federal and state investment in education and research in critical areas such as the STEM fields (science, technology, engineering and mathematics) teaching, nursing, biomedicine, and other knowledge-intensive professions along the lines recommended by the American Competitiveness Initiative, Rising Above the Gathering Storm, and the National Innovation Initiative.
- The federal government should encourage more research collaboration, multi-disciplinary research and curricula, including those related to the growing services economy, through existing programs at the Department of Education, the National Science Foundation, the Department of Defense, and the Department of Energy's Office of Science.
- Critical to the nation's continued success in the global economy is the need to produce a globally literate citizenry. The federal government has recently embarked on an initiative to dramatically increase the number of Americans learning critical need foreign languages from kindergarten through postsecondary education and into the workforce. Higher education must too put greater emphasis on international education including foreign language instruction and study abroad in order to ensure graduates have the skills necessary to function effectively in the global workforce.
- In an effort to retain the best and brightest students and professionals from around the world, the federal government must address immigration policies specifically

aimed at international students. The Commission recommends exempting foreign graduates of U.S. colleges and universities from the green card cap which would help the United States retain top talent and needed skill sets, particularly in the science, technology, engineering and math professions. Additionally, eliminate the requirement that a foreign-born student must promise he/she does not intend to immigrate to America in order to obtain a student visa.

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