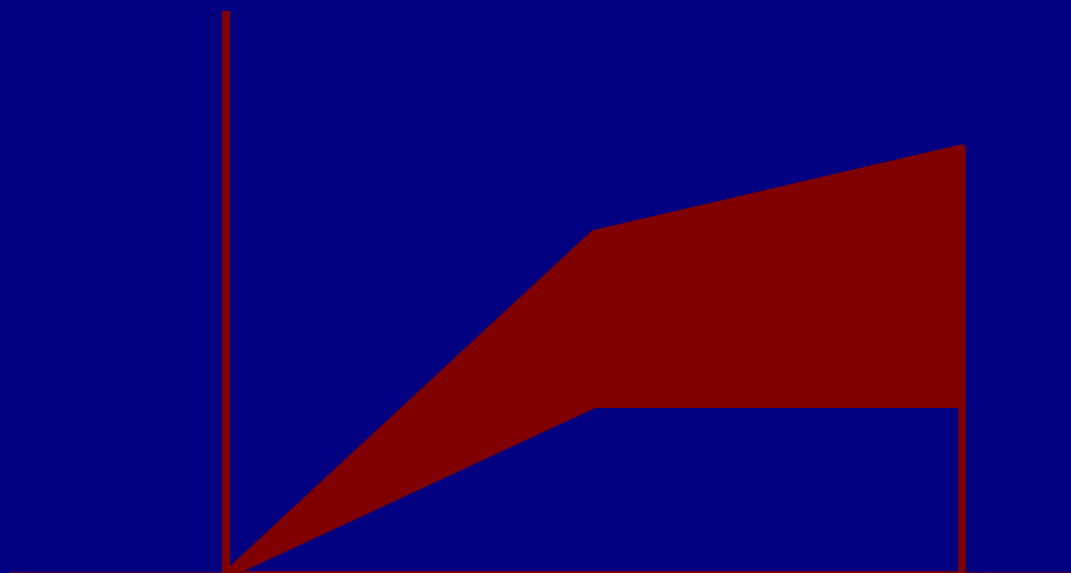




# **MORTGAGING OUR FUTURE**

**HOW FINANCIAL BARRIERS TO COLLEGE  
UNDERCUT AMERICA'S GLOBAL COMPETITIVENESS**



**A REPORT OF THE ADVISORY COMMITTEE  
ON STUDENT FINANCIAL ASSISTANCE**

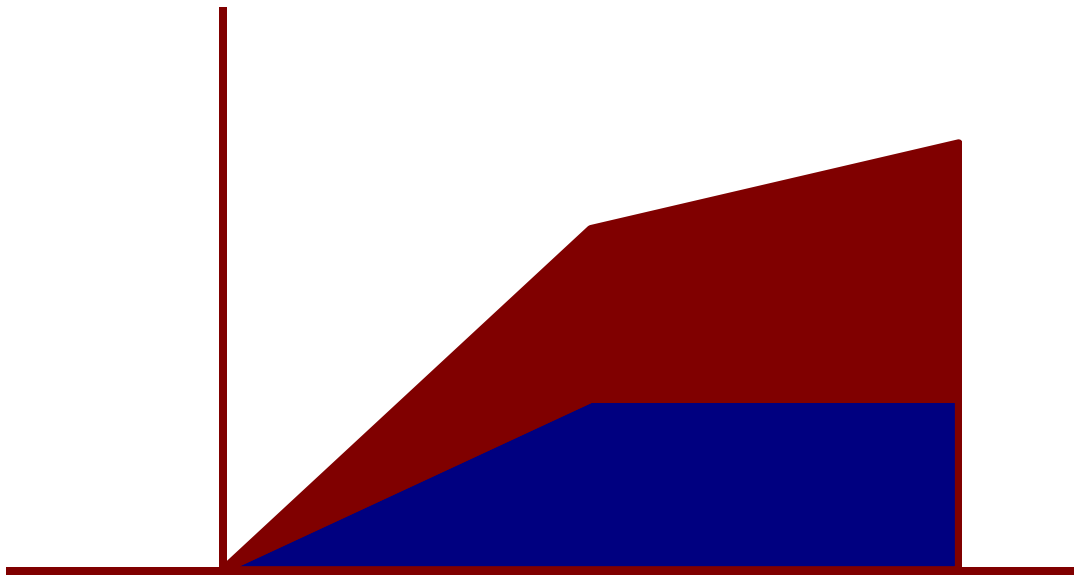
**WASHINGTON DC  
SEPTEMBER 2006**





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**WASHINGTON DC  
SEPTEMBER 2006**

**ADVISING CONGRESS AND  
THE SECRETARY OF EDUCATION  
FOR NEARLY 20 YEARS**

**Advisory Committee on  
Student Financial Assistance**

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**The Advisory Committee on Student Financial Assistance (Advisory Committee) is a Federal advisory committee chartered by Congress, operating under the Federal Advisory Committee Act (FACA); 5 U.S.C., App.2). The Advisory Committee provides advice to the Secretary of the U.S. Department of Education on student financial aid policy. The findings and recommendations of the Advisory Committee do not represent the views of the Agency, and this document does not represent information approved or disseminated by the Department of Education.**

## EXECUTIVE SUMMARY

America's global competitiveness depends on the ability of our high school graduates to earn at least a bachelor's degree. As in recent decades, financial barriers are a major factor in preventing large numbers of college-qualified students from earning a bachelor's degree, particularly those from low- and moderate-income families. These bachelor's degree losses are an unmistakable signal that our nation has yet to make the full investment in student aid necessary to secure our economic future—a dire warning that we are requiring millions of students to mortgage their future and ours as well.

We have failed to take accurate account of the impact of price barriers on our lowest income students, especially those who have prepared and planned for college:

### Bachelor's Degree Loss Estimates

- During the 1990s, between nearly **1 million** and **1.6 million** bachelor's degrees were lost among college-qualified high school graduates from low- and moderate-income families.
- During the current decade, between **1.4 million** and **2.4 million** more bachelor's degrees will likely be lost, as the number of high school graduates increases and academic preparation improves.

These estimates are extremely conservative, reflecting only those losses that occur among low- and moderate-income college-qualified high school graduates *and* only to the extent that they are unable to enroll and persist in college at the same rates as their middle-income peers. Total losses, including those among middle-income students, are much higher (**Figure 28, page 35**).

The loss ranges are based on two measures of “college qualification” or academic preparation, one more rigorous than the other:

### College Qualification Measures

- The lower end of the loss range includes only those high school graduates who took **at least Trigonometry**.
- The upper end includes only those high school graduates who took **at least Algebra II**.

It is extremely important to note that these bachelor's degree loss estimates *exclude* a very large portion of low- and moderate-income 8<sup>th</sup> graders who either do not graduate from high school or graduate but are not college-qualified under at least one of these measures (**Table 1, page 37**). The bachelor's degree losses in this report, therefore, represent the cream of the nation's high school graduate crop. These are students who—

### Students in the Loss Estimates

- expected and planned to earn a bachelor's degree and had completed the courses required to attend a four-year college;
- had more financial aid information than their middle-income peers;
- were not likely deterred by application forms and processes, which millions of far less qualified students complete successfully each year.

These bachelor's degree losses will be difficult, if not impossible, to stem through strictly non-financial means. Although academic preparation appears to have improved, early information and student expectations to complete college have certainly expanded, and financial aid forms and processes have been greatly simplified over the last decade and a half, bachelor's degree completion rates by family income show no sign of improving. Financial barriers in the form of record level work and loan burden caused by rising college prices and insufficient need-based grant aid continue to undermine advances in other areas.

In addition to the direct effects of financial barriers on the success of low- and moderate-income college-qualified high school graduates, there are pervasive indirect effects on students from middle school through high school who strive to become college-qualified. Today's financial barriers serve to reduce the pool of college-qualified high school graduates tomorrow by—

### **Indirect Effects of Financial Barriers**

- weakening incentives to prepare academically,
- compromising the effectiveness of early intervention efforts,
- making further simplification of student aid more difficult.

These findings have important implications for federal, state, and institutional financial aid policy. To increase bachelor's degree attainment, the nation must—

### **Implications for Student Aid Policy**

- reinvigorate the access and persistence partnership to increase need-based aid from *all* sources,
- restrain increases in the price of college and offset necessary increases with need-based aid,
- moderate the trend—at all levels—toward merit-based aid and increasing reliance on loans,
- reduce financial barriers to transfer from two-year to four-year colleges,
- strengthen early intervention programs for low- and moderate-income middle school students,
- invest in efficient and productive remediation in college.

Taking these actions collectively will lower financial barriers, improve bachelor's degree attainment rates, expand the pool of college-qualified high school graduates over time, and enhance America's economic competitiveness.

The losses also provide a framework for evaluating current student aid proposals, particularly their rationale and supporting data. Given the paramount importance of maintaining America's competitiveness, proposals aimed at lowering financial barriers through increased need-based aid from all sources should receive top priority. Overhauling or dismantling the Title IV programs—which suffer primarily from inadequate funding—is unnecessary. Well-designed improvements to increase efficiency and further streamline delivery are all that is required.

The current reauthorization of the Higher Education Act presents an ideal opportunity to make lasting improvements in student aid that will increase educational attainment, strengthen America's global competitiveness, and create a brighter future for all Americans.

## FOREWORD

Twenty years ago, Congress created the Advisory Committee on Student Financial Assistance to be an objective, nonpartisan source of expertise and advice on student aid policy. The charge given to us was to make recommendations to Congress and the Secretary of Education that maintain and improve college access and persistence for needy students. Through four administrations, eleven Congresses, and three reauthorizations of the Higher Education Act, our Committee has made every effort to fulfill this mandate.

This report follows up our two previous reports, *Access Denied* and *Empty Promises*, by focusing on how financial barriers created by rising college prices and insufficient need-based financial aid undercut bachelor's degree attainment in the United States. We focus on bachelor's degree attainment not because every high school graduate must or should earn a bachelor's degree, but because our financial aid system is founded on the principle that any youth, regardless of family income, should have the financial opportunity to earn such a degree, if he or she aspires to do so and prepares adequately. This longstanding principle is not merely altruistic but highly practical. Americans benefit greatly from increasing the educational attainment and economic productivity of our entire citizenry.

While our nation's competitiveness in the world economy has long been an issue, it is a particular focus and concern of federal policy today. Assessing the extent to which the loss of bachelor's degrees and subsequent negative impact on competitiveness can be attributed to financial barriers is of overriding importance.

It is particularly urgent because as concerns about competitiveness have risen, so also have questions about whether financial barriers really matter, and whether the Title IV programs have been effective in reducing those barriers. The major finding of this report is that, beyond any reasonable doubt, financial barriers do matter greatly and that the funding of Title IV programs along with that of state and college programs, while generous, simply has been inadequate to lower these barriers in the face of rising college prices. Blaming underfunded student aid programs for disappointing rates of college enrollment and persistence seems unproductive.

To make these points as persuasively as possible, this report focuses on college-qualified high school graduates. The bachelor's degree loss estimates, therefore, exclude a large portion of low- and moderate-income 8<sup>th</sup> graders who do not graduate from high school or graduate not fully prepared to attend a four-year college (**Tables 1 and 2, page 37**). But nothing in this report should be construed as implying that these students—who are also deserving recipients of Title IV assistance—should be left behind, or that scarce funds should be shifted away from them to their peers who are better prepared. Title IV has multiple purposes, one of which is to offset the continuing disparity between the likelihood that poor and wealthy 8<sup>th</sup> graders can become college-qualified. And the data show clearly that we are a long way from achieving a level playing field in that regard.

The same is true of the large population of low- and moderate-income nontraditional students. This report does not deal with that problem directly but chooses to focus on the underlying access and persistence pipeline that gives rise to that population. Financial barriers to college are a major cause of delayed and part-time enrollment in the first place, as well as a major obstacle

to returning to college in pursuit of a degree.

Lastly, while this report centers on the relationship between bachelor's degree attainment and our nation's competitiveness in the global economy, we recognize and wish to call attention to our belief that the purpose of college goes well beyond that. Perhaps the most important purpose is to build within students the skills of critical thinking, adaptability, and social engagement that improve life for all Americans.

With respect to the underlying causes of financial barriers and their elimination, this report is strictly objective and nonpartisan. No administration or level of government is blamed for the estimated losses, nor held exclusively responsible for eliminating them. We also recognize that not all of the losses should be seen as a response to inadequate finances. In some cases, family or societal issues can exacerbate the effects of financial barriers. As a society, all of us together—the federal and state governments, colleges, and the private sector as well—have allowed these barriers to grow to current record levels over the last three decades. The only practical way that we as a nation can avoid these losses is through a joint and cooperative effort spearheaded by a partnership of all stakeholders, led by the Department of Education, designed to increase need-based grant aid from *all* sources.

Our Committee feels unanimously that unless we begin to work together to lower the financial barriers to college enrollment and persistence identified in this report, much of our considerable efforts to improve academic preparation, broaden early intervention, maximize outreach and information, and simplify student aid forms and processes will be frustrated.

Without a cooperative effort from all stakeholders, the losses of bachelor's degrees estimated in this report, as well as their negative impact on America's economic competitiveness, will prove inescapable.

**Clare Cotton, Chair**  
**Judith Flink, Vice Chair**  
**Advisory Committee on Student Financial Assistance**



## **ACKNOWLEDGEMENTS**

The Advisory Committee thanks the countless individuals in the higher education community who have provided unwavering support in our efforts to make recommendations to Congress and the Secretary of Education that increase college access and persistence for low- and moderate-income students. For technical assistance in analyzing the data, we thank John Lee and Sue Clery of JBL Associates.

This report would not have been possible without the support of the U.S. Department of Education as evidenced by the development and maintenance of research databases, supported by the National Center for Education Statistics. The analyses in this report are based almost exclusively on the National Education Longitudinal Study of 1988, the Education Longitudinal Study of 2002, and the National Postsecondary Student Aid Survey. These databases allow policymakers and researchers to analyze national trends in college enrollment, persistence, and degree completion. The Department of Education's significant investment in these databases and in education research continues to be critically important in determining the causes of educational inequality and identifying potential solutions.



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## KEEPING AMERICA COMPETITIVE

Disturbing data on America's global competitiveness are a wake-up call to leaders in government and business that we cannot stand idle and expect to maintain our position as a world leader in industry and technology. A call for a renewed focus on economic competitiveness came from the National Academies. Their report, *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Future*, documents mounting evidence of existing challenges to America's economic standing in a variety of areas, including output, research capacity, and levels of educational attainment. Evidence from the National Academies' report and data from the Organisation for Economic Co-operation and Development (OECD) demonstrate that countries with growing economies, like China and India, are threatening to match or surpass the United States in technological innovation, research, and development.<sup>1</sup>

Maintaining America's economic competitiveness and capacity for technological innovation is directly related to maintaining our nation's economic growth and improving our current standard of living. The National Academies' report cautions that America's ability to lead the world in science and engineering is related to both the creation of high-quality jobs in America, and the ability to respond to the need for cleaner, more reliable sources of affordable energy.<sup>2</sup> In addition, as President George W. Bush noted in introducing the White House's *American Competitiveness Initiative* (ACI) in February 2006, the United States' position as a world leader in science and technology has resulted in strong economic growth and improvements in the livelihoods of many Americans.<sup>3</sup> Because of the relevance of competitiveness to both our economy and society, the National Academies' report and the White House's ACI recommend a comprehensive federal effort to sustain and improve America's competitive advantage.

America's global competitiveness depends not only on investment in research, science, and technology, but also on investment in human capital—higher education. Statistics that highlight differences in educational attainment show that our competitors are equaling or surpassing us in educational achievement. According to the National Center for Education Statistics (NCES), in the 2003 administration of the Program for International Student Assessment (PISA), the United States scored lower in terms of math literacy and problem solving than the average score for most OECD countries.<sup>4</sup>

**Countries with growing economies, like China and India, are threatening to match or surpass the United States in technological innovation, research, and development.**

**America's global competitiveness depends not only on investment in research, science, and technology, but also on investment in human capital—higher education.**

**America's competitive advantage in the global economy depends upon increasing rates of bachelor's degree attainment.**

In addition, indicators from the National Science Board and National Science Foundation show that students who were non-citizens had the largest growth in attainment of science and engineering doctorate degrees. In 2001, more than one-third of such degrees were awarded to foreign-born students.<sup>5</sup> For this reason, both the ACI and the National Academies' reports call for increased federal investments in science and engineering research programs, and for improvements in math and science education across the entire education pipeline.

America's competitive advantage in the global economy depends upon increasing rates of success in postsecondary education and increasing rates of bachelor's degree attainment in particular. The decline in manufacturing jobs in today's knowledge economy has resulted in an increased need for highly skilled workers, particularly those who have attained at least a bachelor's degree.<sup>6</sup> For example, the Bureau of Labor Statistics estimated in 2001 that jobs requiring some form of postsecondary education will constitute 42 percent of total job growth between 2000 and 2010; such jobs accounted for 29 percent of all jobs in 2000.<sup>7</sup>

**Increasing bachelor's degree attainment rates would result in the flexible, productive, and innovative workforce that is vital to maintaining our economic advantage.**

In addition, *New England 2020*, a recent report commissioned by the Nellie Mae Foundation, predicts a decline in the percentage of 30-year-olds with a bachelor's degree or higher in Massachusetts, Connecticut, Vermont, and Maine—partially due to changing demographics—and links this decline to the availability of a skilled workforce in these states.<sup>8</sup> Increasing bachelor's degree attainment rates would result in the flexible, productive, and innovative workforce necessary to fill the high-quality jobs that the National Academies indicated were vital to maintaining our economic advantage.<sup>9</sup>

Moreover, the earning power and income taxes paid by bachelor's degree recipients are significantly higher than those who earn an associate's degree, or no degree at all. Accordingly, the National Center for Public Policy and Higher Education and the National Center for Higher Education Management Systems predict a decline in personal income levels in the United States between 2000 and 2020 and a subsequent decline in the nation's tax base if bachelor's degree attainment rates do not increase. These organizations predict a decline in the share of the population age 25 to 64 with a bachelor's degree, and a decline in personal income per capita by \$325, or 2 percent. In comparison, personal income per capita grew by 41 percent nationally between 1980 and 2000.<sup>10</sup> The College Board also estimates that the typical full-time, year-round worker with a bachelor's degree earned \$49,900 per year in

2003 and paid \$11,800 in taxes, compared to a similar worker with an associate's degree who earned \$37,600 and paid \$8,400 in taxes. Workers with only a high school diploma earned \$30,800 per year and paid \$6,500 in taxes.<sup>11</sup> Clearly, there are both private and public benefits to bachelor's degree attainment.

### **Unequal Bachelor's Degree Attainment Rates**

Because bachelor's degree attainment is essential to America's economic future, narrowing income-related gaps in degree attainment is of critical importance. Doing so requires that college-qualified high school graduates from low- and moderate-income families have the financial resources to enroll and persist through degree completion.<sup>12</sup> However, our nation is nowhere near achieving this goal, and significant gaps in bachelor's degree attainment rates by family income continue to exist.

Among 8<sup>th</sup> graders in 1988, the following percentages attained a bachelor's degree by the year 2000, by family income (**Figure 1**):

- 16 percent of low-income
- 27 percent of moderate-income
- 43 percent of middle-income
- 65 percent high-income.

Over four times as many high-income 8<sup>th</sup> graders attained a bachelor's degree as their low-income peers.

Further, significant gaps in bachelor's degree attainment rates by family income are likely to persist throughout the decade. Among 8<sup>th</sup> graders in 2000, the following percentages are projected to attain a bachelor's degree by the year 2012 (**Figure 1**):<sup>13</sup>

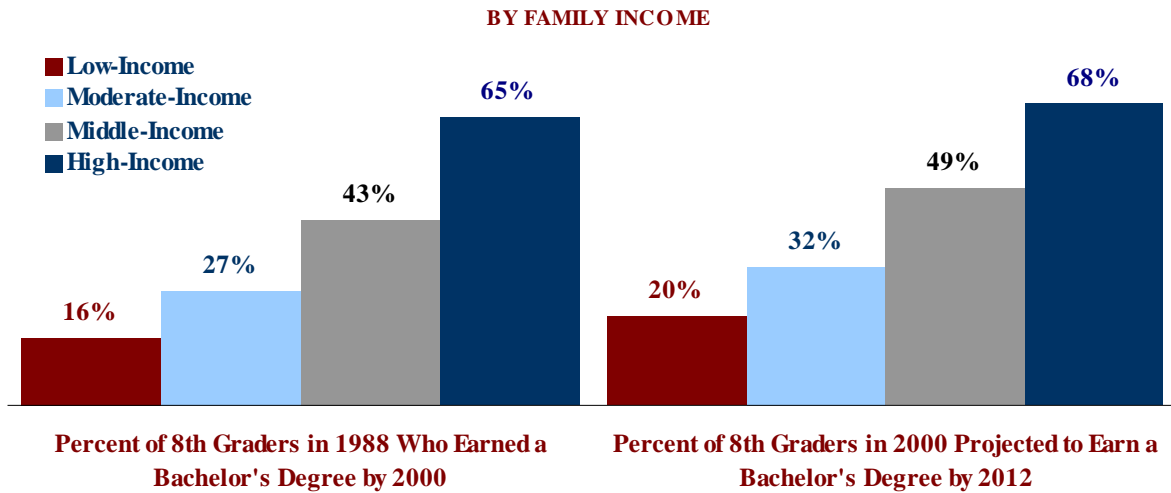
- 20 percent of low-income
- 32 percent of moderate-income
- 49 percent of middle-income
- 68 percent of high-income.

Although more low-income students who were 8<sup>th</sup> graders in 2000 are likely to attain a bachelor's degree by the year 2012, they remain far less likely than their high-income peers to attain the degree. Persistent inequality of bachelor's degree attainment rates by family income will be a challenge that our nation will confront for decades. This inequality will continue to undermine our ability to compete in the 21<sup>st</sup> century global economy.

**Because bachelor's degree attainment is essential to America's economic future, narrowing income-related gaps in degree attainment is of critical importance.**

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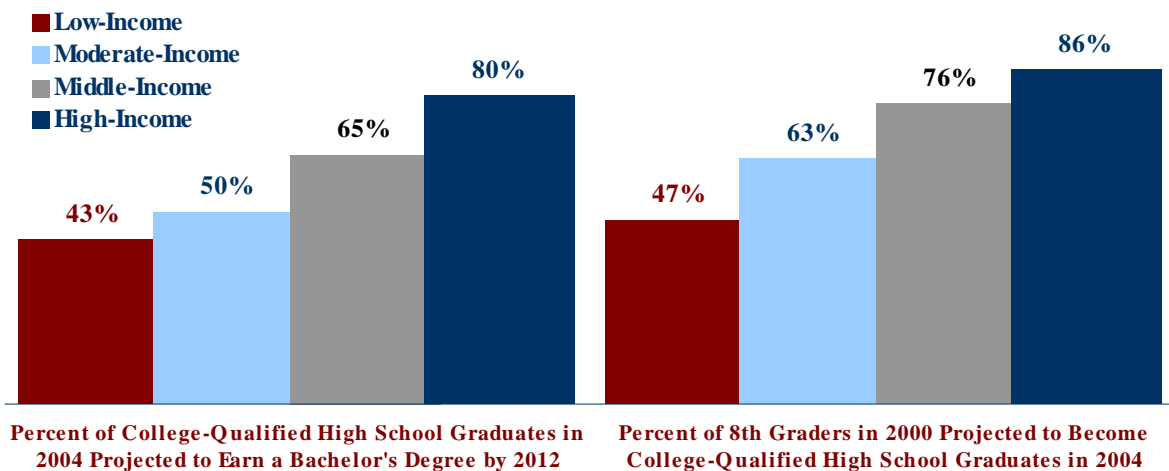
**FIGURE 1: BACHELOR'S DEGREE ATTAINMENT  
OF 8<sup>TH</sup> GRADERS IN 1988 AND 2000**



Only 16% of low-income 8<sup>th</sup> graders in 1988 who eventually became college-qualified high school graduates by taking at least Algebra II attained a bachelor's degree by the year 2000, compared to 65% of their high-income peers. In 2000, 20% of low-income 8<sup>th</sup> graders are projected to attain a bachelor's degree by 2012, but this rate is still far lower than the 68% of high-income 8<sup>th</sup> graders.

Source: Calculations based on the analyses of the National Education Longitudinal Study of 1988/2000 and Education Longitudinal Study of 2002/2004.

**FIGURE 2: COMPONENTS OF THE ACCESS & PERSISTENCE PROBLEM  
FOR COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES\***



The access and persistence problem today has two components. First, on the left, college-qualified low- and moderate-income high school graduates are less likely to earn a bachelor's degree than their upper income peers—43% and 50% vs. 80%. Second, on the right, low- and moderate-income 8th graders are less likely to become college-qualified high school graduates—47% and 63% vs. 86%.

Source: Calculations based on the analyses of the National Education Longitudinal Study of 1988/2000 and Education Longitudinal Study of 2002/2004.

