

Background

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Expanding Opportunity for Low-Income High School Students: Pell Grants vs. Advanced Placement Classes

Kirk A. Johnson, Ph.D.

In his 2004 State of the Union address, President George W. Bush proposed to “expand Advanced Placement programs in low-income schools.” The President’s subsequent budget for fiscal year (FY) 2005 calls for \$28 million in additional funding for the Advanced Placement Incentive Program. This would allocate some \$52 million in 2005 to establish Advanced Placement programs in low-income areas and prepare more teachers to teach these rigorous classes.

While increasing college-level educational opportunities for low-income students is a worthy goal, there are more efficient and cost-effective ways to achieve this aim. Specifically, the President and Congress should take the following alternative action:

Divert the proposed \$52 million to the Pell grant¹ program and aim these funds specifically at bright, low-income high school students who could use those grants to attend classes at a community college or state university in America’s extensive network of higher education institutions.

1. Federal Pell grant awards are based on financial need and, generally speaking, are available only to eligible learners in undergraduate programs. The most needy college students received up to \$4,050 for the 2003–2004 academic year. Unlike student loans, Pell grants do not have to be repaid.

Talking Points

- Bright, low-income high school students can perform college-level work either by taking Advanced Placement (AP) classes or by attending classes at a local college.
- AP classes are costly for the school district because they involve higher salaries for well-educated teachers, have smaller class sizes, and require supplementary teacher-training activities. Additionally, these classes may duplicate those already offered at local colleges.
- Needy high school students should be able to access Pell grants to gain college credits. College classes allow students to choose from a wider course curriculum and offer the advantage of reaching more students than can be served by AP classes—all while utilizing an existing educational infrastructure.

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214 Massachusetts Ave., NE
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(202) 546-4400 heritage.org

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Such a program could enable more than 43,000 high school students nationwide to attend one college class per semester.

Higher Education Opportunities for High School Students

There are two basic ways that bright high school students can perform college-level work. First, they may enroll in Advanced Placement (AP) or International Baccalaureate (IB) classes.² More than 14,000 schools—about 60 percent of the high schools in the nation—offer at least one AP class.³ These classes are an extremely challenging way for students to experience the rigors of college while they are still in high school.

At the end of an AP class, the student is eligible to take a test administered by the College Board (the organization that administers the SAT and a number of other exams). If he or she achieves a sufficiently high score on the exam, most colleges and universities will award the student a certain amount of credit toward a bachelor's degree.⁴

The second way to get college credit while still in high school is simply to take one or more classes at a community college or state university. Virtually all states have some program that allows high school students to take such classes, subject to various admission requirements or regulations.⁵

Federal Support for Advanced Placement Programs

Federal programs have clearly favored the establishment of AP courses. One of the declared purposes of the No Child Left Behind Act was “to increase the number of individuals that achieve a baccalaureate or advanced degree and to decrease the amount of time such individuals require to attain such degrees.”⁶

To that end, the No Child Left Behind legislation authorized Advanced Placement Incentive Program Grants,⁷ which provided roughly \$24 million annually to state and local education agencies to fund Advanced Placement and pre-AP programs in low-income communities.⁸ Although there are many allowable uses for these grants—including tutoring programs and faculty in-service activities—the intent of the law is clearly to funnel more students into high school-based AP programs.

President Bush's FY 2005 budget increases funding for this program to \$52 million.⁹ This additional funding was proposed to “provide teacher training to expand the pool of instructors qualified to teach AP classes at schools that serve large populations of low-income students.” The President reiterated this intention in a recent speech:

I think we need to have money available to help teachers teach the Advanced Placement

2. Hereafter, this paper will only discuss AP classes and programs for comparative purposes. A similar discussion could have been undertaken for IB classes, but this was not done for the sake of simplicity.
3. College Board, “Annual AP Program Participation, 1956–2003,” at http://apcentral.collegeboard.com/repository/ap03_annual_participa_29510.pdf, and College Board, “School Report of AP Examinations 2002–2003,” at http://apcentral.collegeboard.com/repository/ap03_school_report_ex_29537.pdf.
4. There are 34 AP classes in 19 different subject areas that one may take. These are listed at www.collegeboard.com/student/testing/ap/subjects.html. Most high schools typically offer only a few of these classes to students.
5. These programs take many forms and vary widely from state to state—and even from college to college. In dual or concurrent enrollment programs, high school students spend part of their regular school day taking one or more college classes, either at the high school or at a local college. They receive either college credit or a combination of high school and college credit. High school enrichment classes, on the other hand, are classes that allow the student to earn college credit during the evening, but do not confer credit toward high school graduation.
6. No Child Left Behind Act, P.L. 107–110, Section 1702(9), at www.ed.gov/policy/elsec/leg/esea02/pg14.html.
7. These grants were authorized by Section 1705 of the No Child Left Behind Act.
8. This paper discusses the grants for establishing AP programs. The U.S. Department of Education also administers a test subsidy program to offset the cost of taking AP tests.
9. Office of Management and Budget, “Department of Education,” in *Budget of the United States Government, Fiscal Year 2005* (Washington, D.C.: U.S. Government Printing Office, 2004), at www.whitehouse.gov/omb/budget/fy2005/pdf/budget/education.pdf, p. 109.