\* High school graduates who completed at least Algebra II.



Two interrelated weaknesses in public policy underpin the nation's unequal bachelor's degree attainment by family income:

- Failure to ensure the success of college-qualified high school graduates.
- Failure to increase the pool of college-qualified high school graduates over time.

Low- and moderate-income high school graduates who are college-qualified are far less likely to earn a bachelor's degree than their middle- and high-income peers. Among 2004 college-qualified high school graduates, the following are projected to earn a bachelor's degree by 2012, by family income (**Figure 2**):

- 43 percent from low-income families
- 50 percent from moderate-income families
- 65 percent from middle-income families
- 80 percent from high-income families.

The goal of federal student assistance is to provide high school graduates who are adequately prepared the opportunity to pursue and complete college, regardless of family income. This goal has yet to be achieved and undercuts our nation's competitiveness in the global economy.

The nation has failed to increase the pool of college-qualified high school graduates over time, particularly among low- and moderate-income students. The likelihood that an 8<sup>th</sup> grader will graduate from high school college-qualified is strongly and positively related to family income. Among 8<sup>th</sup> graders in 2000, the following are projected to become college-qualified high school graduates in 2004 (**Figure 2**):

- 47 percent from low-income families
- 63 percent from moderate-income families
- 76 percent from middle-income families
- 86 percent from high-income families.

This highly unequal distribution of educational opportunity by family income is indicative of an unequal playing field that exists as early as 8<sup>th</sup> grade.<sup>14</sup> Such inequality directly undercuts our nation's competitiveness in the global economy.

**Low- and moderate-income high school graduates who are college-qualified are far less likely to earn a bachelor's degree than their middle- and high-income peers.**

**The nation has failed to increase the pool of college-qualified high school graduates over time, particularly among low- and moderate-income students.**

## **The Dual Role of Need-Based Grant Aid**

Financial barriers in the form of high prices net of all grant aid at four-year public colleges play a critical role in both dimensions of unequal bachelor's degree attainment rates by family income:

**Financial barriers are a primary cause of low- and moderate-income, college-qualified high school graduates being unable to attain bachelor's degrees at the same rate as their middle- and high-income peers.**

- First, the barriers are a primary cause of low- and moderate-income, college-qualified high school graduates being unable to attain bachelor's degrees at the same rate as their middle- and high-income peers.
- Second, the barriers also reduce the number of low- and moderate-income students graduating from high school college-qualified, by diminishing incentives to prepare and plan for college.<sup>15</sup>

To demonstrate these points, this report—

**The purpose of the report is to formulate a flexible, analytical framework in which the impact of financial barriers on bachelor's degree attainment can be assessed.**

- estimates losses of bachelor's degrees among college-qualified high school graduates from low- and moderate-income families for the decade of the 1990s and the current decade;
- derives high-level findings about the impact of financial barriers, including an exploration of how such barriers undermine academic preparation, information, and simplification efforts;
- identifies the broad implications of those findings for federal, state, and institutional policy.

The purpose of the report is to formulate a flexible, analytical framework in which the impact of financial barriers on bachelor's degree attainment can be assessed. This framework must be used to evaluate priorities and proposals in the current reauthorization of the Higher Education Act (HEA).

## **THE IMPACT OF FINANCIAL BARRIERS ON BACHELOR'S DEGREE ATTAINMENT**

The National Education Longitudinal Study of 1988 (NELS:88) tracked a cohort of 8<sup>th</sup> graders from 1988 through 2000, providing information on these students' transition from high school through postsecondary education. Similar to NELS:88, the Education Longitudinal Study of 2002 (ELS:2002) is a database that will track a cohort of 10<sup>th</sup> graders in 2002 from high school through postsecondary education. These databases allow for comparative analyses between the two cohorts. A third database, the National Postsecondary Student Aid Survey (NPSAS), examines how students pay for postsecondary education and includes information on college costs and financial aid.<sup>16</sup>

### **Technical Approach**

These three Department of Education (ED) data sets—NELS:88, ELS:2002, and NPSAS—can be used to determine the impact of financial barriers on high school graduates in the two cohorts and to estimate bachelor's degree losses due to financial barriers in the 1990s and the current decade. To do so, the following steps are necessary:

- Identify those students in each cohort who are “college-qualified” high school graduates.
- Determine the financial barriers—net prices of four-year public colleges—facing these students.
- Examine their 10<sup>th</sup> grade expectations to finish college, 12<sup>th</sup> grade plans to attend a four-year college, financial concerns, and actual enrollment behavior.
- Estimate the percentage and number who were (or will be) unable to earn a bachelor's degree within eight years.

The final step requires using these estimates to calculate total losses of bachelor's degrees in the 1990s and the current decade, and to attribute a portion of those losses to financial barriers.

### **Identifying College-Qualified High School Graduates**

The first step in isolating the impact of financial barriers on bachelor's degree attainment is to focus on those high school

**These three ED data sets—NELS, ELS, and NPSAS—can be used to determine the impact of financial barriers on high school graduates in the two cohorts.**

**The final step requires using these estimates to calculate total losses of bachelor's degrees in the 1990s and current decade, and to attribute a portion of those losses to financial barriers.**

graduates who are college-qualified. To do so, this report uses two measures of college qualification:

- High school graduates who took at least Algebra II—a measure comparable to the one introduced by NCES in 1997.
- High school graduates who took at least Trigonometry, a more rigorous measure under which far fewer high school graduates are identified as college-qualified.

**Level of high school math is used because it has been shown to be a strong predictor of academic success in college.**

Level of high school math is used because it has been shown to be a strong predictor of academic success in college.<sup>17</sup> These two measures form the upper and lower bounds, respectively, of this report's bachelor's degree loss estimates and projections.

### **At Least Algebra II**

Under the less rigorous measure, 52 percent of low-income students and 65 percent of moderate-income students who graduated from high school in 1992 were qualified to attend a four-year college, compared to 73 percent of middle-income students and 86 percent of high-income students (**Figure 3**). This measure is comparable to that used by NCES in a 1997 analysis of access to postsecondary education for 1992 high school graduates. In that study, NCES found that low-income high school graduates who were college-qualified had as much or more financial aid information as their middle-income peers, and attributed no differences in four-year college enrollment rates by income to complexity of application forms or processes.<sup>18</sup>

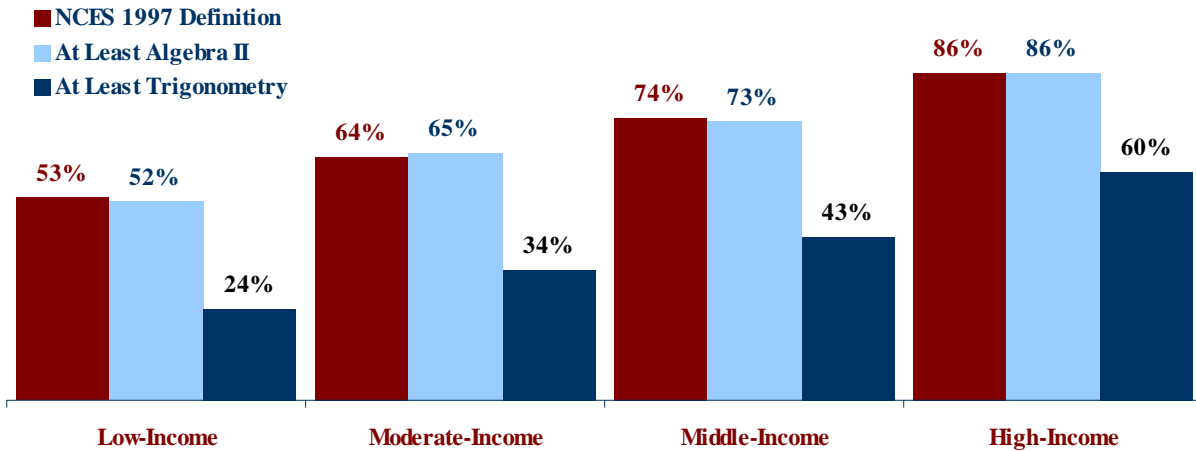
**Under the less rigorous measure, 52 percent of low-income students and 65 percent of moderate-income students were qualified to attend a four-year college.**

Approximately the same percentage of low-income high school graduates were identified as college-qualified under the 1997 NCES measure (53 percent) as are identified as college-qualified under the “at least Algebra II” measure (52 percent).

### **At Least Trigonometry**

The second, more rigorous measure includes only those high school graduates who completed at least Trigonometry. Under this measure, 24 percent of low-income high school graduates and 34 percent of moderate-income graduates were qualified to attend a four-year college, compared to 43 percent and 60 percent of their middle- and high-income peers, respectively (**Figure 3**).

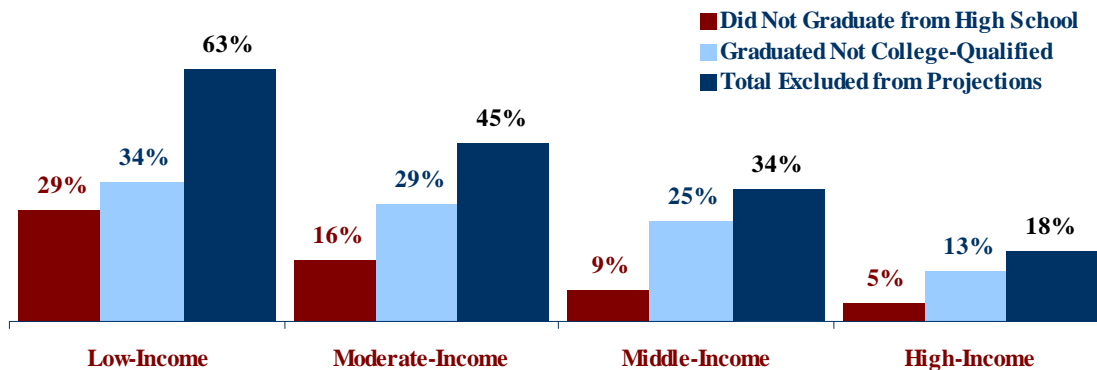
**FIGURE 3: PERCENT OF 1992 HIGH SCHOOL GRADUATES WHO WERE QUALIFIED TO ATTEND A 4-YEAR COLLEGE  
COMPARING MEASURES OF COLLEGE QUALIFICATIONS**



Bachelor’s degree loss estimates in this report use two measures of college qualification: first, that high school graduates have completed at least Algebra II; second, and more rigorous, that high school graduates have completed at least Trigonometry. The “at least Algebra II” measure is comparable to the one introduced by NCES in 1997 in that the percentage of high school graduates qualified by family income under the two measures varies by no more than one percentage point.

Source: National Education Longitudinal Study of 1988/2000.

**FIGURE 4: PERCENT OF 1988 8<sup>TH</sup> GRADERS EXCLUDED FROM BACHELOR’S DEGREE LOSS ESTIMATES  
WHEN "ATLEAST ALGEBRA II" MEASURE IS USED**



If college-qualified is defined as high school graduates who took at least Algebra II, a large portion of 8<sup>th</sup> graders from low- and moderate-income families are excluded from bachelor’s degree loss estimates – 63% and 45%, respectively. Excluded from the analyses are all 8<sup>th</sup> graders who did not graduate from high school plus those who graduated but did not take at least Algebra II.

Source: National Education Longitudinal Study of 1988/2000.

## **Students Excluded from Loss Estimates**

**Of 1988 low-income 8<sup>th</sup> graders, 63 percent were excluded, and of moderate-income 8<sup>th</sup> graders, 45 percent were excluded because they did not graduate from high school, or graduated but did not take at least Algebra II.**

**Even more low- and moderate-income 8<sup>th</sup> graders were excluded from the estimates when the “at least Trigonometry” measure was used, 83 percent and 71 percent, respectively.**

High school graduates who were not college-qualified were not included in the estimates of bachelor’s degree losses. This refers to those who did not graduate from high school or did not graduate from high school having taken at least Algebra II or at least Trigonometry. Excluded were a sizeable portion of high school graduates from all income groups, particularly from low-income and moderate-income families.<sup>19</sup>

### **At Least Algebra II**

Under the “at least Algebra II” measure, the following percentages of 1988 8<sup>th</sup> graders were excluded from the analyses, by family income (**Figure 4**):

- 63 percent of low-income
- 45 percent of moderate-income
- 34 percent of middle-income
- 18 percent of high-income.

Of 1988 low-income 8<sup>th</sup> graders, 63 percent were excluded because 29 percent did not graduate from high school, and 34 percent graduated but did not take at least Algebra II. Of moderate-income 8<sup>th</sup> graders, 45 percent were excluded because 16 percent did not graduate, and 29 percent graduated but did not take at least Algebra II.

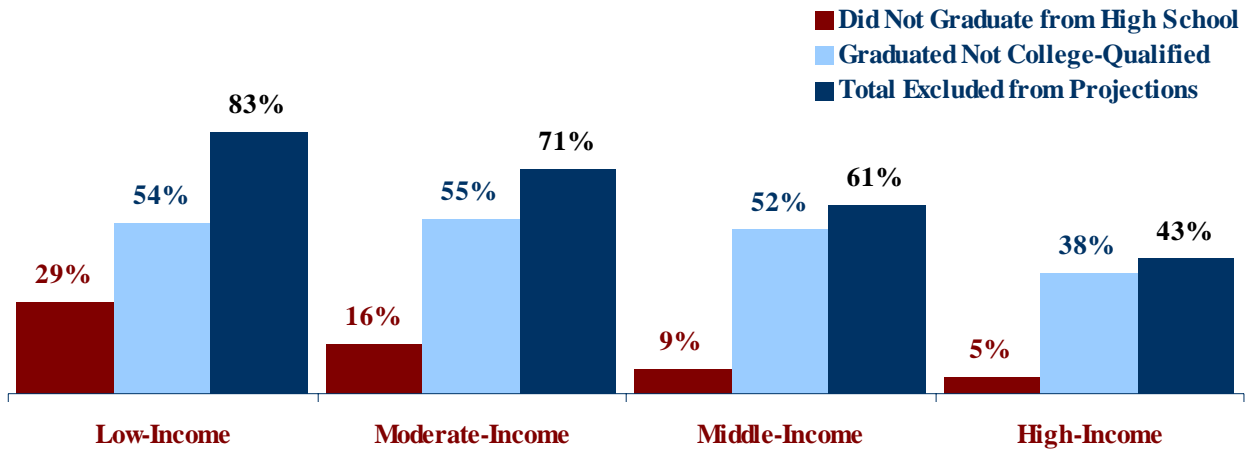
### **At Least Trigonometry**

Even more low- and moderate-income 8<sup>th</sup> graders were excluded from the estimates when the “at least Trigonometry” measure is used. The following percentages of 1988 8<sup>th</sup> graders were excluded, by family income (**Figure 5**):

- 83 percent of low-income
- 71 percent of moderate-income
- 61 percent of middle-income
- 43 percent of high-income.

It is essential to note that over 70 percent of low- and moderate-income 8<sup>th</sup> graders were excluded from the estimated number of bachelor’s degrees lost among college-qualified high school graduates when the “at least Trigonometry” measure was used.

**FIGURE 5: PERCENT OF 1988 8<sup>TH</sup> GRADERS EXCLUDED FROM BACHELOR'S DEGREE LOSS ESTIMATES WHEN "AT LEAST TRIGONOMETRY" MEASURE IS USED**



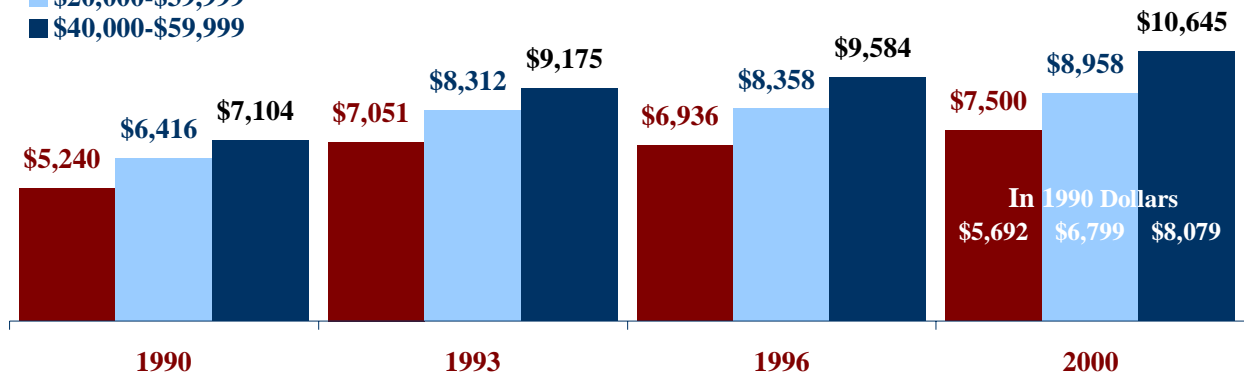
Alternatively, if college-qualified is defined more rigorously as high school graduates who have taken at least Trigonometry, a very high portion of 8<sup>th</sup> graders from low- and moderate-income families are excluded from bachelor's degree loss estimates – 83% and 71%, respectively. Excluded were all 8<sup>th</sup> graders who did not graduate from high school plus those 8<sup>th</sup> graders who did graduate but had not taken at least Trigonometry.

Source: National Education Longitudinal Study of 1988/2000.

**FIGURE 6: NET PRICES (WORK AND LOAN BURDEN) FACING LOW- AND MODERATE-INCOME FAMILIES AT 4-YEAR PUBLIC COLLEGES SELECTED YEARS FROM 1990 TO 2000**

**Family Income**

- \$0-\$19,999
- \$20,000-\$39,999
- \$40,000-\$59,999



Net prices (family work and loan burden) at 4-year public colleges defined as total cost of attendance minus grant aid from all sources rose for the better part of the 1990s. During this period, total student aid increases at 4-year public colleges were exceeded by price increases. Thus, increases in student aid from all sources did not induce increases in 4-year-college enrollment.

Source: National Postsecondary Student Aid Survey (NPSAS); calculations by T. Mortenson.

## Decade of the 1990s

Understanding bachelor's degree losses in the 1990s first requires examining how net prices at four-year public colleges increased over the decade, how those increases related to family income, and how those increases affected student and parent concerns about college costs and available financial aid.

**Despite increases in grant aid from all sources, net prices in constant dollars at four-year public colleges rose slightly throughout the 1990s; there was no induced-enrollment effect at four-year public colleges.**

### Net Prices of Four-Year Public Colleges

In this report, net prices are defined as total cost of attendance—tuition, fees and living expenses—minus grant aid from all sources at four-year public colleges, and can be thought of as the total work and loan burden facing the family. Between 1990 and 2000, net prices in NPSAS had increased for low- and moderate-income families (**Figure 6**):

- From \$5,240 in 1990 to \$7,500 in 2000 for incomes less than \$20,000.
- From \$6,416 in 1990 to \$8,958 in 2000 for incomes between \$20,000 and \$39,999.
- From \$7,104 in 1990 to \$10,645 in 2000 for incomes between \$40,000 and \$59,999.

**The best way to measure financial barriers is to calculate the net price of a four-year public college as a percentage of family income: \$7,500 in 2000 represented 75 percent of income for the lowest income families.**

Despite increases in grant aid from all sources, net prices in constant dollars at four-year public colleges rose slightly throughout the 1990s. Because price increases offset increases in grant aid, there was no induced-enrollment effect at four-year public colleges due to increases in student aid.

### Net Price as Percent of Family Income

Net prices affect students and families differently depending on the level of family income. The best way to measure financial barriers is to calculate the net price of a four-year public college as a percentage of family income. For example, a net price of \$7,500 in 2000 represented only 15 percent of income for a family earning \$50,000, but 75 percent of income for a low-income family earning \$10,000. The negative impact of net price on enrollment decisions varies inversely with family income. For families whose income remained in the lowest category—\$0 to \$19,999—between 1990 and 2000, net price at a four-year public college as a percentage of family income rose from over 50 percent to over 70 percent.<sup>20</sup>



## Financial Concerns

The net prices that college-qualified high school graduates faced at four-year public colleges in the 1990s had an impact on concerns about college costs and the availability of financial aid among both parents and students. At both levels of academic preparation, college-qualified high school graduates and their parents from low- and moderate-income families were much more concerned about college costs and the availability of financial aid than their middle- and high-income peers (**Figure 7**):

- Among parents, at least 80 percent of low-income and over 66 percent of moderate-income were “very concerned” about college costs and financial aid, compared to 37 percent or less of their middle-income peers and 19 percent or less of their high-income peers.
- Among students, 71 percent of low-income and 59 percent of moderate-income were “very concerned” about college costs and aid, compared to less than 34 percent of their middle-income peers and 21 percent or less of their high-income peers.

Since parent and student concerns about college costs and financial aid translate directly into concerns about perceived net price, such concerns can undercut plans to attend a four-year college and actual enrollment.<sup>21</sup>

### 1992 High School Graduates Who Took At Least Algebra II

Net prices and financial concerns about college costs and the availability of financial aid had a direct impact on the expectations, plans, and enrollment of 1992 college-qualified high school graduates who took at least Algebra II.

## Expectations, Plans, and Enrollment

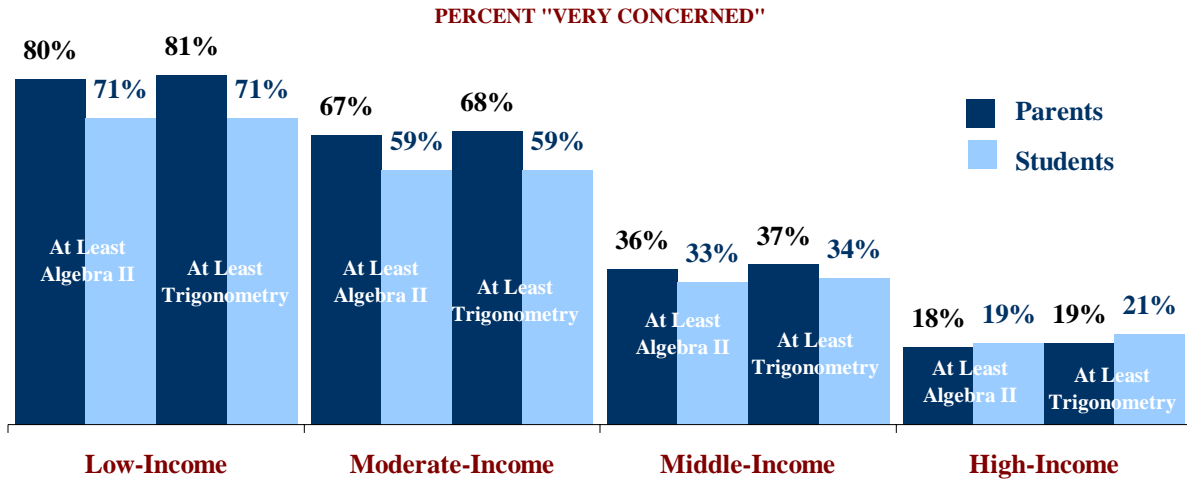
The majority expected in 10<sup>th</sup> grade to finish college and planned in 12<sup>th</sup> grade to attend a four-year college. However, 12<sup>th</sup> grade plans melted into lower enrollment for all groups, especially for those from low- and moderate-income families (**Figure 8**):<sup>22</sup>

- Among those with low-income, 70 percent planned to enroll in a four-year college but only 54 percent did so, a **23 percent melt**.

**Parent and student concerns about college costs and financial aid translate directly into concerns about perceived net price.**

**Net prices and financial concerns had a direct impact on the expectations, plans, and enrollment patterns of 1992 college-qualified high school graduates.**

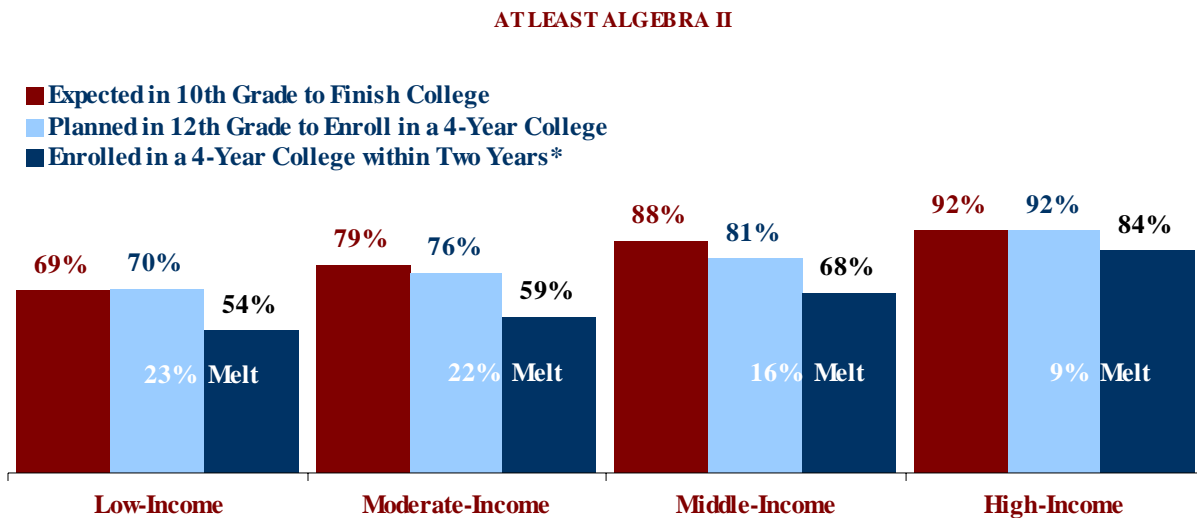
**FIGURE 7: CONCERNS ABOUT COLLEGE COSTS AND FINANCIAL AID AMONG COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES AND THEIR PARENTS**



At both levels of academic preparation, 1992 college-qualified high school graduates and their parents from low- and moderate-income families were much more concerned about college costs and the availability of financial aid than their middle- and high-income peers. These financial concerns translate into concerns about perceived net price and intervene between students' expectations and plans to enroll in a 4-year college and the level and timing of their actual enrollment.

Source: National Education Longitudinal Study of 1988/2000.

**FIGURE 8: EXPECTATIONS, PLANS, AND 4-YEAR COLLEGE ENROLLMENT OF 1992 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES**



Expectations and plans rose as family income increased. The majority of 1992 college-qualified high school graduates expected in 10<sup>th</sup> grade to finish college and planned in 12<sup>th</sup> grade to attend a 4-year college. However, financial concerns about college costs and the availability of financial aid caused 12<sup>th</sup> grade plans to melt into lower enrollment levels, especially among students from low- and moderate-income families.

Source: National Education Longitudinal Study of 1988/2000.

- Among those with moderate-income, 76 percent planned to enroll in a four-year college but only 59 percent did so, a **22 percent melt**.
- Among those with middle-income, 81 percent planned to enroll in a four-year college but only 68 percent did so, a **16 percent melt**.
- Among those with high-income, 92 percent planned to enroll in a four-year college but 84 percent did so, only a **9 percent melt**.

Concerns about college costs and the availability of financial aid in the 1990s—perceived net price—had a strong inverse effect by family income on the melt between 12<sup>th</sup> grade plans and actual enrollment.

Also of special importance was the strong inverse relationship between family income and attending no college at all. Among 1992 college-qualified high school graduates from low-income families, 20 percent attended no college at all, compared to only 3 percent of their high-income peers (**Figure 9**).

### **Bachelor’s Degree Attainment**

Bachelor’s degree attainment was strongly and positively related to family income among 1992 college-qualified high school graduates. For those who completed at least Algebra II, the following percentages had earned a bachelor’s degree by year 2000, by family income (**Figure 10**):

- 43 percent of low-income
- 50 percent of moderate-income
- 64 percent of middle-income
- 80 percent of high-income.

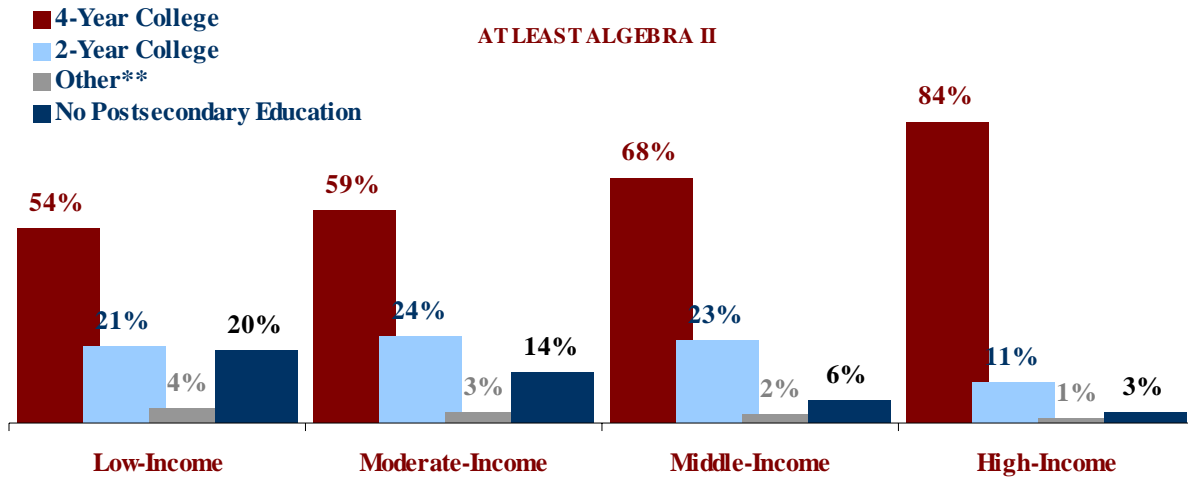
Also of interest, those who started at a four-year college earned a bachelor’s degree far more often than their peers who expected to earn the degree, but started at a two-year college (**Figure 10**):

- 62 percent compared to 20 percent of low-income
- 67 percent compared to 34 percent of moderate-income
- 78 percent compared to 44 percent of middle-income
- 84 percent compared to 53 percent of high-income.

**Among 1992 college-qualified high school graduates from low-income families, 20 percent attended no college at all, compared to only 3 percent of their high-income peers.**

**Bachelor’s degree attainment was strongly and positively related to family income among 1992 college-qualified high school graduates.**

**FIGURE 9: ENROLLMENT PATTERNS\* OF 1992 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES**



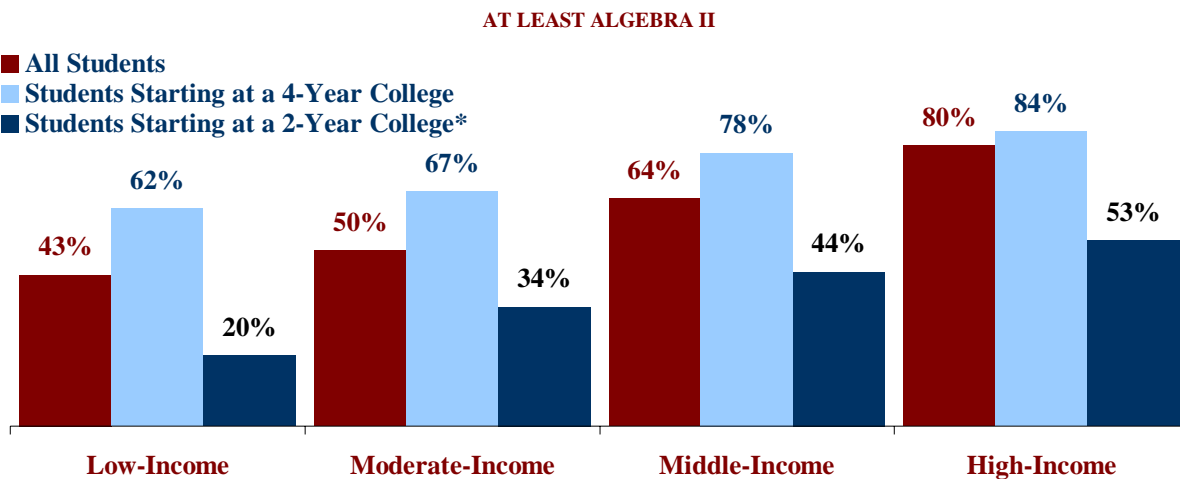
Even among college-qualified high school graduates, enrollment in a 4-year college was strongly related to family income. Those from high-income families enrolled at a much higher rate than those from low-income families – 84% vs. 54%. Over 20% of low-, moderate-, and middle-income students enrolled in a 2-year college. Also noteworthy, 20% and 14% of those with low- and moderate-income attended no college at all.

Source: National Education Longitudinal Study of 1988/2000.

\* First institution attended within two years of high school graduation.

\*\* Includes for-profit institutions and less-than-2-year institutions.

**FIGURE 10: BACHELOR'S DEGREE ATTAINMENT OF 1992 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES BY 2000**



Among college-qualified high school graduates, bachelor's degree attainment is strongly related to family income – with students from high-income families earning the degree much more often than students from low-income families, 80% vs. 43%. Starting at a 4-year college increases the likelihood of earning a bachelor's degree considerably – especially for students from low- and moderate-income families.

Source: National Education Longitudinal Study of 1988/2000.

\* Includes only those who expected to earn at least a bachelor's degree.

Those with high income who started at a four-year college were more than twice as likely as their low-income peers to earn a bachelor's degree. This pattern likely reflected the negative impact of financial barriers on both the initial enrollment decision (four-year college versus two-year college) as well as the financial difficulty of transferring from a two-year college to a four-year college for those of low- and moderate-income.<sup>23</sup>

### **1992 High School Graduates Who Took At Least Trigonometry**

The impact of financial barriers on the expectations, plans, enrollment, and bachelor's degree attainment of 1992 college-qualified high school graduates was also evident when the more rigorous measure of "at least Trigonometry" was used. Those from low- and moderate-income families were still less likely than those from middle- and high-income families to earn a bachelor's degree.

#### **Expectations, Plans, and Enrollment**

As might be anticipated, 10<sup>th</sup> grade expectations, 12<sup>th</sup> grade plans, and college enrollment were all at higher levels for 1992 high school graduates who took at least Trigonometry, compared to their peers who took at least Algebra II. The vast majority expected in 10<sup>th</sup> grade to finish college and planned in 12<sup>th</sup> grade to attend a four-year college. However, even for these students who met the more rigorous measure, there was a melt between college plans and actual enrollment (**Figure 11**):

- Among those with low-income, 84 percent planned to enroll in a four-year college, but only 73 percent did so, a **13 percent melt**.
- Among those with moderate-income, 86 percent planned to enroll in a four-year college, but only 72 percent did so, a **16 percent melt**.
- Among those with middle-income, 88 percent planned to enroll in a four-year college, but 81 percent did so, an **8 percent melt**.
- Among those with high-income, 95 percent planned to enroll in a four-year college, but 90 percent did so, only a **5 percent melt**.

**The impact of financial barriers on 1992 college-qualified high school graduates was also evident when the more rigorous measure of "at least Trigonometry" was used.**

**Even for these students who met the more rigorous measure, there was a melt between college plans and actual enrollment.**

**As in the case of their peers who took at least Algebra II, bachelor's degree attainment rates of 1992 high school graduates who completed at least Trigonometry were also positively related to family income.**

**Those with high income who started at a two-year college were more than twice as likely as their low-income peers to earn a bachelor's degree, likely reflecting the negative impact of financial barriers**

As in the case of their peers who took at least Algebra II, for 1992 high school graduates who took at least Trigonometry, concerns about college costs and the availability of financial aid likely had an inverse effect by family income on the melt between 12<sup>th</sup> grade plans and actual enrollment. Also, the inverse relationship between family income and attending no college was still evident, although at lower levels. Over 8 percent of those with low- and moderate-income attended no college at all, compared to only 1 percent of their high-income peers (**Figure 12**).

### **Bachelor's Degree Attainment**

As in the case of their peers who took at least Algebra II, bachelor's degree attainment rates by 2000 of 1992 high school graduates who completed at least Trigonometry were also positively related to family income (**Figure 13**):

- 55 percent of low-income
- 63 percent of moderate-income
- 78 percent of middle-income
- 85 percent of high-income.

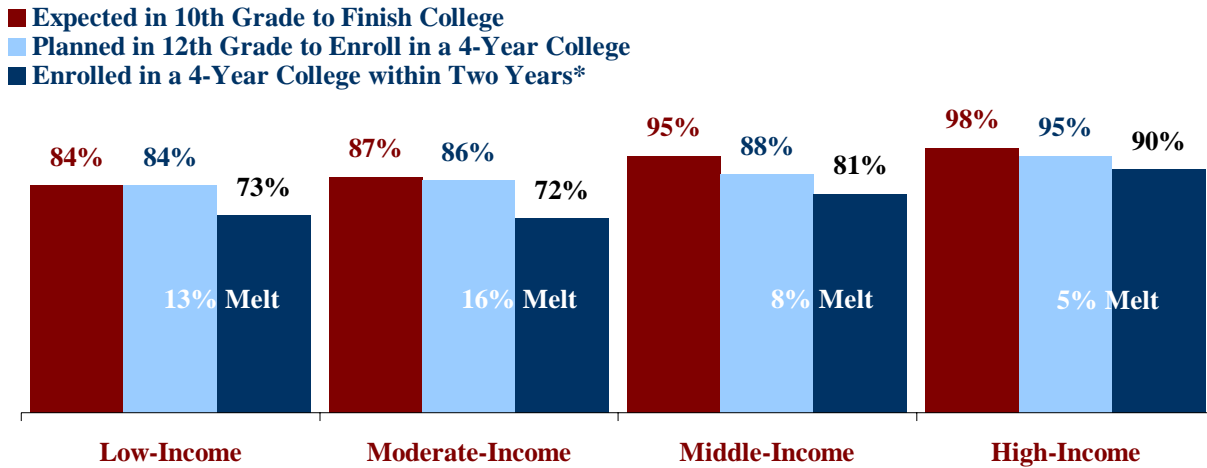
By family income, higher percentages of students who started at a four-year college earned a bachelor's degree compared to those who started at a two-year college with the expectation of earning at least a bachelor's degree:

- 69 percent compared to 19 percent of low-income
- 73 percent compared to 45 percent of moderate-income
- 83 percent compared to 64 percent of middle-income
- 88 percent compared to 49 percent of high-income.<sup>24</sup>

Those with high income who started at a two-year college were more than twice as likely as their low-income peers to earn a bachelor's degree. This pattern likely reflects the negative impact of financial barriers on both the initial enrollment decision—four-year college versus two-year college—as well as the financial difficulty of transferring from a two-year college to a four-year college even for those of low- and moderate-income who were better prepared.

**FIGURE 11: EXPECTATIONS, PLANS, AND 4-YEAR COLLEGE ENROLLMENT OF 1992 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES**

**AT LEAST TRIGONOMETRY**

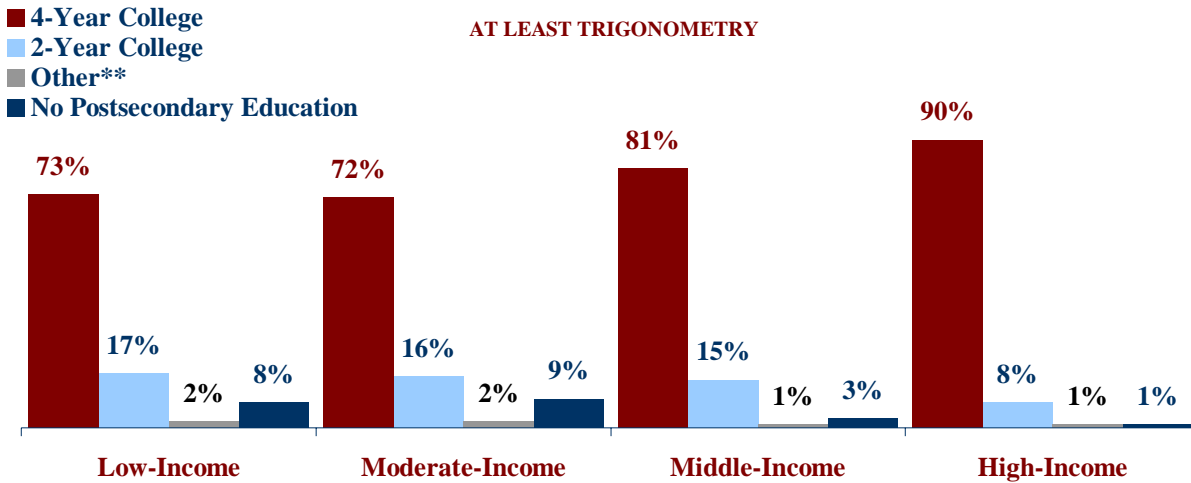


For those college-qualified high school graduates who took at least Trigonometry, 10<sup>th</sup> grade expectations and 12<sup>th</sup> grade plans were understandably higher than for those who had taken at least Algebra II, and, likewise, rose with family income. However, even for these better prepared high school graduates, 12<sup>th</sup> grade plans melted into lower actual 4-year college enrollment, especially among those of low- and moderate-income.

Source: National Education Longitudinal Study of 1988/2000.

**FIGURE 12: ENROLLMENT PATTERNS\* OF 1992 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES**

**AT LEAST TRIGONOMETRY**



Even among college-qualified high school graduates who completed at least Trigonometry, 4-year college enrollment is related to family income. Students from high-income families enroll at higher rates than students from low-income families – 90% vs. 73%. Also, over 15% of those with low- and moderate-income enroll in a 2-year college.

Source: National Education Longitudinal Study of 1988/2000.

\* First institution attended within two years of high school graduation.

\*\* Includes for-profit institutions and less-than-2-year institutions.

## Bachelor's Degree Losses Among 1992 College-Qualified High School Graduates

Whether the measure of “at least Algebra II” or “at least Trigonometry” is used, large losses of bachelor's degrees occurred among the 1992 cohort, by family income (**Figure 14**):

Whether the measure of “at least Algebra II” or “at least Trigonometry” is used, large losses of bachelor degrees occurred among the 1992 cohort, by family income.

- 77,000 to 211,000 of low-income
- 108,000 to 280,000 of moderate-income
- 51,000 to 143,000 of middle-income
- 31,000 to 59,000 of high-income.

Because 1992 was early in the decade, and both net prices and the number of high school graduates increased throughout the 1990s, cumulative losses across the decade were at least ten times higher.

### Attributing Bachelor's Degree Losses to Financial Barriers

Since not all college-qualified high school graduates at any income level earn a bachelor's degree, total losses of bachelor's degrees must be adjusted downward to include only those that can be reasonably attributed to financial barriers. Two methods are used in this report:

Total losses of bachelor's degrees must be adjusted downward to include only those that can be reasonably attributed to financial barriers.

- **Method #1:** Includes only losses among low-, moderate-, and middle-income students adjusted downward by the rate at which their *high-income* peers did not earn the degree.
- **Method #2:** Includes, more conservatively, only losses among low- and moderate-income students adjusted downward by the rate at which their *middle-income* peers did not earn the degree.

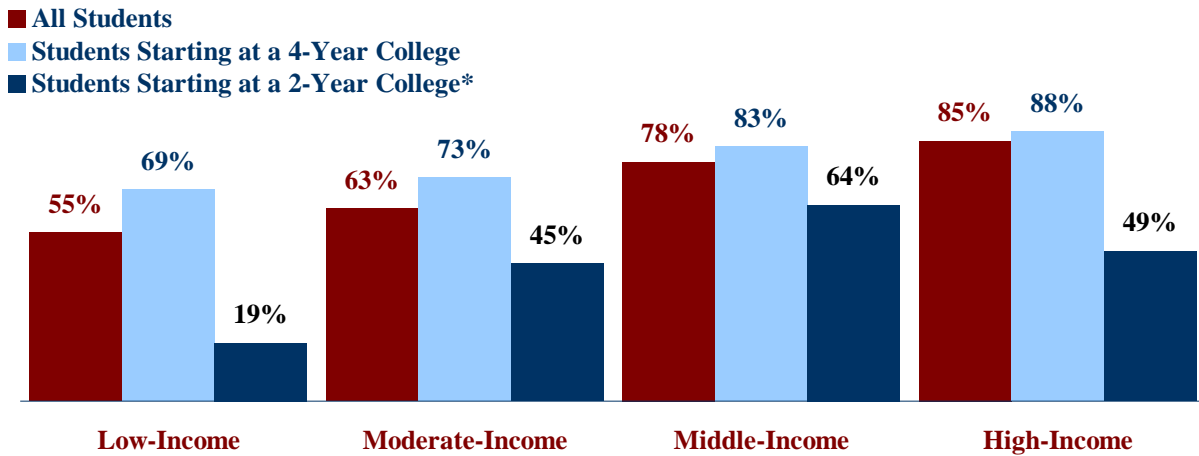
For example, among 1992 college-qualified high school graduates who had taken at least Trigonometry, the percent *not* attaining a bachelor's degree, by family income, can be derived from the attainment rates (**Figure 13**):

- 45 percent of low-income
- 37 percent of moderate-income
- 22 percent of middle-income
- 15 percent of high-income.



**FIGURE 13: BACHELOR'S DEGREE ATTAINMENT OF 1992 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES BY 2000**

**AT LEAST TRIGONOMETRY**



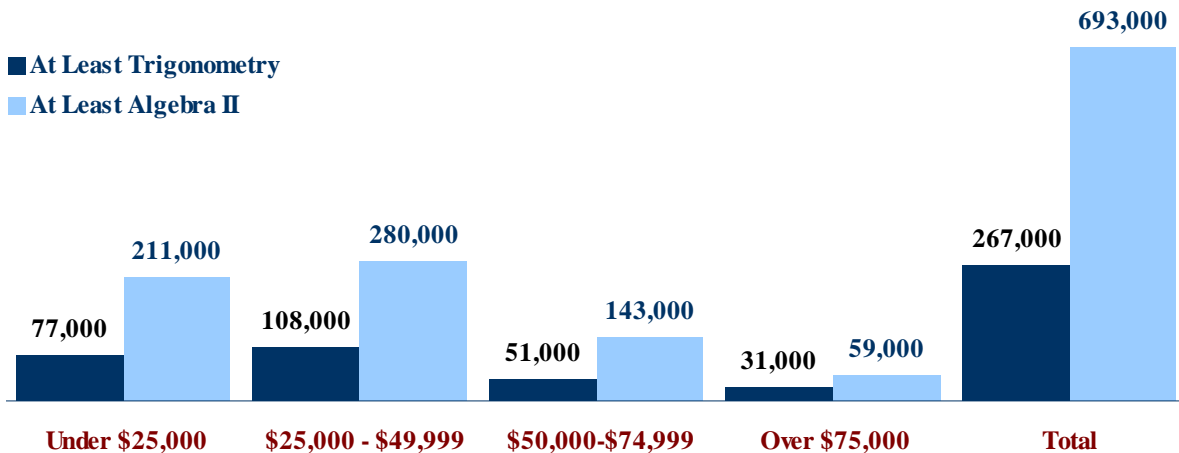
Among college-qualified high school graduates who have taken at least Trigonometry, bachelor's degree attainment is strongly related to family income – with those from high-income families earning the degree more often than students from low-income families, 85% vs. 55%. Starting at a 4-year college increases the likelihood of earning a bachelor's degree – especially for those of low- and moderate-income.

Source: National Education Longitudinal Study of 1988/2000.

\* Includes only those who expected to earn at least a bachelor's degree.

**FIGURE 14: BACHELOR'S DEGREE LOSSES AMONG 1992 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES**

**TOTAL NOT ATTAINING THE DEGREE BY YEAR 2000**



Whether an index of “at least Algebra II” or “at least Trigonometry” is used, large losses of bachelor's degrees occurred among 1992 college-qualified high school graduates. Between 185,000 (77,000 + 108,000) and 491,000 (211,000 + 280,000) bachelor's degrees were lost among those with low- and moderate-income. Between 51,000 and 143,000 were lost among those with middle-income as well. Because 1992 was early in the decade, and net prices increased as the number of high school graduates rose, total bachelor's degree losses for the decade were likely at least ten times larger—2.67 million to 6.93 million.

Source: Calculations based on analyses of the National Education Longitudinal Study of 1988/2000.

**Method #1 adjusts for the rate at which those with *high-income* did not attain the degree; Method #2 adjusts for the rate at which those with *middle-income* did not attain the degree.**

**Loss estimate ranges for the 1992 high school class by family income are: 39,000 to 78,000 of low-income; and 44,000 to 78,000 of moderate-income—decade-wide losses were likely at least ten times higher.**

Method #1, which adjusts for the rate at which those with high-income did not attain the degree, reduces all rates by 15 percentage points to yield adjusted loss rates of 30 percent, 22 percent, and 7 percent for low-, moderate-, and middle-income students, respectively. These loss rates are then used to generate the number of losses in these three income bands using the estimated income distribution of 1992 high school graduates.

Method #2, which adjusts for the rate at which those with middle-income did not attain the degree, reduces all rates by 22 percentage points to yield adjusted loss rates of 23 percent and 15 percent for low- and moderate-income students, respectively. These loss rates are used to generate losses in these two income bands.

### **1992 Bachelor’s Degree Losses Under Method # 1**

Using this method of attribution produces the following loss estimate ranges for the 1992 high school class, by family income (**Figure 15**):

- 51,000 to 137,000 of low-income
- 64,000 to 168,000 of moderate-income
- 16,000 to 63,000 of middle-income.

The 1992 class was just one cohort; decade-wide losses were likely at least ten times higher.