program. It's one thing to aspire to Advanced Placement, but if you don't have a teacher who knows how to teach Advanced Placement, it's not going to become a reality.¹⁰

Drawbacks of the Federal Advanced Placement Incentive Program

Consideration of the following factors indicates that high school-based Advanced Placement classes may not be the most efficient and cost-effective means to expand access to higher education for low-income students.

Significantly Higher Costs

Generally speaking, Advanced Placement classes are far more expensive to operate than regular high school classes because of the higher salaries given to teachers who are qualified to instruct these classes, the smaller class size that is typical of AP programs, and the higher cost of AP books and other materials.

The following example illustrates these cost discrepancies. The typical high school math instructor (who might teach, for example, algebra or geometry) has, at a minimum, a bachelor's degree in mathematics or math education and some teaching credential. In contrast, because an AP calculus class would require a higher understanding of complex mathematical concepts, a qualified AP math teacher would typically have a master's degree or perhaps even a Ph.D. In 2002, an entry-level teacher with a bachelor's degree, teaching in a large urban school district, earned an average of \$31,567 per year. In

contrast, a highly educated teacher with a master's degree and additional graduate training—a likely candidate to teach AP classes—might earn as much as \$53,248 per year.¹¹

As noted, AP classes are also more expensive to operate because the average size of an AP class is somewhat smaller than the standard high school class. While there are about 17 students in the typical AP class,¹² there are nearly 24 students in the typical public secondary-school classroom.¹³

Additionally, as noted by the President, many high school teachers need supplementary training to achieve the competency needed to teach AP courses. Indeed, most of the proposed \$28 million increase would be designated for teacher-training activities.

Taking into account differences in the average class size and teacher's pay, the cost of the typical AP class is more than twice that of the average non-AP high school class, even if it is assumed that the costs of textbooks and class materials would be the same for both types of courses.¹⁴

Nevertheless, increasing numbers of low-income students have taken AP tests in recent years. This is due, in part, to the Advanced Placement Incentive Program Grants and the Advanced Placement Test Fee Program (which pays a portion of the AP test fee for low-income students), as well as to various state and local incentives.¹⁵ In 1999, fewer than 93,000 low-income students took AP tests; by 2002, that figure had increased to more than 140,000—an increase of more than 50 percent.¹⁶ Even so, this represents only about 9 percent of the

10. "Improving Education with Parental Options and School Choice," remarks by the President in a Conversation on Parental Options and School Choice, Archbishop Carroll High School, Washington, D.C., February 13, 2004, at www.whitehouse.gov/news/releases/2004/02/20040213-6.html.
11. American Federation of Teachers, *Survey and Analysis of Teacher Salary Trends 2002*, Table IV-1, at www.aft.org/research/survey02/SalarySurvey02.pdf.
12. Glenn B. Milewski and Jacqueline M. Gillie, "What Are the Characteristics of AP Teachers? An Examination of Survey Research," College Board *Research Report* No. 2002-10, 2002, Table 4.
13. U.S. Department of Education, *Digest of Education Statistics 2002*, Table 69, at www.nces.ed.gov/edstats.
14. Books and other materials are not considered in this calculation because many high schools require that students purchase their own AP class materials.
15. No Child Left Behind Act, P.L. 107-110, Section 1704, at www.ed.gov/policy/elsec/leg/esea02/pg14.html.
16. U.S. Department of Education, "Advanced Placement Incentives Program," at www.ed.gov/about/reports/annual/2004plan/edlite-advancedpl.html.

total AP tests taken in 2002.¹⁷ Compared with higher-income peers, far fewer low-income students are taking AP tests.

This discrepancy is likely the result of two factors. First, there is a well-documented academic achievement gap between low-income students and their more affluent peers. For example, according to the National Assessment of Educational Progress, in 2002, only about 1 percent of the 12th grade students who qualified for free or reduced-price lunches exhibited an advanced level of proficiency in reading, compared to nearly 5 percent of students from higher-income families.¹⁸ These high-achieving students would be the most likely to benefit from rigorous college-level classes.