### **1992 Bachelor’s Degree Losses Under Method #2**

Using the more conservative method of attribution produces the following loss estimate ranges for the 1992 high school class, by family income (**Figure 16**):

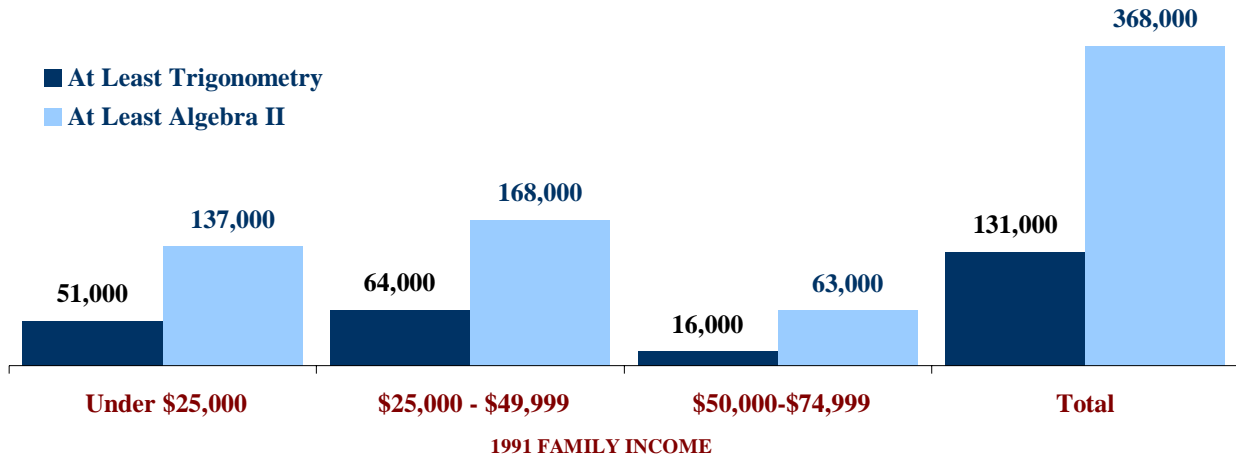
- 39,000 to 78,000 of low-income
- 44,000 to 78,000 of moderate-income.

Decade-wide losses were likely at least ten times higher.

Once again, these ranges exclude a large portion of 1988 8<sup>th</sup> graders from low- and moderate-income families who did not graduate from high school by 1992, or did not graduate college-qualified under one or both measures of college qualification.

**FIGURE 15: BACHELOR'S DEGREE LOSSES AMONG 1992 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES ATTRIBUTABLE TO FINANCIAL BARRIERS**

**METHOD #1: ADJUSTED DOWNWARD BY THE RATE AT WHICH THOSE WITH HIGH-INCOME DID NOT ATTAIN THE DEGREE BY 2000**

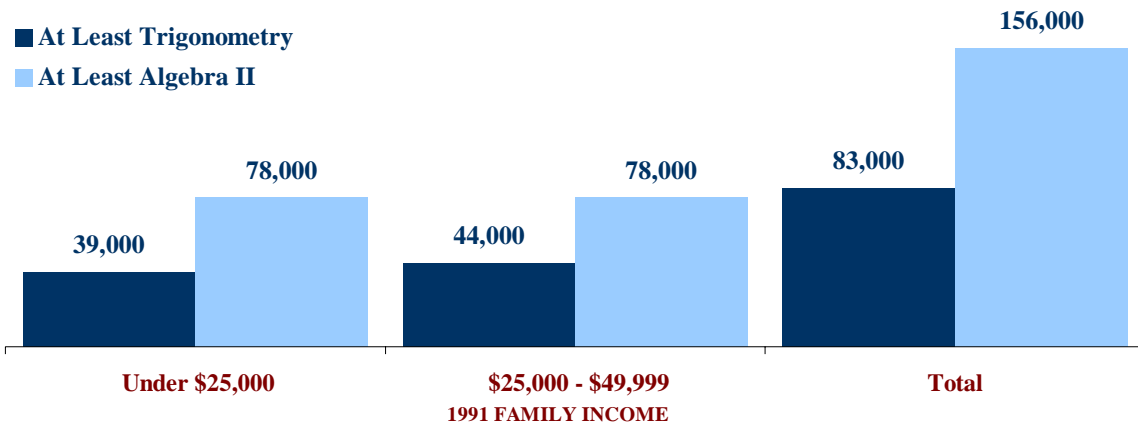


The first method for attributing bachelor's degree losses among 1992 college-qualified high school graduates to financial barriers includes losses only among those with low-, moderate-, and middle-income and adjusts the losses downward by the rate at which those with high-income did not attain the degree. Between 131,000 and 368,000 bachelor's degrees were lost. Because net prices and the number of high school graduates rose in the 1990s, decade-wide losses were likely at least ten times higher—1.31 million to 3.68 million.

Source: Calculations based on analyses of the National Education Longitudinal Study of 1988/2000.

**FIGURE 16: BACHELOR'S DEGREE LOSSES AMONG 1992 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES ATTRIBUTABLE TO FINANCIAL BARRIERS**

**METHOD #2: ADJUSTED DOWNWARD BY THE RATE AT WHICH THOSE WITH MIDDLE-INCOME DID NOT ATTAIN THE DEGREE BY 2000**



The second, more conservative method of attributing bachelor's degree losses among 1992 college-qualified high school graduates to financial barriers is to include losses only among those with low- and moderate-income and to adjust the losses downward by the rate at which middle-income students did not earn the degree. Between 83,000 and 156,000 bachelor's degrees were lost. Because net prices and the number of high school graduates rose in the 1990s, decade-wide losses were at least ten times higher—830,000 to 1.56 million.

Source: Calculations based on analyses of the National Education Longitudinal Study of 1988/2000.

## The Current Decade

Data and lessons learned from the 1992 NELS cohort can be used in conjunction with recent data on 2004 12<sup>th</sup> graders in the ELS cohort to project the number of bachelor's degrees that are likely to be lost if financial barriers facing low- and moderate-income students are not reduced.

**The 1992 NELS cohort can be used in conjunction with recent data on 2004 high school 12<sup>th</sup> graders in the ELS cohort to project the number of bachelor's degrees that are likely to be lost.**

### Net Prices of Four-Year Public Colleges

Between 2000 and 2004, net prices (work and loan burden) at four-year public colleges net prices in NPSAS remained at record levels (**Figure 17**):

- \$7,500 in 2000 and \$8,719 in 2004 for family incomes less than \$20,000.
- \$8,958 in 2000 and \$10,090 in 2004 for family incomes between \$20,000 and \$39,999.
- \$10,645 in 2000 and \$12,572 in 2004 for family incomes between \$40,000 and \$59,999.
- \$11,664 in 2000 and \$13,374 in 2004 for family incomes between \$60,000 and \$79,999.

In constant dollars, between 2000 and 2004, net prices at four-year public colleges increased for low- and moderate-income families.<sup>25</sup>

**In constant dollars, between 2000 and 2004, net prices at four-year public colleges increased for low- and moderate-income families.**

### Net Price as Percent of Family Income

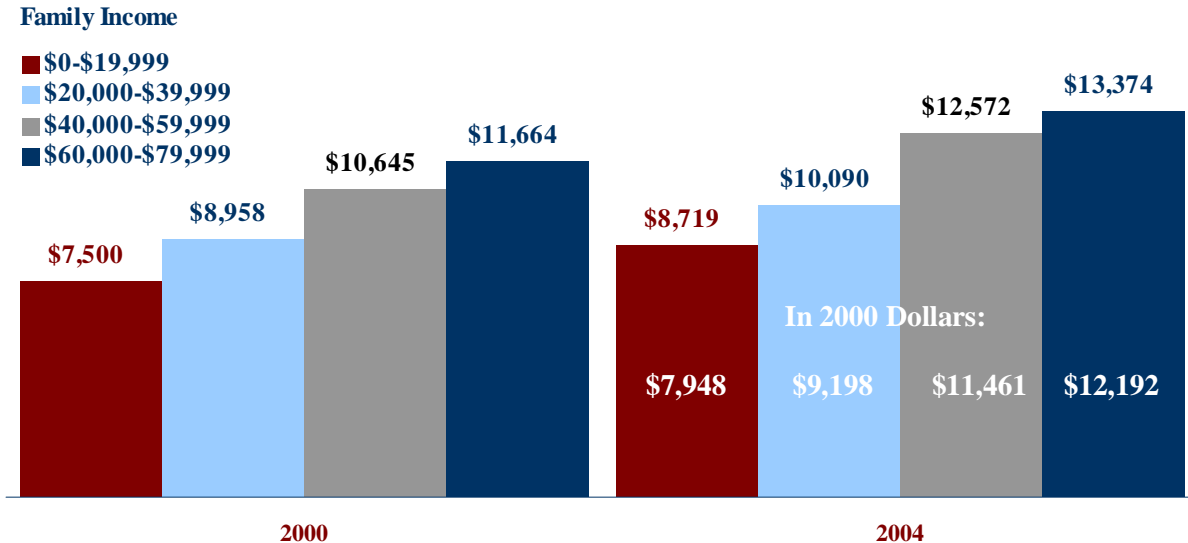
For families whose income remained in the lowest category—\$0 to \$19,999—between 2000 and 2004, net price at a four-year public college as a percentage of family income rose from 75 percent to 87 percent for a low-income family earning \$10,000. Once again, there was little reason for these families to change their college enrollment decisions as student aid increases were largely offset by price increases.

### Financial Aid Packages

A publication of the American Council on Education, "What Every Student Should Know About Student Aid," corroborates data on net prices from NPSAS by providing sample financial aid award

**FIGURE 17: NET PRICES (WORK AND LOAN BURDEN) FACING LOW- AND MODERATE-INCOME FAMILIES AT 4-YEAR PUBLIC COLLEGES**

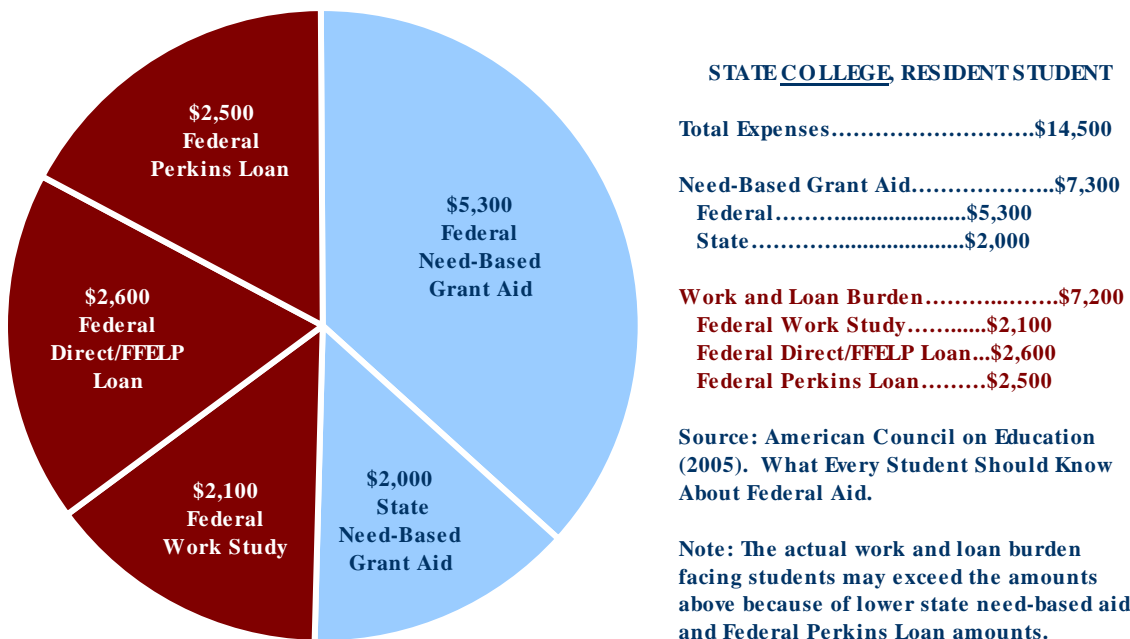
**FROM 2000 TO 2004**



Between 2000 and 2004, net prices at 4-year public colleges—defined as total cost of attendance minus grant aid from all sources, or work and loan burden for the family—rose even when adjusted for inflation. During this period, increases in student aid at 4-year public colleges were again outpaced by price increases. Increases in total student aid did not induce increases in 4-year college enrollment.

Source: National Postsecondary Student Aid Study; calculations by Tom Mortenson.

**FIGURE 18: SAMPLE FINANCIAL AID PACKAGE FOR LOW-INCOME STUDENTS**



Source: American Council on Education (2005). What Every Student Should Know About Federal Aid.

Note: The actual work and loan burden facing students may exceed the amounts above because of lower state need-based aid and Federal Perkins Loan amounts.

Today, at 4-year public colleges, the lowest income high school graduates can face a work and loan burden over \$7,000 after grant aid from all sources is deducted, and a cumulative loan burden of at least \$20,000, assuming completion in four years. Only by working more hours can cumulative loan burden be reduced.

**Sample financial aid award packages for the lowest income students imply a cumulative loan burden between \$20,000 and \$50,000, depending on type of public college and length of time to degree completion.**

packages for the lowest income students by type of college.<sup>26</sup> A sample financial aid package for the lowest income resident student at a four-year public *college* (total expenses of \$14,500) includes the following (**Figure 18**):

- \$7,300 in need-based grant aid (federal and state)
- \$5,100 in federal student loans
- \$2,100 in federal work-study.

This package implies a cumulative loan burden between \$20,000 and \$30,000, depending on length of time to degree completion. A sample financial aid package for the lowest income resident student at a four-year public *university* (total expenses \$17,000) includes the following (**Figure 19**):

- \$6,800 in need-based grant aid (federal and state)
- \$7,900 in federal loans
- \$2,300 in federal work-study.

This package implies a cumulative loan burden between \$30,000 and \$50,000, depending on length of time to degree completion.

#### **Improvements in Academic Preparation between 1992 and 2004**

**Between 1992 and 2004, the percentage of college-qualified students increased as measured by their course-taking, especially among students of low- and moderate-income.**

Between 1992 and 2004, the percentage of college-qualified students increased as measured by their course-taking, especially among students of low- and moderate-income. The increases measured by the percentage taking at least Algebra II were as follows, by family income (**Figure 20**):

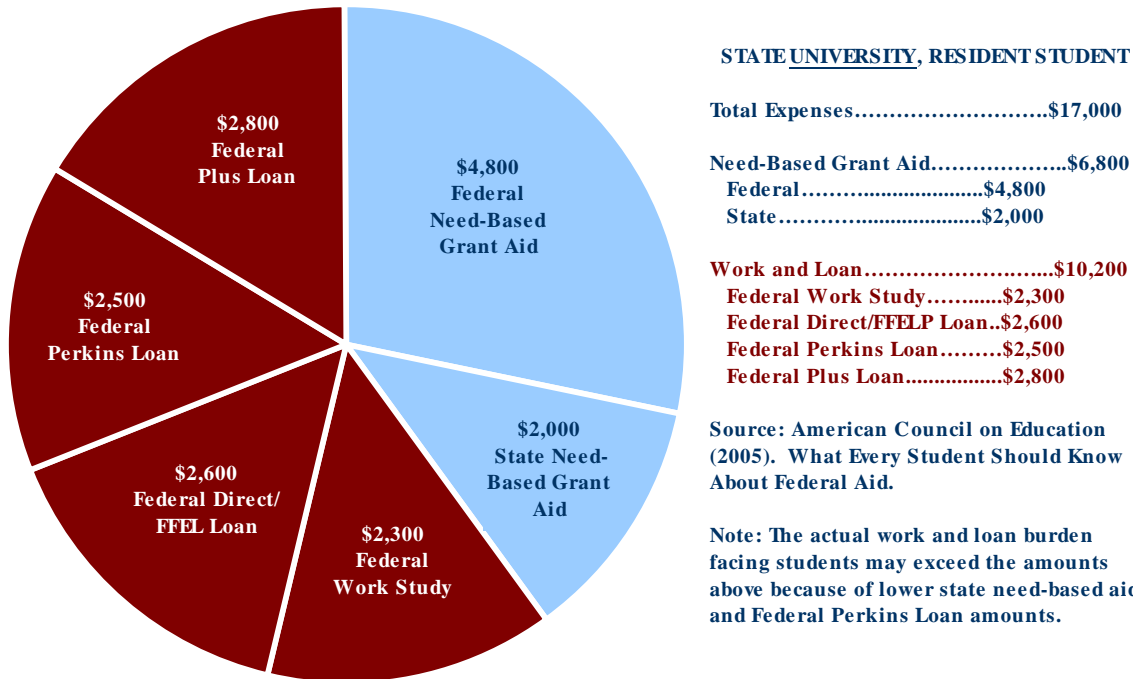
- 52 percent to 66 percent of low-income
- 65 percent to 75 percent of moderate-income
- 73 percent to 84 percent of middle-income
- 86 percent to 90 percent of high-income.

The increases measured by the percentage of students taking at least Trigonometry were as follows, by family income:

- 24 percent to 32 percent of low-income
- 34 percent to 44 percent of moderate-income
- 43 percent to 56 percent of middle-income
- 60 percent to 67 percent of high-income.

The class of 2004 appeared to be better prepared to attend a four-year college, at least as indicated by these two measures.

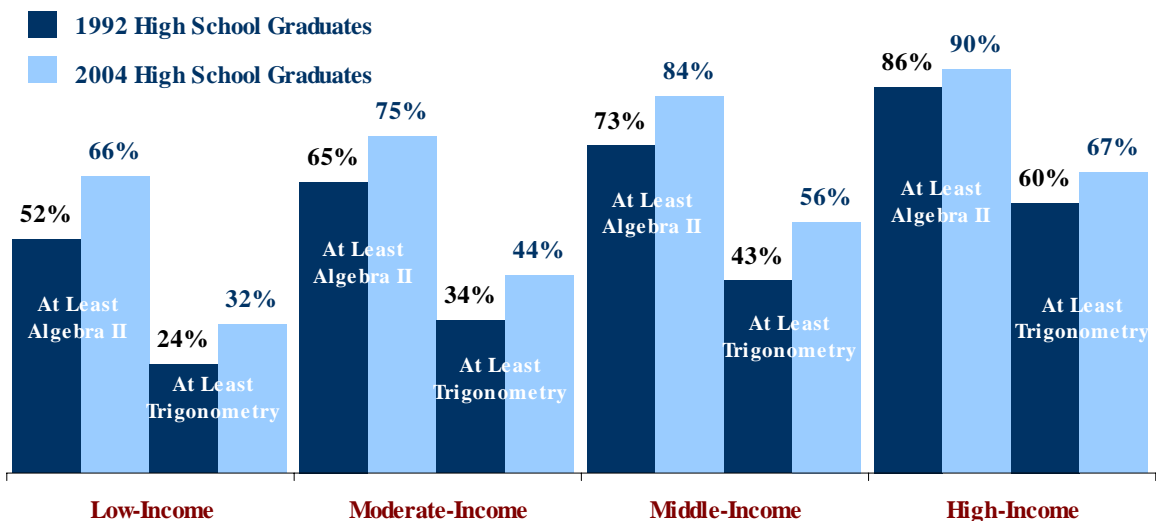
FIGURE 19: SAMPLE FINANCIAL AID PACKAGE FOR LOWEST INCOME STUDENTS



Today, at 4-year public universities, the lowest income high school graduates can face a work and loan burden of \$10,200 after grant aid from all sources is deducted, and a cumulative loan burden of at least \$30,000, assuming completion in four years. Only by working more hours can loan burden be reduced.

FIGURE 20: IMPROVEMENTS IN ACADEMIC PREPARATION FROM 1992 TO 2004

PERCENT OF HIGH SCHOOL GRADUATES WHO ARE COLLEGE-QUALIFIED



Between 1992 and 2004, the percentage of high school graduates taking at least Algebra II and at least Trigonometry increased, especially among those from families with low- and moderate-income. The high school class of 2004 appeared better prepared to attend a 4-year college, as indicated by these two measures.

Source: National Education Longitudinal Study of 1988/2000, Education Longitudinal Study of 2002/2004.

## 2004 High School Graduates Who Took at Least Algebra II

Complete enrollment data are not yet available on the ELS cohort of 2004 high school graduates. However, data on their course-taking, 10<sup>th</sup> grade expectations, and 12<sup>th</sup> grade plans are available. Using the known enrollment and persistence patterns of the 1992 class, these preliminary data can be used to estimate the enrollment pattern and project the likely persistence patterns of 2004 college-qualified high school graduates.

**A comparison of expectations and plans of the 1992 cohort and 2004 cohort shows that plans in 12<sup>th</sup> grade to enroll in a four-year college decreased for most income groups.**

### Expectations and Plans

A comparison of expectations and plans of the 1992 cohort and 2004 cohort shows that, while expectations in 10<sup>th</sup> grade increased among college-qualified high school graduates from low- and moderate-income families, plans in 12<sup>th</sup> grade to enroll in a four-year college decreased for most income groups (**Figure 21**):

- Among those with low-income, expectations to earn a bachelor's degree increased from 69 percent to 76 percent, but plans to enroll in a four-year college fell to 66 percent—4 percentage points below the plans of the class of 1992.
- Among those with moderate-income, expectations increased from 79 percent to 84 percent, but plans to enroll fell to 75 percent—1 percentage point below the plans of the class of 1992.
- Among those with middle-income, expectations and plans remained steady between cohorts at 88 percent and 81 percent, respectively.
- Among those with high-income, expectations remained steady between cohorts at 92 percent, while plans to enroll fell to 89 percent—3 percentage points below the plans of the class of 1992.

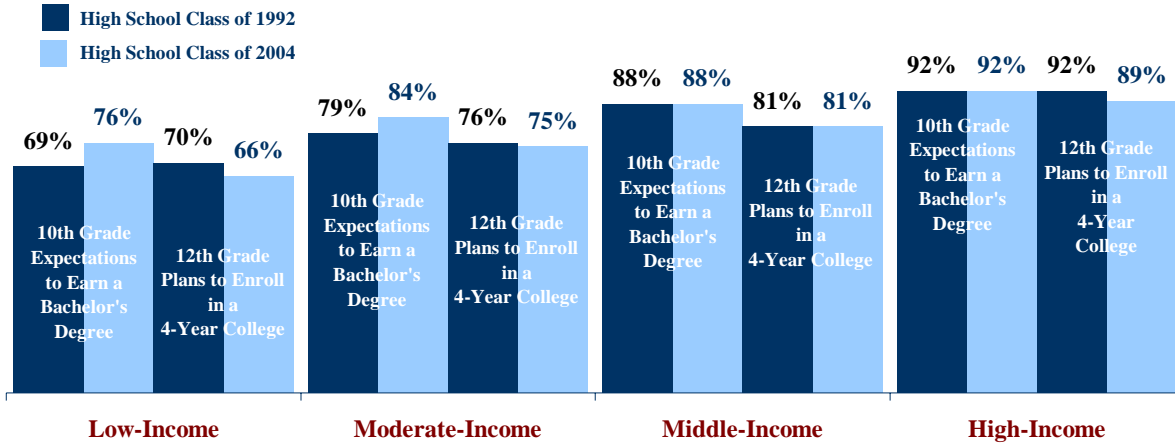
**The 10<sup>th</sup> grade expectations and 12<sup>th</sup> grade plans of college-qualified 2004 high school graduates who took at least Algebra II strongly suggest that their college enrollment patterns, at best, will mirror those of the class of 1992.**

Thus, the 10<sup>th</sup> grade expectations and 12<sup>th</sup> grade plans of college-qualified 2004 high school graduates who took at least Algebra II strongly suggest that their college enrollment patterns, at best, will mirror those of the class of 1992. It appears that the improvements in academic preparation as measured by increases in the percentage of students taking at least Algebra II and at least Trigonometry will not lead to increases in the rate of enrollment in four-year colleges by family income.



**FIGURE 21: EXPECTATIONS AND PLANS OF COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES IN 1992 AND 2004**

**AT LEAST ALGEBRA II**

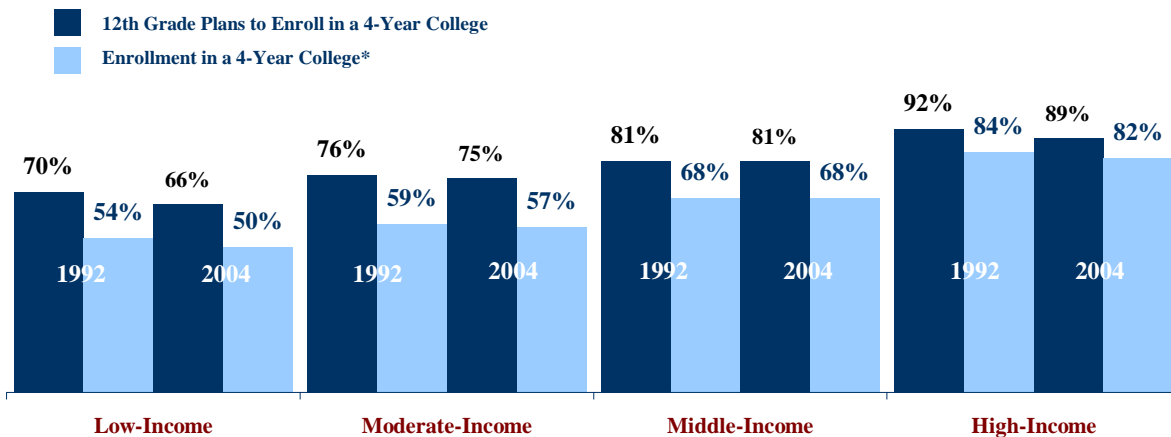


A comparison of expectations and plans of the class of 1992 and 2004 shows that, while expectations in 10<sup>th</sup> grade increased among college-qualified high school graduates from low- and moderate-income families, plans in 12<sup>th</sup> grade to enroll in a 4-year college were at the same level or lower. Increases in academic preparation appear not to have increased plans to enroll in a 4-year college.

Source: National Education Longitudinal Study of 1988/2000 and Education Longitudinal Study of 2002/2004.

**FIGURE 22: PLANS AND 4-YEAR ENROLLMENT OF COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES IN 1992 AND 2004**

**AT LEAST ALGEBRA II**



If the pattern of plans versus actual 4-year college enrollment (the melt) in 1992 is used as a basis for projecting the actual 4-year college enrollment of the class of 2004 (for which data are not yet available), an equal or lower percentage of college-qualified high school graduates from low- and moderate-income families will enroll in a 4-year college, despite increases in academic preparation between 1992 and 2004.

Source: National Education Longitudinal Study of 1988/2000 and Education Longitudinal Study of 2002/2004.

\* Projected

## College Enrollment

**The enrollment pattern of the 1992 cohort who took at least Algebra II can be used as a conservative estimate of the enrollment pattern of their peers in the 2004 cohort.**

If the melt between 12<sup>th</sup> grade plans and actual enrollment in a four-year college in the 1992 cohort is used to project the enrollment of 2004 college-qualified high school graduates (for which data are not yet available), a comparable but slightly lower distribution by family income results (**Figure 22**):<sup>27</sup>

- Down 4 percentage points from 54 percent to 50 percent for low-income.
- Down 2 percentage points from 59 percent to 57 percent for moderate-income.
- Constant at 68 percent for middle-income.
- Down 2 percentage points from 84 percent to 82 percent for high-income.

This suggests that the enrollment pattern of the 1992 cohort who took at least Algebra II can be used as a conservative estimate of the enrollment pattern of their peers in the 2004 cohort.

### 2004 High School Graduates Who Took at Least Trigonometry

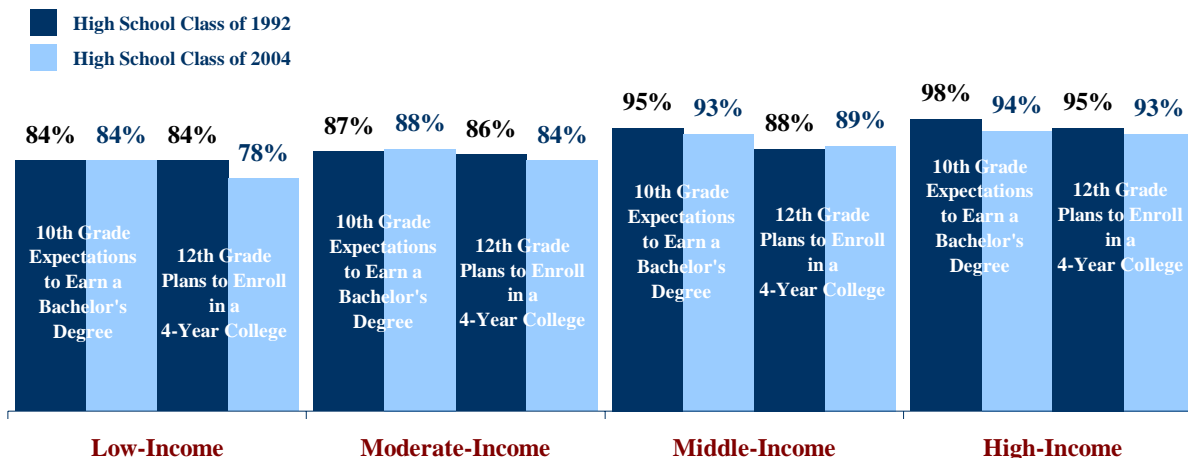
**For those 2004 high school graduates who completed at least Trigonometry, 10<sup>th</sup> grade expectations and 12<sup>th</sup> grade plans were again comparable to those of their 1992 peers.**

For those 2004 high school graduates who completed at least Trigonometry, 10<sup>th</sup> grade expectations and 12<sup>th</sup> grade plans were again comparable to those of their 1992 peers (**Figure 23**):

- Among those with low-income, expectations to earn a bachelor's degree remained steady at 84 percent, but plans to enroll in a four-year college fell to 78 percent—6 percentage points below the plans of the class of 1992.
- Among those with moderate-income, expectations increased from 87 percent to 88 percent, but plans fell to 84 percent—2 percentage points below the plans of the class of 1992.
- Among those with middle-income, expectations decreased from 95 percent to 93 percent, but plans rose to 89 percent—1 percentage point above the plans of the class of 1992.
- Among those with high-income, expectations decreased

**FIGURE 23: EXPECTATIONS AND PLANS OF COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES IN 1992 AND 2004**

**AT LEAST TRIGONOMETRY**

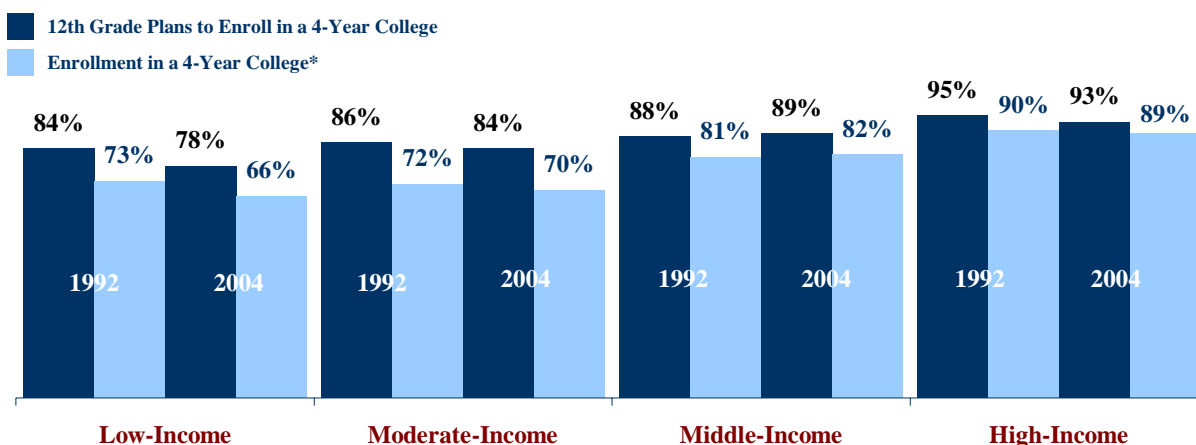


For college-qualified high school graduates who took at least Trigonometry, 10<sup>th</sup> grade expectations were comparable, but 12<sup>th</sup> grade plans to enroll in a 4-year college declined among those with low- and moderate-income from 84% to 78% and from 86% to 84%, respectively. Like their peers in 1992 who took at least Algebra II, a lower percentage of those from low- and moderate-income families in 2004 are likely to have enrolled in a 4-year college. Increases in academic preparation did not increase 4-year college enrollment.

Source: National Education Longitudinal Study of 1988/2000, Education Longitudinal Study of 2002/2004.

**FIGURE 24: PLANS AND 4-YEAR ENROLLMENT OF COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES IN 1992 AND 2004**

**AT LEAST TRIGONOMETRY**



If the pattern of plans versus actual 4-year-college enrollment (the melt) among 1992 college-qualified high school graduates who took at least Trigonometry is used to project the 4-year college enrollment of the class of 2004 (for which data are not yet available), a lower percentage of college-qualified high school graduates from low- and moderate-income families in 2004 are likely to have enrolled in a 4-year college than in 1992.

Source: National Education Longitudinal Study of 1988/2000, Education Longitudinal Study of 2002/2004.

\* Projected

from 98 percent to 94 percent, but plans fell to 93 percent—2 percentage points below the plans of the class of 1992.

**It appears that improvement in academic preparation will not lead to increases in the rate of enrollment in four-year colleges by family income.**

The 10th grade expectations and 12<sup>th</sup> grade plans of college-qualified 2004 high school graduates who took at least Trigonometry suggest that their college enrollment patterns will, at best, be comparable to that of the class of 1992. It appears that improvement in academic preparation as measured by increases in the percentage of students taking at least Trigonometry will not lead to increases by family income in the rate of enrollment in four-year colleges.

### **College Enrollment**

If the melt between 12<sup>th</sup> grade plans and actual enrollment in a four-year college in the 1992 cohort is used to project the enrollment of 2004 college-qualified high school graduates (for which data are not yet available) a comparable but slightly lower distribution by family income is the result (**Figure 24**):

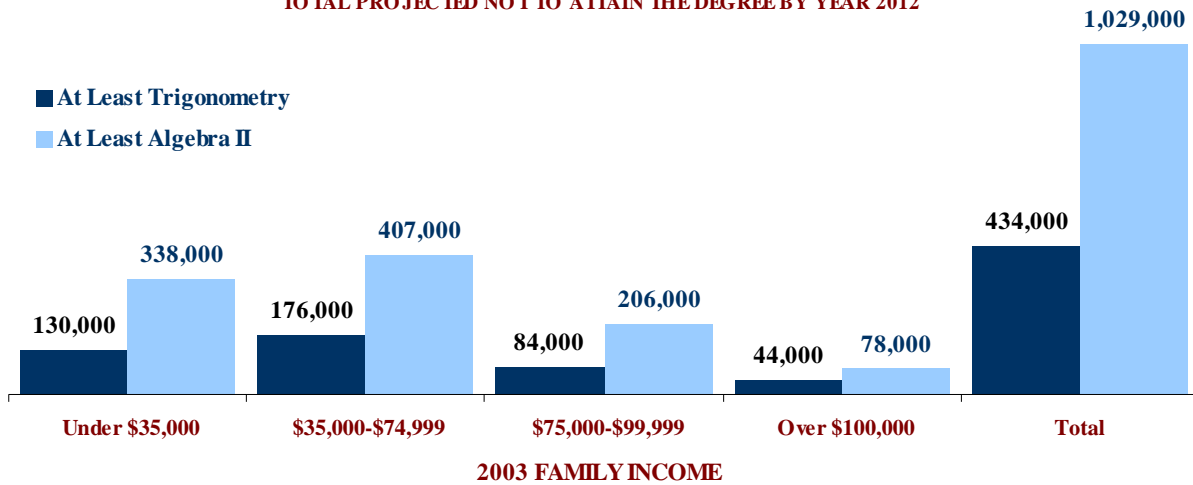
- Down 7 percentage points from 73 percent to 66 percent for low-income.
- Down 2 percentage points from 72 percent to 70 percent for moderate-income.
- Up 1 percentage point from 81 percent to 82 percent for middle-income.
- Down 1 percentage point from 90 percent to 89 percent for high-income.

**This suggests that the enrollment pattern of the 1992 cohort who took at least Trigonometry can be used as a conservative estimate of the enrollment pattern of their peers in the 2004 cohort.**

This suggests that the enrollment pattern of the 1992 cohort who took at least Trigonometry can be used as a conservative estimate of the enrollment pattern of their peers in the 2004 cohort.

**FIGURE 25: PROJECTED BACHELOR'S DEGREE LOSSES  
AMONG 2004 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES**

**TOTAL PROJECTED NOT TO ATTAIN THE DEGREE BY YEAR 2012**

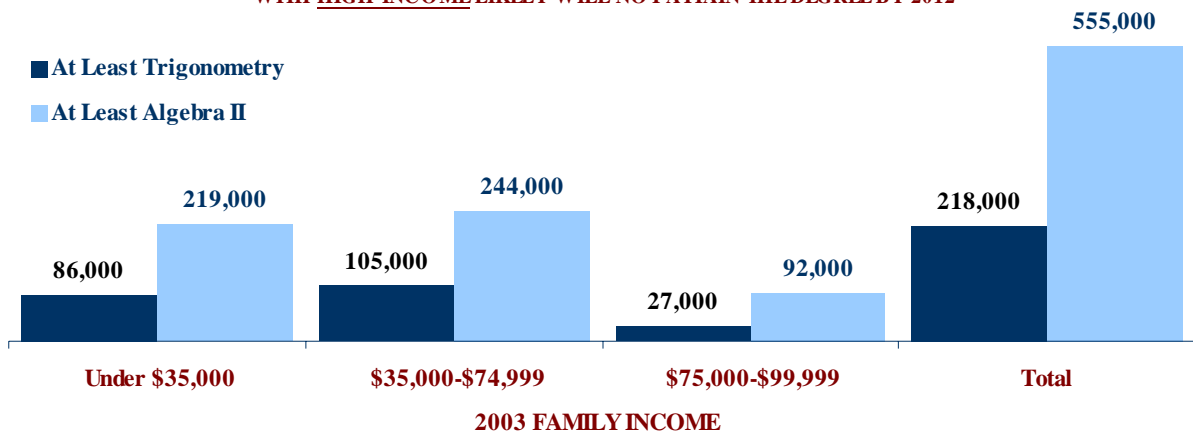


If the enrollment and persistence pattern of the 1992 class is used to project bachelor's degree attainment for the 2004 class, large losses can be expected to occur by 2012—between 434,000 and 1.029 million. This includes 306,000 (130,000 + 176,000) and 745,000 (338,000 + 407,000) among those from low- and moderate-income families. Because net prices are likely to remain high and the number of high school graduates increase, decade-wide losses are likely to be at least ten times higher—between 4.34 million and 10.29 million.

Source: Calculations based on analyses of the National Education Longitudinal Study of 1988/2000 and the Education Longitudinal Study of 2002/2004.

**FIGURE 26: PROJECTED BACHELOR'S DEGREE LOSSES AMONG 2004 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES ATTRIBUTABLE TO FINANCIAL BARRIERS**

**METHOD #1: ADJUSTED DOWNWARD BY THE RATE AT WHICH THOSE WITH HIGH-INCOME LIKELY WILL NOT ATTAIN THE DEGREE BY 2012**



The first method for attributing bachelor's degree losses among 2004 college-qualified high school graduates to financial barriers includes only the losses among those with low-, moderate-, and middle-income and adjusts downward by the rate at which their high-income peers are likely not to attain the degree. Doing so yields losses between 218,000 and 555,000 bachelor's degrees among those with low-, moderate-, and middle-income. Because net prices are likely to remain high and the number of high school graduates increase, total decade-wide losses are likely to be at least ten times larger—2.18 million to 5.55 million.

Source: Calculations based on analyses of the National Education Longitudinal Study of 1988/2000 and the Education Longitudinal Study of 2002/2004.

## **Bachelor's Degree Losses Among 2004 College-Qualified High School Graduates**

Whether the measure of “at least Algebra II” or “at Least Trigonometry” is used, large total losses of bachelor’s degrees can be projected to occur among the 2004 cohort (**Figure 25**):

**Because the number of high school graduates will peak in 2008 and net prices are likely to increase, cumulative losses across the decade are likely to be at least ten times higher than those of the 2004 cohort.**

- 130,000 to 338,000 of low-income
- 176,000 to 407,000 of moderate-income
- 84,000 to 206,000 of middle-income
- 44,000 to 78,000 of high-income.

Because the number of high school graduates will peak in 2008 and net prices are likely to increase, cumulative losses across the decade are likely to be at least ten times higher than those of the 2004 cohort.

### **Attributing 2004 Bachelor's Degree Losses to Financial Barriers**

Using the same two methods explained on page 20, it is possible to identify those losses attributable to financial barriers.

**Bachelor's degree losses occurring only among 2004 college-qualified high school graduates from low- and moderate-income families will be 66,000 to 125,000 and 72,000 to 114,000, respectively.**

#### **2004 Bachelor's Degree Losses Under Method #1**

The following are the bachelor's degree losses among only college-qualified high school graduates from low-, moderate-, and middle-income families adjusted downward by the rate at which their *high-income* peers did not attain the degree (**Figure 26**):

- 86,000 to 219,000 of low-income
- 105,000 to 244,000 of moderate-income
- 27,000 to 92,000 of middle-income.

#### **2004 Bachelor's Degree Losses Under Method #2**

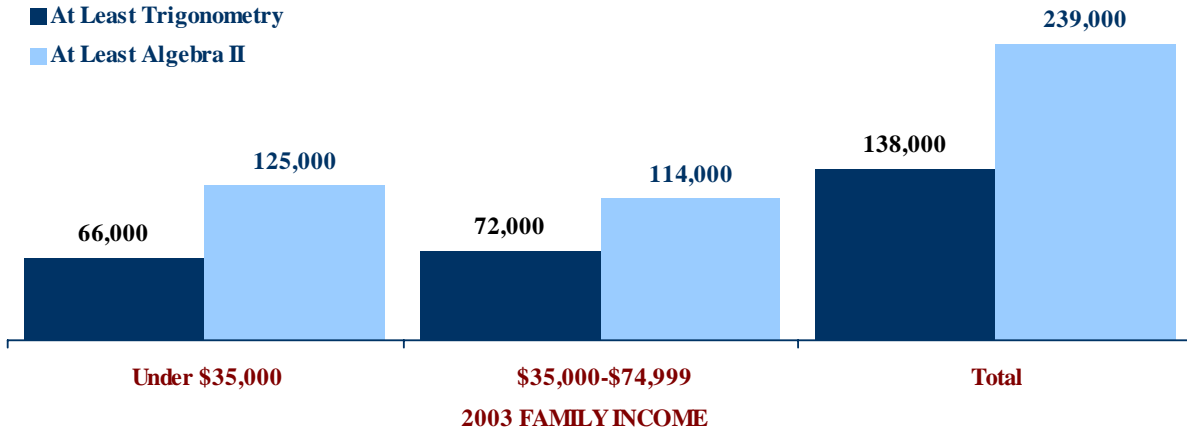
The following are the bachelor's degree losses occurring only among college-qualified high school graduates from low- and moderate-income families adjusted downward by the rate at which their *middle-income* peers did not attain the degree (**Figure 27**):

- 66,000 to 125,000 of low-income
- 72,000 to 114,000 of moderate-income.

Decade-wide losses under both methods are likely to be at least ten times higher.

**FIGURE 27: PROJECTED BACHELOR'S DEGREE LOSSES AMONG 2004 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES ATTRIBUTABLE TO FINANCIAL BARRIERS**

**METHOD #2: ADJUSTED DOWNWARD BY THE RATE AT WHICH THOSE WITH MIDDLE-INCOME LIKELY WILL NOT ATTAIN THE DEGREE BY 2012**

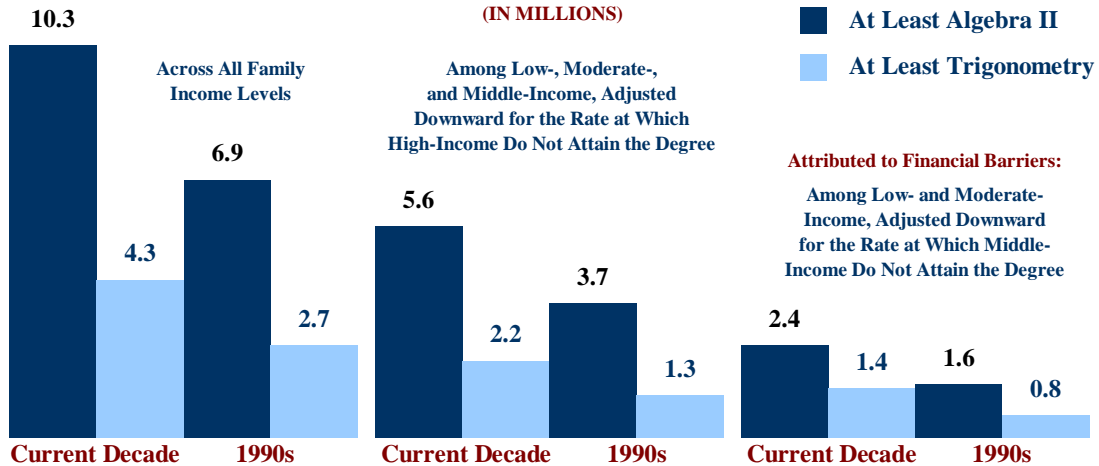


The second method of attributing bachelor's degree losses among 2004 college-qualified high school graduates to financial barriers is to include losses only among those with low- and moderate-income, and to adjust the losses by the rate at which their middle-income peers will not attain the degree. This yields between 138,000 and 239,000 losses and decade-wide losses of 1.38 million to 2.39 million.

Source: Calculations based on analyses of the National Education Longitudinal Study of 1988/2000 and the Education Longitudinal Study of 2002/2004.

**FIGURE 28: SUMMARY BACHELOR'S DEGREE LOSSES AMONG COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES**

**CURRENT DECADE VS. THE 1990S (IN MILLIONS)**



Total bachelor's degree losses among college-qualified high school graduates across all family income levels in the current decade will range from 4.3 million to 10.3 million, depending on the measure of college qualification used. Adjusted downward by the rate at which those with high-income do not earn the degree, the range is 2.2 million to 5.6 million. Adjusted downward again by the rate at which those with middle-income do not earn the degree, the range is 1.4 million to 2.4 million losses attributed to financial barriers.

Source: Calculations based on analyses of the National Education Longitudinal Study of 1988/2000 and the Education Longitudinal Study of 2002/2004.

## Summary of Bachelor's Degree Losses by Decade

A summary of bachelor's degree losses for the 1990s and current decade is provided (**Figure 28**). The lower bound of each range is defined by the "at least Trigonometry" measure, the upper bound by the "at least Algebra II" measure.

Total loss ranges are as follows:

**The bachelor's degree losses attributed to financial barriers in this report are extremely conservative.**

- 4.3 million to 10.3 million for the current decade
- 2.7 million to 6.9 million for the decade of the 1990s.

Loss ranges among low-, moderate-, and middle-income students, adjusted downward by the rate at which their *high-income* peers will not attain the degree, are as follows:

- 2.2 million to 5.6 million for the current decade
- 1.3 million to 3.7 million for the decade of the 1990s.

Loss ranges among low- and moderate-income students, adjusted downward by the rate at which their *middle-income* peers will not attain the degree, are as follows:

- 1.4 to 2.4 million for the current decade
- 0.8 to 1.6 million for the decade of the 1990s.

**The probable effects of financial barriers on the likelihood of high school graduation and the level of academic preparation attained are not considered.**

For purposes of this report, the final set of losses among only low- and moderate-income students is attributed to financial barriers.

### Bachelor's Degree Loss Estimates in Perspective

The bachelor's degree losses attributed to financial barriers in this report are extremely conservative for three reasons:

- The probable effects of financial barriers on the likelihood of high school graduation and the level of academic preparation attained are not considered.
- The losses include only those among low- and moderate-income college-qualified high school graduates.
- Those losses are included only to the extent that their rate exceeds that of their middle-income peers.



**TABLE 1: 1992 HIGH SCHOOL GRADUATES  
ATTAINING A BACHELOR'S DEGREE BY 2000**

1991 Family Income	1992 High School Graduates	College Qualification Measure At Least:	Graduated College-Qualified		College-Qualified and Earned a Bachelor's Degree by 2000		Attributed to Financial Barriers in This Report	
			Yes	No	Yes	No	Method #1	Method #2
Under \$25,000	714,000 (292,000)*	Algebra II	371,000	343,000	160,000	211,000	137,000	78,000
		Trigonometry	171,000	543,000	94,000	77,000	51,000	39,000
\$25,000 to \$49,999	862,000 (164,000)*	Algebra II	560,000	302,000	280,000	280,000	168,000	78,000
		Trigonometry	293,000	569,000	185,000	108,000	64,000	44,000
\$50,000 to \$74,999	542,000 (54,000)*	Algebra II	396,000	146,000	253,000	143,000	63,000	None
		Trigonometry	233,000	309,000	182,000	51,000	16,000	
\$75,000 and over	345,000 (18,000)*	Algebra II	297,000	48,000	238,000	59,000	None	None
		Trigonometry	207,000	138,000	176,000	31,000		

\* Estimated number of 8<sup>th</sup> graders in 1988 who did not graduate from high school in 1992.