A second, and related, reason for the discrepancy in the numbers of Advanced Placement students from different income levels is that the demand for AP classes in low-income areas may not be sufficient to justify the costs of the program at individual schools. In low-income areas, only a few students may have the aptitude necessary to benefit from rigorous AP classes. As noted above, the nationwide average AP class size is about 17 students. Cost concerns are augmented by the fact that, in low-income schools, even fewer students may be sufficiently advanced to qualify for AP classes, thereby increasing the per-pupil expenditures for these students.

Duplication of Effort

In addition to the high costs associated with AP programs, another drawback is that these courses may duplicate classes that are currently being offered in institutions of higher education. Indeed, the point of the AP program, according to the College Board, is to “get a head start on exactly the sort

of work you will confront in college.”¹⁹ Classes similar to the ones in the AP program can be found at virtually all of the nearly 2,100 community colleges and state universities across America.²⁰

For the most part, these institutions of higher education already have the infrastructure to offer these types of classes, and they exist in close proximity to high school students—especially those in low-income urban areas. In short, expanding AP programs would tend to duplicate the kinds of classes that are already available at a broad range of colleges and universities throughout the nation.²¹

Limited Reach of the Advanced Placement Incentive Program

A final—and key—policy question in evaluating the AP Incentive Grant Program versus other alternatives is: How many students does the program serve? A corollary question is: How far is the reach of the program in terms of the potential population of students served?

There is reason to believe that estimates of the numbers of students who would benefit from the Advanced Placement Incentive Program have been overestimated. The estimates are based on the assumption that the program would benefit two groups of students: those who are directly served through newly formed AP classes and those who are not in the AP classes but would benefit indirectly through the increased teacher training provided by the program. Estimates from the U.S. Department of Education peg the total number of beneficiaries of this program at approximately 370,000 students attending 550 middle schools and high schools.²²

This estimate assumes that all students in a given school benefit from the existence of AP classes.

17. College Board, “2002 National Summary Report Totals,” at www.collegeboard.com/prod_downloads/student/testing/ap/sumrpts/2002/pdf/national_2002.pdf.

18. U.S. Department of Education, *The Nation's Report Card: Reading 2002*, at <http://nces.ed.gov/nationsreportcard/pdf/main2002/2003521.pdf>.

19. College Board, “AP: Why Participate?” at www.collegeboard.com/student/testing/ap/about.html.

20. Laura G. Knapp, Janice E. Kelly, Roy W. Whitmore, Shiyong Wu, and Lorraine M. Gallego, “Postsecondary Institutions in the United States: Fall 2001 and Degrees and Other Awards Conferred: 2000–01,” *Education Statistics Quarterly*, Vol. 5, Issue 2 (2003), at http://nces.ed.gov/programs/quarterly/5_2/q4_4.asp.

21. In addition, there would be duplication of effort in the dual- or concurrent-enrollment programs of some states and localities, whereby students take classes at both a high school and a college simultaneously. See discussion below for more information on these programs.

Applying this premise, a remedial student is counted as a beneficiary of the program, as is an advanced student enrolled in an AP class. This clearly overstates the program's reach. A more accurate estimate would define the beneficiaries of the AP Incentive Program as the high achievers taking AP classes, as opposed to the entire student population of a school.

Currently, the AP Incentive Grant program offers tutoring and summer enrichment programs for students, as well as teacher training. Overall, however, the AP Incentive Program has a limited reach because of the program's relatively small dollar funding. Over the 2002–2003 time frame, the AP Incentive Program funded only 35 projects,²³ with most funding going to individual school districts and a few state education agencies.

An Alternative: Pell Grants for Low-Income High School Students

As an alternative to the AP system, Pell grants could be offered to bright, low-income high school students as a fiscally responsible way to expand their access to college-level classes. These grants could be used to take classes at any community college or university that would admit a high school student for the purpose of taking advanced, college-level classes.²⁴

Using the \$24 million the federal government currently spends on the Advanced Placement Incentive Program every year, more than 18,500 low-income students could be given \$1,200 Pell grants, enabling them to take one class in both the fall and spring semesters. If program funding is increased to \$52 million per year—by diverting the President's proposed AP Incentive Program to Pell

grants for low-income high school students in this alternative project—more than 43,000 low-income high school students could take college classes.

Rather than creating additional AP programs, the federal government's annual appropriation to the AP Incentive Program should be used for direct Pell grants to qualified high school students. Six hundred dollars per class should be adequate to cover the tuition costs for most public colleges and universities. According to the College Board, the average price for full-time tuition at four-year public colleges is \$4,694; therefore, \$1,200 Pell grants should cover the tuition for a single class each semester.²⁵

More Options for Students

Such a program would have the ancillary benefit of allowing students to choose from a wider variety of classes than what might be offered in a limited, school-based AP program. Schools with an AP program are most likely to offer English literature/composition, calculus, and U.S. history. Fewer than half of high school AP programs offer courses such as biology, English, chemistry, or Spanish.