**TABLE 2: 2004 HIGH SCHOOL GRADUATES LIKELY  
TO ATTAIN A BACHELOR'S DEGREE BY 2012**

2003 Family Income	2004 High School Graduates	College Qualification Measure At Least:	Graduated College-Qualified**		College-Qualified and Earned a Bachelor's Degree by 2012**		Attributed to Financial Barriers in This Report	
			Yes	No	Yes	No	Method #1	Method #2
Under \$35,000	899,000 (367,000)*	Algebra II	593,000	306,000	255,000	338,000	219,000	125,000
		Trigonometry	288,000	611,000	158,000	130,000	86,000	66,000
\$35,000 to \$74,999	1,085,000 (207,000)*	Algebra II	814,000	271,000	407,000	407,000	244,000	114,000
		Trigonometry	477,000	608,000	301,000	176,000	105,000	72,000
\$75,000 to \$99,999	682,000 (67,000)*	Algebra II	573,000	109,000	367,000	206,000	92,000	None
		Trigonometry	382,000	300,000	298,000	84,000	27,000	
\$100,000 and over	434,000 (23,000)*	Algebra II	391,000	43,000	313,000	78,000	None	None
		Trigonometry	291,000	143,000	247,000	44,000		

\* Estimated number of 8<sup>th</sup> graders in 2000 who did not graduate from high school in 2004.

\*\* Projected

Source for both tables: Calculated using data from the National Education Longitudinal Study of 1988/2000 and the Education Longitudinal Study of 2002/2004.

In considering the implications of these bachelor's degree loss estimates, policymakers should bear in mind that financial barriers to college almost certainly affect both high school graduation rates and level of academic preparation. They should also keep in mind that the educational decisions of middle-income students and families are not immune to such barriers.

**In considering the implications of these loss estimates, policymakers should bear in mind that financial barriers to college almost certainly affect both high school graduation rates and level of academic preparation.**

To place these losses in better perspective, the full bachelor's degree pipelines for the 1992 and 2004 cohorts are presented. Among students from families with low income (under \$25,000) in the 1992 cohort (**Table 1**)<sup>28</sup>—

- **292,000** who were 8<sup>th</sup> graders in 1988 did not graduate from high school,
- **343,000** graduated from high school but were not college-qualified (had not taken at least Algebra II),
- **211,000** graduated from high school college-qualified but did not earn a bachelor's degree.

Total losses from the pipeline were **846,000 of 1.006 million** low-income students. Of the 211,000 who graduated from high school college-qualified but did not earn the degree, this report attributes **78,000** to financial barriers.

Among students from families with low-income (under \$35,000) in the 2004 cohort (**Table 2**)—

- **367,000** who were 8<sup>th</sup> graders in 2000 did not graduate from high school,
- **306,000** graduated from high school but were not college-qualified (had not taken at least Algebra II),
- **338,000** graduated from high school college-qualified but will not likely earn a bachelor's degree.

Total losses from the pipeline among low-income students in the 2004 cohort are likely to be **1.011 million out of a total of 1.266 million**. Of the 388,000 who graduated from high school college-qualified but will not likely earn the degree, this report attributes **125,000** to financial barriers.

**Total losses from the pipeline among low-income students in the 2004 cohort are likely to be 1.011 million out of a total of 1.266 million.**

## **Assumptions Underpinning Bachelor's Degree Loss Estimates**

The primary assumption in this report is that the enrollment and degree completion patterns of college-qualified high school graduates during the 1990s, and projected for this decade, can be estimated using the known patterns of the 1992 class. This assumption is required because complete data on enrollment and degree attainment during the 1990s are available only for the class of 1992, and only data on the expectations and plans of the class of 2004 are now available. Enrollment data on the 2004 class will be available in 2007, and these estimates and projections can be updated as these data become available. Data for the 2004 class that are fully comparable to the 1992 data—including persistence patterns—will not be available until 2012.

The projection that bachelor's degree losses among 2004 college-qualified high school graduates are likely to be higher than those of the 1992 class is based on four key observations:

- Net prices (total cost of attendance minus all grant aid) at four-year public colleges facing low- and moderate-income students were higher in constant dollars in 2004 than in 1992 and are likely to remain at high levels.
- The number of high school graduates increased from 2.5 million to 3.1 million between 1992 and 2004 and will stay at higher levels throughout the decade.
- Academic preparation at both levels used in this report—"at least Algebra II" and "at least Trigonometry"—appears to have improved from 1992 to 2004.
- The 12<sup>th</sup> grade plans of 2004 college-qualified high school graduates to attend a four-year college (a good predictor of the pattern of four-year college enrollment) show no increase over 1992, but rather a slight decrease.

However, losses of bachelor's degrees among college-qualified high school graduates this decade could turn out to be lower than projected in this report if net prices fall significantly for the balance of the decade and/or improved academic preparation leads to higher rates of four-year college enrollment and bachelor's degree completion. In the absence of either of these two developments, the projected bachelor's degree loss estimates for the current decade are likely to be conservative.

**The primary assumption in this report is that the enrollment and degree completion patterns of college-qualified high school graduates during the 1990s, and during this decade, can be estimated using the known patterns of the 1992 class.**

**Losses of bachelor's degrees could turn out to be lower than projected in this report if net prices fall significantly and/or improved academic preparation leads to higher rates of bachelor's degree completion.**



## FINDINGS AND POLICY IMPLICATIONS

Preliminary comparisons between the 1992 and 2004 cohorts of high school graduates yield greater insight into the interaction of factors determining academic success over time, particularly the role financial barriers play. Specifically, the data show the kind of student aid policy that appears necessary to stem the bachelor's degree losses identified in this report. Between 1992 and 2004, among college-qualified high school graduates—

- academic preparation, as measured by course-taking, improved among those from low- and moderate-income families (**Figure 20**);
- information, at least as reflected in 10<sup>th</sup> grade college expectations, increased among low- and moderate-income high school graduates who were college-qualified (**Figure 21**);
- aid application forms and processes were simplified to include one free form, one need analysis model, the automatic zero expected family contribution (EFC) for the lowest income applicants, and automatic re-application.

These are impressive gains made by K-12 educators, professionals in early intervention programs, states, colleges, Congress, and the Department of Education. Unfortunately, net prices increased throughout the period and appear to have undermined these improvements (**Figures 6 and 17**).

Based on the plans of college-qualified high school graduates in 2004, four-year college enrollment and completion rates by family income are likely to remain constant, at best, and bachelor's degree losses are likely to increase. Despite successful efforts to increase access and persistence through improved academic preparation, heightened aspirations and expectations, and greater simplicity in the financial aid system, losses of bachelor's degrees appear to be increasing. High and increasing financial barriers appear to nullify the positive effects of advances in these areas.

Lowering financial barriers by increasing need-based aid appears to be a necessary condition for stemming bachelor's degree losses among college-qualified high school graduates. Without increases, grant aid will be stretched further across a wider population of students, and the net price facing every student will rise.

**Preliminary comparisons between the 1992 and 2004 cohorts of high school graduates yield greater insight into the kind of student aid policy that appears necessary to stem bachelor's degree losses.**

**Lowering financial barriers appears to be a necessary condition for stemming bachelor's degree losses among college-qualified high school graduates.**

## **The Role of Need-Based Aid in Building the College-Qualified Pool**

**Lowering financial barriers through increased need-based aid will increase tomorrow's pool of college-qualified high school graduates.**

**If student perceptions of their own chances mirror the chances shown in national longitudinal data, there is a strong and rational reason for them to question the desirability of preparing academically and assuming large amounts of debt.**

In addition to stimulating increases in bachelor's degree attainment among today's college-qualified high school graduates, lowering financial barriers through increased need-based aid will increase tomorrow's pool of college-qualified high school graduates. Reducing net prices of four-year public colleges confronting low- and moderate-income students would strengthen incentives to prepare, maximize the impact of early intervention, and make further simplification of aid application forms and processes more effective. Ensuring that a growing number of middle and high school students will have the financial resources necessary to enroll and persist in a four-year college will improve the supply of human capital and make the nation more competitive.

### **Increasing Incentives to Prepare**

Data from NELS (**Figure 10**) show that low- and moderate-income college-qualified high school graduates have a 43 percent and 50 percent chance, respectively, of earning a bachelor's degree within eight years of high school graduation. These discouraging odds are often overlooked in policy discussions about the high rate of return to earning a bachelor's degree, and debates about the level of loans that such students should be willing to assume. If students' perceptions of their chances of completing a bachelor's degree mirror the actual chances shown in national longitudinal data, there is a strong and rational reason for them to question the desirability of preparing academically and assuming large amounts of debt. Indeed, there is recent evidence from ACT that only one-third of 8<sup>th</sup> grade students plan to take all the courses necessary for college readiness.<sup>29</sup> Students' perceptions of high net prices can be a strong deterrent to adequate academic preparation (**Figure 7**). Lowering financial barriers will increase incentives to prepare academically.<sup>30</sup>

### **Strengthening Early Intervention**

A primary purpose of early intervention programs is to enhance student awareness of the importance of college and the returns to attaining a bachelor's degree. The effectiveness of early intervention programs depends on a series of sequential successes: greater knowledge and information precipitate higher aspirations; which in turn create a greater incentive to prepare academically; which then leads to higher expectations, specific plans, and eventual enrollment. Data from NELS and ELS (**Figures 8, 11,**

**and 24)** show how this chain breaks down for college-qualified low- and moderate-income high school graduates. Despite higher 10<sup>th</sup> grade expectations, 12<sup>th</sup> grade plans melt into lower levels of actual enrollment because of concerns about college costs and availability of financial aid.

To prevent such breakdowns anywhere along the chain of desired outcomes—knowledge, aspirations, academic preparation, expectations, plans, and enrollment—the most effective early intervention programs lower expected net price through an assurance of adequate need-based aid. Without an assurance that lowers financial barriers early in the access process, breakdowns are not only likely to occur but are probable.

In addition, an early assurance of financial access solves the dilemma of how to provide middle school families with information about financial aid that is both accurate *and* encouraging when the net prices facing their older peers are at record levels.

### **Maximizing Simplification Efforts**

Student aid delivery has been greatly simplified since 1992. Today, most low-income students complete FAFSA on the Web to apply for all forms of federal, state, and institutional aid. Recently enacted and proposed changes in HEA will further reduce complexity in applying for aid. An EZ FAFSA with far fewer questions and data elements will likely replace the long paper form.<sup>31</sup> Although the Department of Education can make further improvements to simplify the application process, the process is no longer the obstacle to obtaining financial aid it once was.<sup>32</sup> Additional efforts include ensuring that low-income students have early information about the financial aid that is available to them from all sources, expanding the income threshold for an automatic zero EFC, and eliminating or reducing the "student work penalty."<sup>33</sup>

The federal government needs to take the lead to ensure that these initiatives maximize college access. However, these simplification improvements alone will not stem the large losses in bachelor's degree attainment. For example, 12<sup>th</sup> grade college plans and enrollment projections for low- and moderate-income students in the 2004 cohort have remained flat, at best, compared to the 1992 cohort (**Figures 21-24**). In order to see real gains in plans, enrollment, and bachelor's degree attainment rates, simplification efforts must be accompanied by adequate increases in need-based aid in order to reduce financial barriers.

**An early assurance of financial access solves the dilemma of how to provide middle school families with information about financial aid that is both accurate *and* encouraging.**

**The federal government needs to take the lead to ensure simplification initiatives maximize college access by accompanying them with adequate increases in need-based aid to reduce financial barriers.**

## **Policy Implications**

The bachelor's degree loss estimates and findings above argue for six broad policy initiatives:

**The bachelor's degree loss estimates and findings argue for six policy actions aimed directly at increasing the bachelor's degree attainment of low- and moderate-income high school graduates who are college-qualified.**

- Reinvigorate the access and persistence partnership to increase need-based aid from all sources.
- Restrain increases in the price of college and offset increases with need-based student aid.
- Moderate the trend—at all levels—toward merit-based aid and the increasing reliance on loans.
- Reduce financial barriers to transfer from two-year to four-year colleges.
- Strengthen early intervention programs for low- and moderate-income students.
- Invest in efficient and productive remediation.

These six policy actions are aimed directly at increasing the bachelor's degree attainment of low- and moderate-income high school graduates who are college-qualified.

### **Reinvigorate the Public-Private Partnership to Increase Need-Based Aid from All Sources**

**This partnership would link the federal government, states, colleges, early intervention programs, K-12 schools, and the private sector to make measurable gains in bachelor's degree completion.**

In the current HEA reauthorization, the Advisory Committee has recommended reinvigorating the public-private partnership to increase need-based aid for college-qualified high school graduates and provide an early assurance of adequate need-based grant aid for middle school students. This partnership would link the federal government, states, colleges, early intervention programs, K-12 schools, and the private sector in order to implement the comprehensive access and persistence strategy needed to make measurable gains in bachelor's degree completion.

In practice, the partnership would involve a financial incentive from the federal government to encourage states to form partnerships with in-state institutions, early intervention programs, businesses, and philanthropic organizations. Together, these state partners would commit financial resources to ensure that all low- and moderate-income students in the state have enough need-based grant aid to cover at least tuition and fees at a four-year public



college. By matching the contributions of state partners, the federal government could leverage additional funds from public and private sources to provide low-income students with supplemental need-based grant aid and at least ensure financial access to a four-year public college. In addition to reducing work and loan burden through increased grant aid, the partnership would include a highly simplified aid application process.

The Senate HEA Reauthorization bill, S.1614, currently includes a program entitled Grants for Access and Persistence (GAP) that would be an important first step towards implementing our partnership recommendation as well as a comprehensive access and persistence strategy.<sup>35</sup>

### **Restrain Increases in the Price of College and Offset Increases with Need-Based Student Aid**

There are two components of net price: total cost of attendance and total need-based grant aid. Increased operating costs and declining state support have forced many colleges to raise prices at a rate that exceeds increases in financial aid. This trend shows no sign of abating.<sup>36</sup> The resulting increases take a heavy toll on the enrollment and persistence behavior of low- and moderate-income students. It is imperative that increases in the price of college be restrained to the extent possible, and that need-based student aid be set aside to protect these students against necessary price increases. Two public flagship universities, the University of North Carolina at Chapel Hill and the University of Virginia, do so with their programs, Carolina Covenant and Access UVA, which are committed to covering the full need of low-income students who meet admissions standards.<sup>37</sup>

Colleges with fewer resources can reduce college costs and limit price increases by joining consortia aimed at sharing best practices in these areas. For example, 299 private colleges comprise the Coalition for College Costs Savings (CCCS) which allows colleges to pool resources and participate in cost savings procurement services.<sup>38</sup> These are essential strategies that can moderate price increases and help to increase bachelor's degree attainment. Colleges can implement additional approaches that are tailored to their own resources and student population.

**Increased operating costs and declining state support have forced many colleges to raise prices at a rate that exceeds increases in financial aid.**

**It is imperative that increases in the price of college be restrained to the extent possible, and that need-based student aid be set aside to protect low- and moderate-income students against necessary price increases.**

## **Moderate the Trend—At All Levels—Toward Merit-Based Aid and Increasing Reliance on Loans**

**Declining support for need-based aid in favor of merit-based aid threatens to raise net prices facing low- and moderate-income high school graduates and to increase their reliance on loans.**

Declining support for need-based aid in favor of merit-based aid threatens to further raise net prices facing low- and moderate-income high school graduates and to increase their reliance on loans. Student aid based purely on merit—especially measures of merit that far surpass college admissions standards—is both unfair and inefficient. Such aid fails to account for the uneven playing field that faces low- and moderate-income students from middle school through high school, and further tends to subsidize high-income, high-ability students whose enrollment and persistence decisions are largely unaffected by the subsidy. To the extent that increases in pure merit-based aid—at the federal, state, or college level—come at the expense of need-based aid, disparities in bachelor’s degree attainment rates by family income could worsen.

Merit-based aid can be fair and efficient if it is based also on need, targeted at students from low- and moderate-income families, and anchored by a definition of merit that parallels college admission standards and a student’s likelihood of academic success. Designed in this way, merit- *and* need-based aid directs funds to those college-qualified high school graduates whose enrollment and persistence decisions are most likely to be positively affected by such aid. While Congress remains committed to need-based aid, the new Academic Competitiveness Grant (ACG) program is both merit-based and need-based.<sup>39</sup>

**Federal policies that encourage states and colleges to increase need-based aid should receive top priority.**

The trend towards pure merit-based aid is much more pronounced at the state level. In 1983-1984, 9 percent of state grants were non-need based, compared to 27 percent in 2004-2005.<sup>40</sup> At the college level, more than half of all grants are awarded without consideration of financial need.<sup>41</sup> While several selective colleges have launched efforts to increase the amount of grant aid awarded to low- and moderate-income students, the small percentage of students who attend such colleges limits the impact of these efforts on overall bachelor’s degree attainment.

The data used in this report show conclusively that the nation has a long way to go in equalizing educational opportunity (**Figures 1 and 2**). Increases in need-based aid, or at a minimum, aid that is based on both merit and need will lower work and loan burden, maximize bachelor’s degree attainment, and enhance the nation’s competitiveness in the global marketplace. Federal policies that encourage states and colleges to increase need-based aid should receive top priority.

## **Reduce Financial Barriers to Transfer from Two-Year to Four-Year Colleges**

Two-year colleges play a vital role in America's higher education system. They serve as a local access point to higher education for countless residents in communities across the nation and provide a crucial gateway for many students en route to their bachelor's degree. Unfortunately, numerous obstacles inhibit transfer from a two-year college to a four-year college, including lack of information about required courses and unstructured articulation agreements between institutions.<sup>42</sup> Data in this report (**Figures 9 and 12**) suggest that financial barriers also play a significant role—in particular, the large disparity in rates of bachelor's degree attainment between low- and high-income students who appear equally college-qualified and start at a two-year college expecting to earn the degree (**Figures 10 and 13**). For two-year colleges to be a viable alternative for low- and moderate-income students pursuing a bachelor's degree, barriers to transfer, including financial barriers, must be eliminated.

The Jack Kent Cooke Foundation study finds that less financial aid is available for transfer students than for students who first enroll at four-year colleges.<sup>43</sup> Alleviating financial barriers to transfer will boost bachelor's degree attainment among students already enrolled in higher education and aspiring to complete their degree.

## **Strengthen Early Intervention Programs for Low- and Moderate-Income Students**

The loss estimates in this report exclude a large portion of low- and moderate-income 8<sup>th</sup> graders who do not graduate from high school or graduate not fully prepared to attend a four-year college (**Figure 4**). The data make very clear that the largest pool of potential bachelor's degrees is the population of low- and moderate-income youth who do not complete high school college-qualified. For example, only 15 percent of the underqualified ("less than Algebra II") low-income 1992 cohort attained a bachelor's degree (**Figure 30**). Clearly, removing financial barriers alone will not improve bachelor's degree attainment rates among low- and moderate-income students.

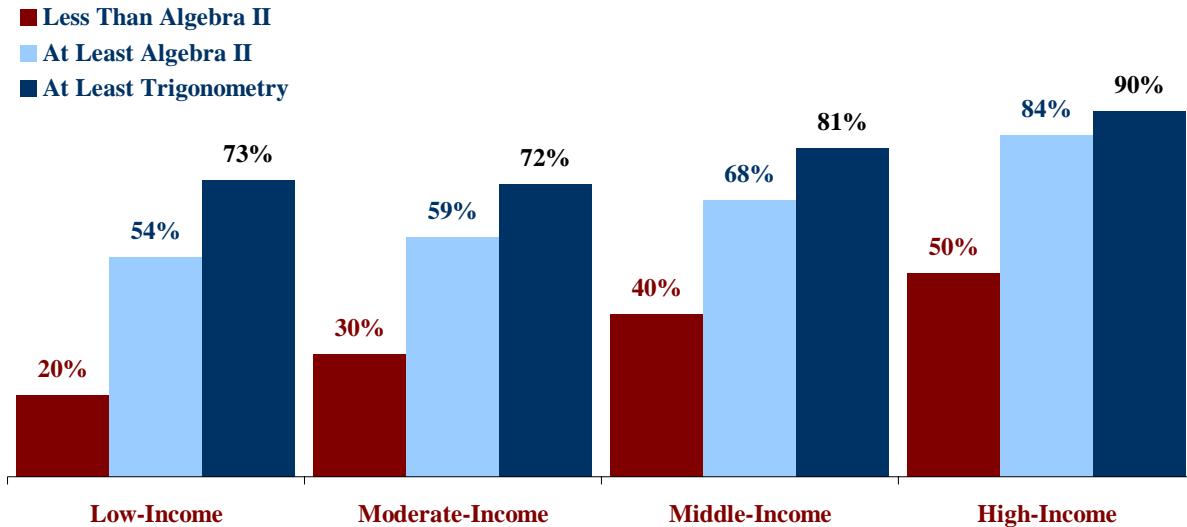
In conjunction with school reform efforts aimed at producing college-qualified students by improving the rigor of high school curricula, it is critical to strengthen programs that ensure low- and moderate-income middle school students receive the guidance and mentoring required to build aspirations, expectations, and plans to

**For two-year colleges to be a viable alternative for low- and moderate-income students pursuing a bachelor's degree, barriers to transfer, including financial barriers, must be eliminated.**

**Because reducing financial barriers and improving preparation work in tandem, increases in need-based aid for college-qualified high school graduates cannot come at the expense of these vital early intervention programs.**

**FIGURE 29: IMPACT OF ACADEMIC PREPARATION ON ENROLLMENT OF 1992 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES**

**PERCENT ENROLLING IN A 4-YEAR COLLEGE**

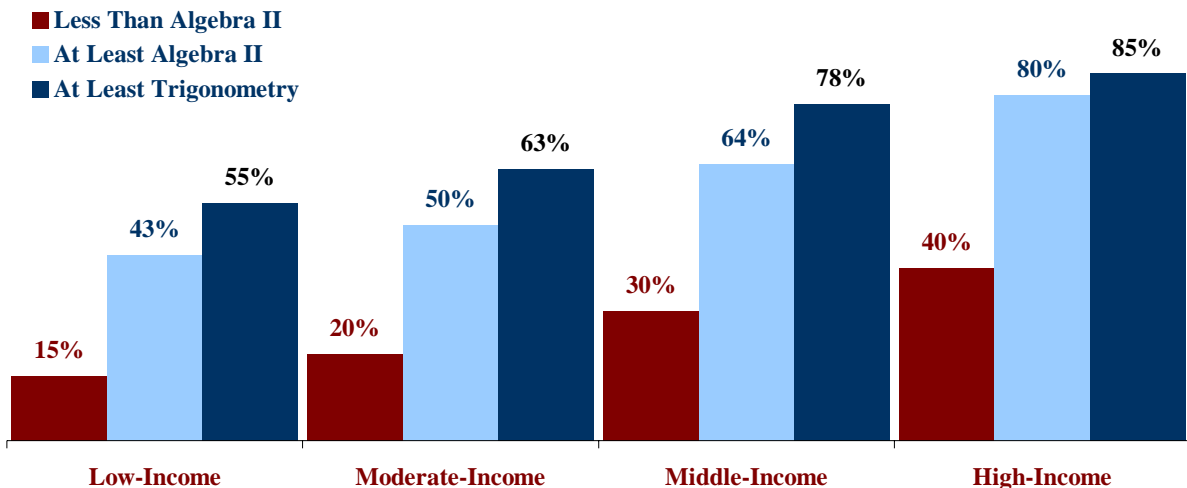


Among 1992 high school graduates, level of academic preparation was strongly related to enrollment in a 4-year college at all family levels. Those with low-income who had taken at least Algebra II enrolled more than twice as often as those who had not. Reflecting the impact of financial barriers, among those who took less than Algebra II, 20% of low-income enrolled compared to 50% of their high-income peers.

Source: National Education Longitudinal Study of 1988/2000.

**FIGURE 30: IMPACT OF ACADEMIC PREPARATION ON BACHELOR'S DEGREE ATTAINMENT OF 1992 COLLEGE-QUALIFIED HIGH SCHOOL GRADUATES**

**PERCENT COMPLETING THE DEGREE BY YEAR 2000**



1992 high school graduates who took less than Algebra II did attain bachelor's degrees, although at lower levels than their better prepared peers. Once again, the impact of financial barriers is evident. Those with high-income attained the degree far more often than their low- and moderate-income peers—40% versus 15% percent and 20%, respectively. Low- and moderate-income high school graduates who fall short by only one or two courses constitute the largest pool from which to increase bachelor's degrees.

Source: National Education Longitudinal Study of 1988/2000.

attend college. These programs, funded through local, state, federal, or nonprofit sources are predominantly successful. However, only one-quarter of early intervention programs fully address five vital areas of development critical to overcoming the academic and informational barriers to college access and persistence.<sup>44</sup> Increased support of early intervention programs will offset the disparity between the likelihood that poor and wealthy students can become college-qualified. Because reducing financial barriers and improving preparation work in tandem, increases in need-based aid for college-qualified high school graduates cannot come at the expense of these vital programs.

### **Invest in Efficient and Productive Remediation**

Recent efforts at school reform have made a positive impact on the preparation of high school students for college level work. As indicated previously, data from NELS and ELS show positive gains in academic preparation between the graduating high school classes of 1992 and 2004. These efforts inevitably produce more high school students on the margin of college qualification, especially among low- and moderate-income high school graduates. Many students fall short by only one or two courses and represent a large pool of potential bachelor's degrees. We must tap this pool through remediation at two-year and four-year colleges if we are to raise our nation's levels of degree attainment. For example, raising students' level of preparation in math up to Algebra II has an enormous effect on the rate of successful college enrollment and bachelor's degree attainment far beyond the increase that improving preparation from Algebra II to Trigonometry provides (**Figures 29 and 30**). This applies among students of all income levels. Providing college level remediation to students who are only marginally unqualified can dramatically increase bachelor's degree attainment.

There is additional evidence to support the effectiveness of this strategy. Recent research demonstrates that remedial education programs have positive impacts on degree attainments of students at the margin of requiring remediation at four-year colleges.<sup>45</sup> As the data demonstrate, low- and moderate-income students beginning at four-year colleges have substantially higher bachelor's degree attainment success than those with similar aspirations who begin at two-year colleges (**Figures 10 and 13**). Effective four-year college remediation efforts can draw students into those schools initially and increase their chances of degree completion. Investing in remedial education programs to increase

**Many students fall short by only one or two courses and represent a large pool of potential bachelor's degrees—we must tap this pool through remediation.**

**Effective four-year college remediation efforts can draw students into those schools initially and increase their chances of degree completion.**

the degree attainment levels of high school students who are only marginally underqualified is not only necessary, but is also an effective use of federal, state, and institutional resources.

America's global competitiveness depends on the ability of low- and moderate-income high school graduates who are college-qualified to earn at least a bachelor's degree. The nation must be willing to invest in sufficient need-based student aid to help them reach that goal. Taken collectively, the six policy actions recommended in this report will lower financial barriers, improve bachelor's degree attainment rates, and greatly expand the pool of college-qualified high school graduates over time.

## **THE CURRENT HEA REAUTHORIZATION**

The current reauthorization of the Higher Education Act offers an opportunity for Congress to revisit the impact of financial barriers on access and persistence in light of the bachelor's degree losses estimated in this report. In particular, five recommendations made by the Advisory Committee over the last three years merit consideration:

- Create a national partnership to increase need-based aid from all sources that links the federal government, states, colleges, and K-12 schools across existing Title IV programs in pursuit of measurable gains in access and persistence for the nation's neediest students who are academically qualified (**Appendix A, page 61**).
- Create a comprehensive system of early information on financial aid and college costs that provides middle school students, high school students, and adults with adequate and early information about financial aid, including early estimates of their potential eligibility for aid from multiple sources in the context of likely college costs.
- Reduce further the penalty on student work in federal need analysis by increasing the Income Protection Allowance (IPA), or by lowering the assessment rate on student earnings.
- Raise further the income threshold in federal need analysis for an auto-zero EFC.
- Phase out the full paper FAFSA, streamline FAFSA on the Web, and create a much simpler paper EZ FAFSA to protect low-income applicants.

Taking these steps will improve access and persistence through bachelor's degree attainment and expand the pool of college-qualified high school graduates.

## ENDNOTES

### Keeping America Competitive

<sup>1</sup> The National Academies note that the United States is currently a “net importer” of high-technology products. In 2001, the U.S. had a \$50 billion negative trade balance of high-technology imported goods compared to a positive trade balance of \$54 billion in 1990. In addition, according to the OECD, China overtook the United States and became the world’s leading exporter of information and communications technology (ICT) goods in 2004, exporting \$180 billion of ICT goods compared to \$149 billion exported by the United States. For more information, see (The National Academies 2005); (Organization for Economic Co-operation and Development 2005).

<sup>2</sup> (The National Academies 2005)

<sup>3</sup> (White House 2006)

<sup>4</sup> PISA is an international assessment of 15-year-olds administered every three years by the National Center for Education Statistics, and is designed to measure literacy in terms of reading, mathematics, and science. For more information, see Program for International Student Assessment: PISA 2003 Summary; <http://nces.ed.gov/surveys/pisa/PISA2003Highlights.asp>.

<sup>5</sup> (The National Academies 2005); see also (National Science Board 2004).

<sup>6</sup> The Department of Education’s Office of Vocational and Adult Education estimated in 2003 that new job growth and retirements would produce a need for 18 million new bachelor’s degree holders by the year 2012. For more information, see OVAE Review: January 10, 2003; <http://www.ed.gov/news/newsletters/ovaereview/orev011003.html>.

<sup>7</sup> (Hecker D. 2001); see also <http://www.bls.gov/opub/mlr/2001/11/art4full.pdf>.

<sup>8</sup> One cause of the decline in these states is attributed to the increasing minority population with lower bachelor’s degree attainment rates as compared to the decreasing majority white population; for more information see (Coelen and Berger 2006).

<sup>9</sup> For more information on the relationship between higher education and America’s economic competitiveness, see (Douglass 2006); (Kolb 2006).

<sup>10</sup> For more information on the public and private benefits to higher education, see (Kelly 2005); (National Center for Higher Education and Public Policy 2005); (Institute for Higher Education Policy 2005).

<sup>11</sup> (The College Board 2005)

<sup>12</sup> This report compares low-, moderate-, middle-, and high-income students in the 1992 (NELS) and 2004 (ELS) cohorts. Family income for the 1992 cohort is based on 1991 income; income for the 2004 cohort is based on 2003 income. Using the Consumer Price Index (CPI) to adjust the 1991 income bands for inflation would yield the following income bands for 2004:

Low-Income	Under \$33,750
Moderate-Income (Low-Middle)	\$33,750-\$67,499
Middle-Income (High-Middle)	\$67,500-\$101,249
High-Income	\$101,250 and over.

Since data for the 2004 cohort were not collected in a manner that allowed such an update, the following closely-approximated income bands in the data were used:



Low-Income	Under \$35,000
Moderate-Income (Low-Middle)	\$35,000-\$74,999
Middle-Income (High-Middle)	\$75,000-\$99,999
High-Income	\$100,000 and above

The bachelor's degree loss estimates and policy implications are unaffected by the slight variation in income bands.

<sup>13</sup> To project the number of 8<sup>th</sup> graders in 2000 who will likely attain a bachelor's degree by the year 2012, by family income, the following calculation is used: (Percentage of 1992 High School Graduates \* Percentage of Qualified Students with at least Algebra II in 2002 \* Bachelor Degree Completion Rate in 1992). Because data are not yet available on the graduation rates and degree completion rates of the 2004 cohort, these estimates are based on 1992 graduation rates and degree attainment rates. College-qualification data on the ELS 2004 cohort is available and used in this analysis. Since complete data for the ELS cohort is not currently available, assumptions were made to arrive at the projections and loss estimates for the 2004 cohort. For more information about the assumptions underpinning this report, see page 39.

<sup>14</sup> For many students, the unequal playing field becomes apparent earlier than 8th grade. However, the NELS:88 database only provides entries for students in 8th grade and beyond. For more information about challenges encountered earlier in the educational pipeline, see (Children's Defense Fund 2005); (Wimberly and Noeth 2005). Although not directly addressing inequalities in preparation due to income, an AYPF forum did address the tremendous importance in middle school preparation, citing that the greatest percentage of high school dropouts occur in 9<sup>th</sup> grade. For more information, see (Cohen and Yang 2006).

<sup>15</sup> Early intervention programs that include financial aid have been shown to increase incentives for students to attend college; see (Blanco 2005). This report details how certain early intervention programs, known as early commitment financial aid programs, offer low-income students a guarantee of financial aid for college if they actively participate and fulfill the requirements of the program. Examples of such programs include I Have a Dream, Indiana's Twenty-first Century Scholars Program, Project Grad, the Washington State Achievers Program, and Oklahoma's Higher Learning Access Program.

### **The Impact of Financial Barriers on Bachelor's Degree Attainment**

<sup>16</sup> For more information on the National Education Longitudinal Study of 1988, see <http://nces.ed.gov/surveys/nels88>. For more information on the Education Longitudinal Study of 2002, see <http://nces.ed.gov/surveys/els2002/overview.asp>. For more information on the National Postsecondary Student Aid Survey, see <http://www.nces.ed.gov/npsas/>.

<sup>17</sup> Several studies show that the level of high school math is a strong predictor of academic success in college. For more information, see (Adelman 1999); (Adelman 2006). As a result of these and other studies, this report uses mathematics coursework as a proxy for college-qualification. These college-qualification measures—"at least Algebra II" and "at least Trigonometry"—are self-reported data and do not take into account the quality or intensity of the coursework.

<sup>18</sup> The college-qualification index used by NCES in 1997 is a composite measure that includes GPAs for cumulative academic coursework, senior class rank, NELS 1992 test scores, and SAT or ACT exam scores. For more information, see (Berkner and Chavez 1997). Because NCES has not replicated its college-qualification index for the ELS:2002 database, this report uses "at least Algebra II," which is comparable to the NCES measure in terms of the percentage of college-qualified students, and a more rigorous measure—"at least Trigonometry."

<sup>19</sup> When reviewing the report's loss estimates, it is important to remember the conservative nature of these numbers. Not only are the estimates calculated in a conservative manner, they include large proportions of low- and moderate-income students who failed to become college-qualified high school graduates. For the 1992 cohort, when using the "at least Algebra II" measure, the estimates only include 37 percent and 55 percent of low- and moderate-income students, respectively; for the "at least Trigonometry" measure, the estimates only include 17 percent of low-income and 29 percent of moderate-income students.

<sup>20</sup> Studies that have found no relationship between Pell Grant recipients and four-year college enrollment often fail to take into consideration that net prices have risen steadily.

<sup>21</sup> The term “four-year college” is used to refer to all postsecondary institutions that award bachelor’s degrees, including both colleges and universities, and those that are public, not-for-profit, and for-profit institutions. However, this report focuses specifically on the financial barriers at four-year *public* colleges because the purpose of the federal and state financial aid programs has traditionally been to ensure financial access to at least a public institution.

<sup>22</sup> The melt between 12<sup>th</sup> grade plans and college enrollment is calculated as: (12<sup>th</sup> grade plans – college enrollment) / 12<sup>th</sup> grade plans.

<sup>23</sup> Several states have implemented programs to aid transfer between two- and four-year institutions, such as the Massachusetts Tuition Advantage Program (TAP); Maryland Hope Community College Transfer Scholarship; Towards Excellence, Access, and Success (TEXAS) Grant; and the Virginia Transfer Grant Program. For more information, see (Long 2005).

<sup>24</sup> Fewer high-income students who begin at a two-year college expecting to earn a bachelor’s degree attain the degree than middle-income students. In fact, a comparable percentage of high-income and moderate-income students who follow this path attain a bachelor’s degree. This study reports these patterns, but does not further analyze the determinants of the behavior.

<sup>25</sup> *USA Today's* annual 50-state survey reports that financial aid for students attending public flagship universities increased from 2002 to 2005, but not at rates high enough to keep pace with tuition and fee increases. For more information, see (Specht 2006).

<sup>26</sup> (American Council on Education 2005)

<sup>27</sup> The college enrollment and bachelor’s degree attainment rates for the 2004 cohort are not yet available. NCES plans to release enrollment data for ELS:2002 in 2007. Comparable degree attainment data to NELS:88/2000 for the 2004 cohort will not be available before 2012. As these data become available, the Advisory Committee plans to update its findings. For more information about scheduled releases for ELS:2002 data, see <http://nces.ed.gov/surveys/els2002/design.asp>.

<sup>28</sup> To estimate the number of students who began in the 1992 cohort (as 8<sup>th</sup> graders in 1988) and did not graduate from high school, the following calculation is used: (Number of 1992 High School Graduates) / Graduate Rate – Number of High School Graduates. For comparative purposes, this report shows the number of students who theoretically began in the 2004 cohort (as 8<sup>th</sup> graders in 2000) and did not graduate from high school. NCES first surveyed students in ELS:2002 in 2002, when they would have been in 10<sup>th</sup> grade. For comparability to NELS:88, the report shows the estimated number of 8<sup>th</sup> graders. Because ELS data on graduation rates are not yet available, these calculations are based on the 1992 high school graduation rates, by income.

## **Summary of Findings and Policy Implications**

<sup>29</sup> (ACT 2003)

<sup>30</sup> (Heller 2006a); (St. John 2004). For more information on the Indiana Twenty-first Century Scholars Program, see (St. John et al. 2002). For more information on the Washington State Achievers Program, see (St. John and Hu 2004).

<sup>31</sup> Pending HEA Reauthorization bills H.R.609 and S.1614 would implement (with appropriate field-testing) a highly simplified two-page paper “EZ-FAFSA” for students who are eligible for the automatic zero. See Section 471 of H.R.609 and Section 483 of S.1614.

<sup>32</sup> U.S. Department of Education's Office of Federal Student Aid (FSA) processing statistics for January 1, 2006 through July 2, 2006 indicate a nine percent increase in the number of electronic applications (8.5 million versus 7.8 million), compared to the same time during the previous processing cycle (05/06). See page 7 of the Summer 2006 edition of the Advisory Committee's quarterly publication, *Access and Persistence*, for more information on these statistics.

<sup>33</sup> Both pending HEA Reauthorization bills (H.R.609 and S.1614) would reinstate the "early analysis" process, directing the Secretary of Education to allow students to complete the FAFSA in years prior to enrollment in order to receive early estimates of their EFC, and allow students to update this information as needed using the reapplication process in order to apply for final award determination (see Section 471 of H.R.609 and Section 483 of S.1614). The "student work penalty" refers to the treatment in current need analysis of students who work to cover unmet need, but earn more than the Income Protection Allowance (IPA) per year. The IPA for dependent students is currently \$3,000, or \$6,050 for independent students without dependents. Students who earn more than these amounts will have their eligibility for grant aid reduced the following year because any money above these limits is considered available for contribution to college costs. These levels were recently increased with the passage of the Higher Education Reconciliation Act of 2005 (see Section 8017 of S.1932). For more information on early financial aid information and the "student work penalty," see (Advisory Committee on Student Financial Assistance 2005). The Advisory Committee recommended raising the IPA levels by a minimum of \$1,000 for each group of students in *The Student Aid Gauntlet* (2005).

<sup>34</sup> The Higher Education Reconciliation Act of 2005 (S.1932) increased the income cap for eligibility for an automatic zero EFC to \$20,000 from \$16,000 (see Section 8018 of S.1932). The Advisory Committee recommended increasing it to \$25,000; see (ACSFA 2005). The Higher Education Reconciliation Act of 2005 (S.1932) also increased the IPA levels, from \$2,440 in 2005-2006 to \$3,000 and from \$5,560 in 05-06 to \$6,050 for independent students without dependents (see Section 8017 of S.1932). The Advisory Committee recommended raising the IPA levels by a minimum of \$1,000 for each group of students in *The Student Aid Gauntlet* (2005).

<sup>35</sup> Grants for Access and Persistence (GAP) would replace the Special Leveraging Educational Assistance Partnerships Program, or Special LEAP, as included in the pending Senate HEA Reauthorization Bill (see Section 415E of S.1614). Senator Jack Reed (D-RI) first introduced the legislation to create GAP in S.1029, the Accessing College through Comprehensive Early Outreach and State Partnerships Act (ACCESS Act). This legislation, which obtained bi-partisan co-sponsorship, would provide federal matching funds to states that implemented public-private partnerships in order to provide low-income students with supplemental need-based grant aid and an early assurance of the availability of such aid.

<sup>36</sup> A study by the National Center for Public Policy and Higher Education predicts budget shortfalls in all 50 states by the year 2013, and notes that these shortfalls are likely to result in increased pressure on state appropriations to higher education; see (Jones 2006).

<sup>37</sup> For more information about these programs, visit <http://www.virginia.edu/accessuva> for Access UVA and <http://www.unc.edu/carolinacovenant/> for the Carolina Covenant.

<sup>38</sup> The Coalition for College Cost Savings (CCCS), a nonprofit organization, is dedicated to helping smaller independent colleges and universities improve business processes and contain costs through collaboration. For more information, see <http://www.thecoalition.us/>.

<sup>39</sup> The Academic Competitiveness Grant Program (ACG) was created by the Higher Education Reconciliation Act of 2005 (see Section 8003). Academic Competitiveness Grants are available to students who are eligible for a Pell Grant and who have successfully completed a "rigorous" curriculum in high school and maintained a specific GPA in college. See <http://studentaid.ed.gov/PORTALSWebApp/students/english/AcademicGrants.jsp> for more information on ACG.

<sup>40</sup> (National Association of State Student Aid and Grant Programs. 2006.)

<sup>41</sup> (Heller 2006b)

<sup>42</sup> For more information on barriers to transfer and articulation between two- and four-year institutions, see (Long 2005).

<sup>43</sup> (Dowd et al. 2006); for more information on the Jack Kent Cook Undergraduate Transfer Scholarship program, see [http://www.jackkentcookefoundation.org/jkcf\\_web/content.aspx?page=UnderG](http://www.jackkentcookefoundation.org/jkcf_web/content.aspx?page=UnderG).

<sup>44</sup> (Perna and Swail 2002)

<sup>45</sup> (Bettinger and Long 2005)

## REFERENCES

- ACT. 2003. *Eighth Grade Students Underestimate College Preparation Needs*. Iowa City IA.
- Adelman, C. 1999. *Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment*. Washington DC: U.S. Department of Education.
- Adelman, C. 2006. *The Toolbox Revisited: Paths to Degree Completion From High School Through College*. Washington DC: U.S. Department of Education.
- Advisory Committee on Student Financial Assistance. 2001. *Accessed Denied: Restoring the Nation's Commitment to Equal Educational Opportunity*. Washington DC.
- Advisory Committee on Student Financial Assistance. 2002. *Empty Promises: The Myth of College Access in America*. Washington DC.
- Advisory Committee on Student Financial Assistance. 2005. *The Student Aid Gauntlet: Making Access to College Simple and Certain*. Washington DC.
- Advisory Committee on Student Financial Assistance. 2006. *Access and Persistence* (Summer).
- American Council on Education. 2005. *What Every Student Should Know About Federal Aid*. Washington DC.
- Berkner, L., and L. Chavez. 1997. *Access to Postsecondary Education for the 1992 High School Graduates*. Washington DC: U.S. Department of Education, Office of Educational Research and Improvement.
- Bettinger, E., and B.T. Long. 2005. Addressing the Need of Under-Prepared College Students: Does College Remediation Work? NBER Working Paper No. 11325 (under submission). Cambridge MA: National Bureau of Economic Research.
- Blanco, C. 2005. *Early Commitment Financial Aid Programs: Promises, Practices, and Policies*. Boston MA: Pathways to College Network.
- Children's Defense Fund. 2005. *The State of America's Children 2005*. Washington DC.
- The Coalition for College Cost Savings. 2006. *Our Mission and Vision*. <http://www.thecoalition.us/index.cfm?goto=mission> (accessed September 7, 2006).
- Coelen, S., and J. Berger. 2006. *New England 2020: A Forecast of Educational Attainment and its Implications for the Workforce of New England States*. Boston MA: Nellie Mae Education Foundation.
- Cohen, J., and J. Yang. June 23, 2006. Middle Grades Reform: Breaking Ranks in the Middle and Schools to Watch. Summary of Middle Grades Reform, American Youth Policy

- Forum, Washington DC. <http://www.aypf.org/forumbriefs/2006/fb062306.htm> (accessed September 7, 2006).
- The College Board. 2005. *Education Pays 2004: The Benefits of Higher Education for Individuals and Society* (Revised edition). Washington DC.
- Douglass, J.A. 2006. The Waning of America's Higher Education Advantage: International Competitors are No Longer Number Two and Have Big Plans in the Global Economy. *Research & Occasional Paper Series: CSHE.9.06*. Berkeley CA: Center for Studies in Higher Education, University of California, Berkeley.
- Dowd, A.C., et al. 2006. *Transfer Access to Elite Colleges and Universities in the United States: Threading the Needle of the American Dream*. Lansdowne VA: Jack Kent Cooke Foundation.  
[http://www.jackkentcookefoundation.org/jkcf\\_web/content.aspx?page=1493126](http://www.jackkentcookefoundation.org/jkcf_web/content.aspx?page=1493126) (accessed September 7, 2006).
- Federal Student Aid. 2006. *The Academic Competitiveness Grant*. U.S. Department of Education, Federal Student Aid.  
<http://studentaid.ed.gov/PORTALSWebApp/students/english/AcademicGrants.jsp> (accessed September 7, 2006).
- Hecker, D. 2001. Occupational Employment Projections to 2010. *Monthly Labor Review* 124 (November): 57-94.
- Heller, D. 2006a. Early Commitment of Financial Aid Eligibility. *American Behavioral Scientist* 49: 1719-1738.
- Heller, D. 2006b. Merit Aid and College Access. Paper presented at the Symposium on the Consequences of Merit-Based Student Aid for the Wisconsin Center for the Advancement of Postsecondary Education, University of Wisconsin, Madison.
- Institute for Higher Education Policy. 2005. *The Investment Payoff: A 50-State Analysis of the Public and Private Benefits of Higher Education*. Washington DC.
- Jones, D. 2006. State Shortfalls Projected to Continue Despite Economic Gains: Long-Term Prospects for Higher Education No Brighter. *Policy Alert* (February). San Jose CA: National Center for Public Policy and Higher Education.
- Kelly, P.J. 2005. *As America Becomes More Diverse: The Impact of State Higher Education Inequality*. Boulder CO: National Center for Higher Education Management Systems.
- Kolb, C.E.M. 2006. The Cracks in Our Education Pipeline. *Education Week* 25 (42).

- Lemke, M. et al. 2004. *International Outcomes of Learning in Mathematics Literacy and Problem Solving: PISA 2003 Results From the U.S. Perspective*. Washington DC: National Center for Education Statistics.
- Long, B. T. 2005. *State Financial Aid: Policies to Enhance Articulation and Transfer*. Boulder CO: Western Interstate Commission for Higher Education.
- The National Academies. 2005. *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*. Washington DC.
- National Association of State Student Aid and Grant Programs. 2006. *36<sup>th</sup> Annual Survey Report on State-Sponsored Student Financial Aid: 2004-2005*. Washington DC.
- National Center for Education Statistics. n.d. *Education Longitudinal Study of 2002: Overview: Purpose*. Washington DC. <http://nces.ed.gov/surveys/els2002/overview.asp> (accessed September 7, 2006).
- National Center for Education Statistics. n.d. *National Education Longitudinal Study of 1988: NELS 88 Overview*. Washington DC. <http://nces.ed.gov/surveys/nels88/> (accessed September 7, 2006).
- National Center for Education Statistics. n.d. *National Postsecondary Student Aid Survey: Overview*. Washington DC. <http://nces.ed.gov/surveys/npsas/> (accessed September 7, 2006).
- National Center for Higher Education and Public Policy. 2005. *Income of U.S. Workforce Projected to Decline If Education Doesn't Improve*. San Jose CA.
- National Science Board. 2004. *Science and Engineering Indicators 2004*. Arlington VA: National Science Foundation.
- Office of Vocational and Adult Education. January 10, 2003. *OVAE Review*. Washington DC: U.S. Department of Education. <http://www.ed.gov/news/newsletters/ovaereview/orev011003.html> (accessed September 7, 2006).
- Organization for Economic Co-operation and Development. 2005. Indicator A1: Educational Attainment of the Adult Population. *Education at a Glance 2005 – Tables*. Paris France. [http://www.oecd.org/document/11/0,2340,en\\_2825\\_495609\\_35321099\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/11/0,2340,en_2825_495609_35321099_1_1_1_1,00.html) (accessed September 7, 2006).
- Perna, L., and W.S. Swail. 2002. Pre-college Outreach and Early Intervention Programs. In *Conditions of Access: Higher Education for Lower Income Students*, ed. D. Heller, 97-112. Westport CT: American Council on Education.
- Specht, M. 2006. Financial Aid Can't Keep Pace. *USA Today* (August 30).

- St. John, E.P., et al. 2002. *Meeting the Access Challenge: Indiana's Twenty-First Century Scholars Program*. New Agenda Series. Indianapolis IN: Lumina Foundation for Education.
- St. John, E.P. 2004. The Impact of Financial Aid Guarantees on Enrollment and Persistence: Evidence from Research on Indiana's Twenty-first Century Scholars and Washington State Achievers Programs. In *State Merit Scholarship Programs and Racial Inequality*, ed. D. Heller and P. Marin. Cambridge MA: The Civil Rights Project at Harvard University.
- St. John, E.P., and S. Hu. 2004. The Washington State Achievers Program: How does it influence student postsecondary educational opportunities? Paper presented at the annual meeting of the American Educational Research Association. San Diego CA.
- University of North Carolina at Chapel Hill. n.d. *Carolina Covenant*. <http://www.unc.edu/carolinacovenant/> (accessed on September 7, 2006).
- University of Virginia. 2006. *Access UVA*. <http://www.virginia.edu/accessuva/> (accessed on September 7, 2006).
- U.S. Congress. 109<sup>th</sup> Congress. *Higher Education Reconciliation Act of 2005*, Public Law 109-171.
- U.S. Congress. House. *College Access and Opportunity Act of 2006*. H.R.609. 109<sup>th</sup> Cong. (March 30).
- U.S. Congress. Senate. *Higher Education Bill*. S.1614. 109<sup>th</sup> Cong.
- Wimberly, G., and R. Noeth. 2005. *College Readiness Begins in Middle School: ACT Policy Report*. Iowa City IA: ACT.
- White House Domestic Policy Council and the Office of Science and Technology Policy. 2006. *American Competitiveness Initiative*. Washington DC.