The typical multidisciplinary college offers all of these classes and a broad range of others. Under a Pell grant program, for example, a low-income student who might be particularly gifted in computers could take computer science courses at a local junior college—an option he or she would not enjoy in most AP programs.²⁶

In 2000, George W. Bush (then a presidential candidate) proposed a program in which high school students could use what he called “enhanced Pell grants” to receive up to \$1,000 for the purpose of taking advanced math and science classes at col-

22. E-mail correspondence with Beth Baggett, Advanced Placement Program Manager, U.S. Department of Education, Office of Improvement and Innovation, March 8, 2004. A full report to Congress on the AP Incentive Grant program will be released later this year and will likely report more detailed statistics on the programs funded.

23. E-mail correspondence with Beth Baggett, March 8, 2004, and U.S. Department of Education, “Advanced Placement Incentive Program Grants Awards,” at www.ed.gov/programs/apincent/awards.html.

24. Such grants should clearly be used only for college-level work. Remedial or high school-level classes should be taken at the respective high schools.

25. College Board, *Trends in College Pricing 2003*, Table 6b, at www.collegeboard.com/prod_downloads/press/cost03/cb_trends_pricing_2003.pdf. Two-year colleges cost less than half of four-year public educational institutions.

26. For example, only about one-seventh of all high schools with AP programs offer computer science as an advanced course. See College Board, “Program Summary Report,” at http://apcentral.collegeboard.com/repository/ap02_national_summary_19662.pdf.

lege.²⁷ In practice, such a program would be very similar to the one recommended here.

In short, expanding the Pell grant program to promising high school students would produce more academic choices than an AP program could, because the infrastructure to offer a great variety of classes already exists on college campuses. Sending qualified high school students to college to take these classes, rather than enrolling them in high school AP programs, would avoid “reinventing the wheel” and would provide expanded educational opportunities for bright, low-income high school students.

Such grants could also be used for other AP alternatives. For example, certain enterprising firms have begun to offer AP classes over the Internet or via home study/correspondence courses.²⁸

Supplementing, Not Supplanting, Programs for Higher Education

One possible criticism of the expanded Pell grant proposal may be that states, some of which already have higher education programs for high school students, might shift their own state money away from such programs if they can receive federal funding. Several states already have programs that allow bright high school students to take college courses without paying tuition fees. For example, the state of Washington has had a program since 1992, called “Running Start,” that allows 11th and 12th grade students to take college-level courses at community colleges and a few state universities.²⁹ This dual-enrollment program gives the student high school and college credit simultaneously.

Similar programs are peppered throughout other areas of the nation. Individual school districts and/or states that allow high school students to take col-

lege classes for free would be reimbursed for the class cost, up to \$600 per class each semester. Those states could not, however, receive federal money unless they expanded the program to include more students. Therefore, any legislation authorizing this expanded version of Pell grants should have a “supplement, not supplant” clause.

Conclusion

The often-touted benefits of taking Advanced Placement courses are that students can “get a head start on exactly the sort of work [they] will confront in college” and “develop the study habits necessary for tackling rigorous course work.”³⁰ However, these benefits are not unique to the AP program. Offering students an opportunity to take classes at a community college or state university would provide them with the same advantages. In addition, high school students who take classes at these institutions will have more subject choices than are available through AP programs.

Offering Pell grants to bright, low-income high school students is a fiscally responsible way to expand the educational opportunities of high-achieving students. Under current funding, such a pilot program could provide 18,500 students with Pell grants for one class per semester at a cost that is roughly what the federal government spends on establishing AP programs in low-income areas. Additional funding provided through the President’s FY 2005 budget request would extend this opportunity to as many as 43,000 students. President Bush and Congress should use Pell grants as a means of opening more opportunities for advanced education to low-income high school students.

—Kirk A. Johnson, Ph.D., is a Senior Policy Analyst in the Center for Data Analysis at The Heritage Foundation.

27. John W. Gonzales, “Bush Visits California, Where He Trails in the Polls,” *Houston Chronicle*, June 21, 2000.

28. One of these firms is Apex Learning, a company founded by former Microsoft executive Paul Allen that offers AP classes over the Internet for \$475 for each student per semester.

29. For more on this program, see Katherine Long, “Some Advanced Classes Shine Brighter than Others,” *Seattle Times, Times Guide to Schools*, November 2000, at <http://taxis.seattletimes.nwsourc.com/cgi-bin/taxis.cgi/schoolguide/vortex/index?view=article&ArticleID=23>.

30. College Board, “Bulletin 2003–2004 for AP Students and Parents,” at http://apcentral.collegeboard.com/repository/ap03_bulletin_eng_030_30703.pdf.