**APPENDIX A: ADVISORY COMMITTEE  
2003 REAUTHORIZATION LETTER**

**ADVISORY COMMITTEE ON STUDENT FINANCIAL ASSISTANCE**

May 22, 2003

The Honorable Judd Gregg  
Chairman  
Senate Health, Education, Labor, and Pensions Committee  
393 Senate Russell Office Building  
Washington, DC 20510

Dear Senator Gregg:

The Advisory Committee on Student Financial Assistance (Advisory Committee) is pleased to transmit its major recommendation for reauthorization of the Higher Education Act (HEA). Created by the Higher Education Amendments of 1986, the Advisory Committee is an independent source of advice and counsel to Congress and the Secretary of Education on student financial aid policy. The Committee's most important legislative charge is to make recommendations that maintain and enhance access and persistence of low- and moderate-income students in postsecondary education.

The upcoming HEA reauthorization represents an important opportunity for Congress to make progress in solving the nation's core college access and persistence problem. In a December 31, 2002 letter to the Honorable John A. Boehner, Chairman of the Committee on Education and the Workforce, the Advisory Committee identified three key dimensions for the nation's neediest, low-income students:

- Those in middle school today do not—and cannot—know their total eligibility for federal, state, and institutional financial aid resources. And, even if they did know their total eligibility, it is insufficient to ensure financial access even to less expensive public colleges, even for those who are academically qualified.
- Nearing (and upon) graduation from high school, they face overly complex application forms, which inhibit their transition to college and inordinately high unmet need, the gap between student aid and college expenses. High unmet need causes students to undertake excessive levels of work and loan burden.
- Those who enter college, especially four-year colleges, against these financial odds must work far too many hours, which reduces their eligibility for grant aid, and accumulate far too much debt in meeting college expenses.

This unproductive pattern inevitably leads to diminished expectations and plans early on, low levels of enrollment upon high school graduation, and disappointing rates of persistence and degree completion in college. Breaking this pattern will require a major adjustment in the nation's long run access and persistence strategy.

**80 F Street, N.W., Suite 413, Washington, D.C. 20202-7582 • Tel: 202/219-2099 • Fax: 202/219-3032**  
**An independent committee created by Congress to advise on higher education and student aid policy**

### **A Practical and Promising Solution**

Fortunately, the broad outline of a solution is already known and at least partially in place in states like Indiana, Oklahoma, and Washington. In those states, low-income middle school students and their families are assured of financial access to four-year public colleges. With such an assurance, they know that adequate financial resources will be there if they work hard to become academically prepared. They know that grant aid in particular will be sufficient to keep work and loan burden to manageable levels upon enrollment in college and through degree completion. The success of these state efforts in advancing access and persistence is proof that, when low-income students and their families are assured sufficient financial resources to be successful in college, their educational expectations and plans, academic preparation, level of enrollment, and rate of persistence dramatically improve. If combined with a highly simplified application for financial aid, and an improved, more transparent determination of eligibility that eliminates the current counterproductive penalty on work, then an early assurance of financial access and persistence will yield immediate and enduring progress toward equal educational opportunity.

The challenge in this reauthorization is for the federal government, in partnership with the states, colleges, and the private sector, to implement systemic and long-lasting solutions to the nation's core college access and persistence problem. States that have already implemented such strategies must be encouraged to go further, broadening the coverage and improving the effectiveness of their programs. States that have yet to adopt such a strategy must be encouraged to implement one based on successful models. Colleges—both public and private—must also do their share, by increasing the amount of grant assistance and support services for needy students to ensure degree or certificate completion. Lastly, to the extent possible, the considerable resources of the private sector must also be brought to bear. If all existing public and private access and persistence resources and programs are pooled to work together, then significant progress can be made.

### **A National Access and Persistence Partnership**

The Advisory Committee recommends the creation of a national partnership that links the federal government, states, colleges, and K-12 schools across existing Title IV programs, in pursuit of measurable gains in access and persistence for the nation's neediest students who are academically qualified. This partnership should be based on existing models that have been proven effective and should take full advantage of existing public and private resources. To be successful, the partnership must have the following components:

- **An Early Assurance of Financial Access.** The partnership must integrate a financial assurance into existing public and private early intervention, academic preparation, mentoring, and counseling programs in the state.
- **Simplified Application and Adequate Grant Aid.** The partnership must provide for easy application for financial aid and assure financial access to four-year colleges, for both first-time students and two-year college transfers, through a combination of existing funding sources and supplemental state grants.
- **Enhanced Persistence.** The partnership must provide continuing grant aid, adequate support services, and the elimination of existing penalties for work that lower eligibility for need-based grant aid.

To the extent possible, the partnership should promote institutional policies that ease student transfers and improve completion rates of low-income students. To be internally accountable, the partnership must hold participating low-income students harmless against increases in tuition by increasing their financial aid as prices rise. Colleges should maintain policies that are flexible enough to accommodate the diverse needs of low-income students. Colleges must also be accountable; it is incumbent on private and public colleges and their partners to make every effort possible to

The Honorable Judd Gregg  
May 22, 2003  
Page 3

control their costs. The partnership also must systematically generate data, capable of monitoring and measuring the partnerships' impact on educational expectations and plans, enrollment, and persistence outcomes.

Lastly, there are several ways that such a partnership could be implemented. The partnership could take the form of a modification to one or more existing Title IV programs or a competitive grant program. In recognition of the fact that funding may not be available initially to meet the demands of all states that wish to participate, it could be phased in gradually, in a scalable manner. For example, initial priority could be given to a limited amount of states

that, in conjunction with participating colleges, were able to develop innovative methods to provide a full assurance of financial access to a significant number of middle school students. Regardless of the specific form that the partnership takes, states and colleges should be encouraged to match federal funds to ensure that the additional grant aid necessary to make good on the promise of financial access and persistence is forthcoming.

### **Benefits to Students and the Nation**

This reauthorization offers the opportunity to put into place a creative and efficient partnership that can stem the increase in the number of students for whom opportunity will be nothing more than an empty promise, and make considerable progress toward renewing the nation's commitment to access to college and the opportunity to persist. The resulting statute could begin to insure that the hard work of the neediest Americans who will attempt to enroll in college over the next decade will be rewarded.

While a problem several decades in the making cannot be solved overnight, a reinvigorated federal-state-institutional partnership with private sector support is both desirable and feasible. It would ensure that the nation confronts the serious college access and persistence problem head-on. It will also focus resources on a winning long-term strategy to increase the amount of need-based grant aid that low- and moderate-income high school graduates receive that will reduce the work hours and loan burden they currently face to a manageable level.

As always, the Advisory Committee members and staff would be pleased to discuss the proposal with you or provide any technical assistance that is necessary. Please contact our staff director, Dr. Brian Fitzgerald, if we can be of assistance.

Sincerely,

Dr. Charles Terrell  
Chairperson

Enclosure

cc: Advisory Committee members  
The Honorable Edward M. Kennedy (Identical letter sent)  
Members of the Committee on Health, Education, Labor and Pensions  
Members of the Committee on Education and the Workforce  
The Honorable Roderick R. Paige  
The Honorable William D. Hansen  
The Honorable Sally L. Stroup

## ADVISORY COMMITTEE ON STUDENT FINANCIAL ASSISTANCE

### REAUTHORIZATION PROPOSAL: A FEDERAL PARTNERSHIP FOR ACCESS AND PERSISTENCE

**Summary:** The proposal would forge a new partnership among the federal government, states, and colleges to create an assurance of access and persistence for low-income students. The proposal is necessary because college-qualified low-income students face financial and procedural barriers to enrollment throughout the education pipeline. The proposal would attack this systemic problem by encouraging states to offer low-income students an early assurance of financial access to college, a simplified financial application process, and adequate grant aid to enroll and persist to degree completion. The proposal would also encourage colleges to provide support services and additional persistence grants to low-income students. The most effective early intervention programs have demonstrated that an early assurance of financial access has generated remarkable benefits for low-income students and their families: students who successfully complete early intervention programs are more likely to be academically prepared to attend college and more likely to enroll in college.

**Background:** The Advisory Committee on Student Financial Assistance has outlined the access and persistence problems in its last two reports, *Access Denied* and *Empty Promises*. In summary, the Advisory Committee has found: (1) middle school students lack an assurance of adequate financial aid; (2) high school students face an overly complex financial aid application process and inordinately high unmet need; and (3) college students face an overwhelming level of work and loan burden in attempting to persist to degree completion. The Advisory Committee is convinced that progress is unlikely unless the Title IV access and persistence partnership among the federal government, states, colleges, and K-12 schools is boldly reinvigorated during this reauthorization.

An effective access and persistence strategy must be multidimensional; it should contain three critical components: (1) An early assurance of financial access; (2) a simplified application and adequate grant aid; and (3) persistence grants and support services. An assurance of financial access to low-income middle school students would create incentives for students to aspire to attend college, enroll in early intervention programs, and prepare academically to attend college. A simplified application form that is aligned with existing federal programs would make eligibility more transparent and application less encumbered for high school students. Additional grant aid and support services at college would reduce low-income students' work and loan burden and improve the likelihood that they will enroll in college and persist to degree completion.

**Proposal:** Congress should create a partnership that offers matching grants to states and institutions to form partnerships that promote access and persistence for low-income students. Congress could appropriate funds to states, especially those states that have a demonstrated commitment to early intervention leading to college access. States could have the flexibility to decide which low-income students to target the additional grant aid to, but could be encouraged to give priority to low-income students who have participated in a federal, state, community, or private early intervention program. The partnership could encourage states to provide low-

income middle school students with an early assurance of financial access to a four-year college; it could establish a streamlined application process that included automatic eligibility, enabling states to notify every 7<sup>th</sup> grade student of his or her total drawing power on federal and state grant aid. The partnership would allow states to offer financial incentives, in the form of additional grant assistance, to high school students to participate in and complete early intervention programs. Participation in such programs will increase the likelihood that the targeted students will aspire to college and be academically prepared to enroll in college. The partnership could also encourage participating colleges to attract, retain, and graduate low-income students; institutions would receive matching funds to provide persistence grants and additional support services. Finally, the partnership could further reduce the work and loan burden of low-income college students by eliminating the student “work penalty,” whereby a student’s grants decrease the more (s)he works to cover unmet need, and thus ensuring adequate grant aid each year of college.

### **Key Features:**

- The partnership could leverage additional federal funds with additional state and institutional grant aid through matching requirements.
- It minimizes structural changes to existing federal programs and does not create new federal programs to compete with those that already exist.
- It could leverage existing Title IV programs like SEOG and Work-Study to lower unmet need and increase enrollment and persistence.
- It could be scalable and data generating; the partnership could initially be implemented in a select group of states, or it could be gradually phased into every state.
- It could be internally accountable, holding participating students harmless against tuition increases and encouraging timely degree completion.
- Students could use their grant assistance at public and private accredited colleges.
- The federal government could encourage states to award available grant aid to students that participate in an early intervention program; programs that utilize strategies such as mentoring, counseling, academic support, providing financial information, involving parents, and visiting college campuses.
- The partnership could take advantage of existing early intervention programs such as TRIO, GEAR UP, I Have a Dream, and those operated by private (corporate and philanthropic) firms.
- The federal government could ensure consistency of grant aid each year of college by minimizing the current student “work penalty,” by which wages earned to cover unmet need reduce grant aid in subsequent years, as a means of encouraging persistence.

- Colleges could encourage academically qualified low-income students to attend their school by offering matching grant aid, and by providing support services that help students persist to degree completion.

**Benefits:** The proposed partnership would allow the federal government to leverage existing Title IV programs to expand low-income students' access to college; thus, allowing the nation to produce more skilled workers. The partnership provides states with the opportunity to strengthen their need based grant programs to offset the rising tide of college costs. The partnership would also provide colleges with additional funds for persistence grants and support services. States and colleges would benefit from a student population that was more motivated, by an early assurance of financial access, to prepare academically and to persist to degree completion. Students of low-income families would also benefit from an early assurance of financial access, as it would encourage them to have higher expectations to attend college and they would receive better information with which to make plans to attend college. Students would also benefit from the reduction of financial and procedural barriers to college access; students would receive a simpler financial application, a clearer articulation of the financial aid available, and consistent grant aid each year of college, through the elimination of the student "work penalty."

**APPENDIX B: ADVISORY COMMITTEE  
SIMPLIFICATION RECOMMENDATIONS**

<b>ADVISORY COMMITTEE RECOMMENDATIONS IN HEA REAUTHORIZATION BILLS (H.R.609 and S. 1614) AND HIGHER EDUCATION RECONCILIATION ACT (P.L.109-171)</b>			
<b>RECOMMENDATION</b>	<b>Senate Bill (S.1614)</b>	<b>House Bill (H.R.609)</b>	<b>HERA 2005 (P.L.109-171)</b>
1. Create a System of Early Financial Aid Information	●	◐	◐
2. Make Federal Need Analysis Transparent, Consistent, Fair	◐	◐	◐
3. Expand Existing Simplification to More Students	◐	◐	◐
4. Allow All Students to Apply for Financial Aid Earlier	◐	◐	
5. Make the FAFSA Relevant and Understandable	◐	◐	◐
6. Create a Simpler Paper Form for Low-Income Students	●	●	
7. Phase Out Full Paper Form and Increase Use of Technology	●	◐	
8. Simplify and Streamline FAFSA on the Web	●	●	
9. Simplify the Verification Process			
10. Create a National Access and Persistence Partnership	●		

● = recommendation fully implemented; ◐ = recommendation partially implemented.

## APPENDIX C: ADVISORY COMMITTEE MEMBERS

### **Mr. Clare M. Cotton (Chairperson)**

1272 Beacon Street - #8  
Brookline, Massachusetts 02446

*Appointed by:*

**The Honorable Robert C. Byrd (D-WV)**  
**President Pro Tempore of the Senate**

### **Ms. Judith N. Flink (Vice Chairperson)**

Executive Director of University Student Financial Services  
The University of Illinois

*Appointed by:*

**The Honorable J. Dennis Hastert (R-IL)**  
**Speaker of the House of Representatives**

### **Mr. Don R. Bouc**

President Emeritus  
National Education Loan Network (Nelnet)

*Appointed by:*

**The Honorable Roderick R. Paige (R-TX)**  
**Secretary of Education**

### **Dr. Lawrence W. Burt**

Associate Vice President for Student Affairs  
Director of Student Financial Services  
The University of Texas at Austin

*Appointed by:*

**The Honorable Margaret Spellings (R-TX)**  
**Secretary of Education**

### **Mr. René A. Drouin**

President and CEO  
New Hampshire Higher Education Assistance Foundation

*Appointed by:*

**The Honorable Theodore Stevens (R-AK)**  
**President Pro Tempore of the Senate**

### **Ms. Norine Fuller**

Executive Director  
The Fashion Institute of Design and Merchandising

*Appointed by:*

**The Honorable J. Dennis Hastert (R-IL)**  
**Speaker of the House of Representatives**

### **Mr. Darryl A. Marshall**

Director, Student Financial Aid  
Florida State University

*Appointed by:*

**The Honorable Roderick R. Paige (R-TX)**  
**Secretary of Education**

### **Mr. Lawrence W. O'Toole**

Chairman and CEO  
America's Charter School Finance Corporation

*Appointed by:*

**The Honorable Roderick R. Paige (R-TX)**  
**Secretary of Education**

### **Dr. Claude O. Pressnell, Jr.**

President  
Tennessee Independent Colleges and Universities  
Association (TICUA)

*Appointed by:*

**The Honorable Theodore Stevens (R-AK)**  
**President Pro Tempore of the Senate**

### **Mr. Robert M. Shireman**

Director  
The Institute for College Access & Success, Inc.

*Appointed by:*

**The Honorable Nancy Pelosi (D-CA)**  
**Minority Leader**  
**U.S. House of Representatives**

**Student Member -Vacant**



**APPENDIX D: ADVISORY COMMITTEE STAFF**

**William J. Goggin**  
Executive Director

**Julie Johnson**  
Assistant Director

**Hope M. Gray**  
Executive Officer

**Nicole A. Barry**  
Deputy Director

**Brent J. Evans**  
Assistant Director

**Tracy D. Jones**  
Administrative Assistant

**Michelle Asha Cooper**  
Director of Policy Research

**Jeneva Stone**  
Senior Writer

**Erin B. Renner**  
Director of Government Relations

**Lan Gao**  
Graduate Assistant

**APPENDIX E:  
AUTHORIZING LEGISLATION**

The Advisory Committee was established by an act of Congress in 1986. Section 491 of the Higher Education Act as amended contains the Committee's Congressional mandate. A copy of this section as it appears in the law follows:

**SEC. 491. ADVISORY COMMITTEE ON STUDENT FINANCIAL ASSISTANCE.**

**(a) ESTABLISHMENT AND PURPOSE.**--(1) There is established in the Department an independent Advisory Committee on Student Financial Assistance (hereafter in this section referred to as the "Advisory Committee") which shall provide advice and counsel to the Congress and to the Secretary on student financial aid matters. (2) The purpose of the Advisory Committee is-- (A) to provide extensive knowledge and understanding of the Federal, State, and institutional programs of postsecondary student assistance; (B) to provide technical expertise with regard to systems of needs analysis and application forms; and (C) to make recommendations that will result in the maintenance of access to post-secondary education for low- and middle-income students.

**(b) INDEPENDENCE OF ADVISORY COMMITTEE.**--In the exercise of its functions, powers, and duties, the Advisory Committee shall be independent of the Secretary and the other offices and officers of the Department. Notwithstanding Department of Education policies and regulations, the Advisory Committee shall exert independent control of its budget allocations, expenditures and staffing levels, personnel decisions and processes, procurements, and other administrative and management functions. The Advisory Committee's administration and management shall be subject to the usual and customary Federal audit procedures. Reports, publications, and other documents of the Advisory Committee, including such reports, publications, and documents in electronic form, shall not be subject to review by the Secretary. The recommendations of the Committee shall not be subject to review or approval by any officer in the executive branch, but may be submitted to the Secretary for comment prior to submission to the Congress in accordance with subsection (f). The Secretary's authority to terminate advisory committees of the Department pursuant to section 448(b) of the General Education Provisions Act ceased to be effective on June 23, 1983.

**(c) MEMBERSHIP.**--(1) The Advisory Committee shall have 11 members of which-- (A) 3 members shall be appointed by the President pro tempore of the Senate upon the recommendation of the Majority Leader and the Minority Leader, (B) 3 members shall be appointed by the Speaker of the House of Representatives upon the recommendation of the Majority Leader and the Minority Leader, and (C) 5 members shall be appointed by the Secretary including, but not limited to representatives of States, institutions of higher education, secondary schools, credit institutions, students, and parents. (2) Not less than 7 members of the Advisory Committee shall be individuals who have been appointed on the basis of technical qualifications, professional standing and demonstrated knowledge in the fields of higher education and student aid administration, need analysis, financing postsecondary education, student aid delivery, and the operations and financing of student loan guarantee agencies.

**(d) FUNCTIONS OF THE COMMITTEE.**--The Advisory Committee shall--(1) develop, review, and comment annually upon the system of needs analysis established under part F of this title; (2) monitor, apprise, and evaluate the effectiveness of student aid delivery and recommend

improvements; (3) recommend data collection needs and student information requirements which would improve access and choice for eligible students under this title and assist the Department of education in improving the delivery of student aid; (4) assess the impact of legislative and administrative policy proposals; (5) review and comment upon, prior to promulgation, all regulations affecting programs under this title, including proposed regulations; (6) recommend to the Congress and to the Secretary such studies, surveys, and analyses of student financial assistance programs, policies, and practices, including the special needs of low-income, disadvantaged, and nontraditional students, and the means by which the needs may be met, but nothing in this section shall authorize the committee to perform such studies, surveys, or analyses; (7) review and comment upon standards by which financial need is measured in determining eligibility for Federal student assistance programs; (8) appraise the adequacies and deficiencies of current student financial aid information resources and services and evaluate the effectiveness of current student aid information programs; and (9) make special efforts to advise Members of Congress and such Members' staff of the findings and recommendations made pursuant to this paragraph.

**(e) OPERATIONS OF THE COMMITTEE.**--(1) Each member of the Advisory Committee shall be appointed for a term of 3 years, except that, of the members first appointed-- (A) 4 shall be appointed for a term of 1 year; (B) 4 shall be appointed for a term of 2 years; and (C) 3 shall be appointed for a term of 3 years, as designated at the time of appointment by the Secretary. (2) Any member appointed to fill a vacancy occurring prior to the expiration of the term of a predecessor shall be appointed only for the remainder of such term. A member of the Advisory Committee shall, upon request, continue to serve after the expiration of a term until a successor has been appointed. A member of the Advisory Committee may be reappointed to successive terms on the Advisory Committee. (3) No officers or full-time employees of the Federal Government shall serve as members of the Advisory Committee. (4) The Advisory Committee shall elect a Chairman and a Vice Chairman from among its members. (5) Six members of the Advisory Committee shall constitute a quorum. (6) The Advisory Committee shall meet at the call of the Chairman or a majority of its members.

**(f) SUBMISSION TO DEPARTMENT FOR COMMENT.**--The Advisory Committee may submit its proposed recommendations to the Department of Education for comment for a period not to exceed 30 days in each instance.

**(g) COMPENSATION AND EXPENSES.**--(1) Members of the Advisory Committee may each receive reimbursement for travel expenses incident to attending Advisory Committee meetings, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code, for persons in the Government service employed intermittently.

**(h) PERSONNEL AND RESOURCES.**--(1) The Advisory Committee may appoint such personnel as may be necessary by the Chairman without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and may be paid without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title relating to classification and General Schedule pay rates, but no individual so appointed shall be paid in excess of the rate authorized for GS-18 of the General Schedule. The Advisory Committee may appoint not more than 1 full-time equivalent, nonpermanent, consultant without regard to the provisions of title 5, United States Code. The Advisory Committee shall not be required by the Secretary to reduce personnel to meet agency personnel reduction goals. (2) In carrying out its duties under the Act, the Advisory Committee shall consult with other Federal agencies,

representatives of State and local governments, and private organizations to the extent feasible. (3)(A) The Advisory Committee is authorized to secure directly from any executive department, bureau, agency, board, commission, office, independent establishment, or instrumentality information, suggestions, estimates, and statistics for the purpose of this section and each such department, bureau, agency, board, commission, office, independent establishment, or instrumentality is authorized and directed, to the extent permitted by law, to furnish such information, suggestions, estimates, and statistics directly to the Advisory Committee, upon request made by the Chairman. (B) The Advisory Committee may enter into contracts for the acquisition of information, suggestions, estimates, and statistics for the purpose of this section. (4) The Advisory Committee is authorized to obtain the services of experts and consultants without regard to section 3109 of title 5, United States Code and to set pay in accordance with such section. (5) The head of each Federal agency shall, to the extent not prohibited by law, cooperate with the Advisory Committee in carrying out this section. (6) The Advisory Committee is authorized to utilize, with their consent, the services, personnel, information, and facilities of other Federal, State, local, and private agencies with or without reimbursement.

**(i) AVAILABILITY OF FUNDS.**--In each fiscal year not less than \$800,000, shall be available from the amount appropriated for each such fiscal year from salaries and expenses of the Department for the costs of carrying out the provisions of this section.

**(j) SPECIAL ANALYSES AND ACTIVITIES.**--The Advisory Committee shall-- (1) monitor and evaluate the modernization of student financial aid systems and delivery processes, including the implementation of a performance-based organization within the Department, and report to Congress regarding such modernization on not less than an annual basis, including recommendations for improvement; (2) assess the adequacy of current methods for disseminating information about programs under this title and recommend improvements, as appropriate, regarding early needs assessment and information for first-year secondary school students; (3) assess and make recommendations concerning the feasibility and degree of use of appropriate technology in the application for, and delivery and management of, financial assistance under this title, as well as policies that promote use of such technology to reduce cost and enhance service and program integrity, including electronic application and reapplication, just-in-time delivery of funds, reporting of disbursements and reconciliation; (4) assess the implications of distance education on student eligibility and other requirements for financial assistance under this title, and make recommendations that will enhance access to postsecondary education through distance education while maintaining access, through on-campus instruction at eligible institutions, and program integrity; and (5) make recommendations to the Secretary regarding redundant or outdated provisions of and regulations under this Act, consistent with the Secretary's requirements under section 498B.

**(k) TERM OF THE COMMITTEE**--Notwithstanding the sunset and charter provisions of the Federal Advisory Committee Act (5 U.S.C. App. I) or any other statute or regulation, the Advisory Committee shall be authorized until October 1, 2004.