## Readings on the Advanced Placement Program. 8/27/2010

## http://excellencewithoutap.org/

This web site lists schools that have dropped the AP program and gives information for schools that are considering this move.
"Dispelling the Culture of Mediocrity: Expanding Advanced Placement: Author, 2000. The College Board", pp. 14-15. Issued 2000-08-00 by the College Entrance Examination Board, NY, NY and the Department of Education, Washington, DC. Available from ERIC ED445106 http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/00000000b/80/22/ba/2b.pdf.

In February 2000, educators and administrators from 43 states and Puerto Rico, as well as leaders and representatives of major education organizations, the U.S. Department of Education, and the College Board, convened to discuss strategies to expand Advanced Placement, International Baccalaureate, and other similar programs to disadvantaged students. The conference participants discussed a variety of strategies concerning how to most effectively use the $\$ 15$ million in grantsavailable under the Department's Advanced Placement Incentive Program-to expand these programs.

Secretary Riley announced to participants the Clinton Administration's goal to help every American high school offer advanced courses within the next 10 years. In his keynote address, the Secretary stated, "I believe we can help every high school in America add at least one advanced course each year for the next 10 years. That's a goal we can meet, particularly in light of the growing interest in challenging courses." Riley cited new research that "shows that between 1984 and 1997, the number of AP exams taken by 12th-graders nearly tripled, going from 50 exams per 1,000 students to 131 exams." If we can make this happen, by 2010 every high school junior or senior could have the option of taking five Advanced Placement exams a year.

In response to the Secretary's call, College Board President Gaston Caperton has initiated an ambitious national action plan to make universal access to Advanced Placement a reality for all American high school students, Caperton notes, "By extending AP to many more inner city and rural schools, we can raise the quality of instruction and levels of achievement for students who have been historically underserved. But we must insist on maintaining the current high quality of AP courses. This will require education leaders, civil rights leaders, elected officials, and the College Board to take bold, innovative steps to attract more high-quality teachers to economically disadvantaged districts, to train them to teach college-level courses, and to retain them for a significant period of time."

This program was a nearly total failure in the inner cities. See Lichten's 2 articles in 2007 at the end of this bibliography.

Camara, W. J. and Millsap, R. (1998). The Relationship of PSAT/NMSQT and Course Grades in Predicting Success in the Advanced Placement Program. College Board Report No. 98-4. New

York: The College Board. Shows that for almost all AP courses (languages being the major exception), there is a close relationship between the probability of success (measured by achieving a score of 3 or higher on the AP examination) and the PSAT score in that subject. For example in the AP Calculus AB exam, one out of four persons with a PSAT score of 50 will pass; three out of four persons with a PSAT score of 65 will pass. Finds that the PSAT score is the best predictor of AP success.

See also College Board Research Report No. 2006-1, The Relationship Between PSAT/NMSQT Scores and AP Examination Grades: A Follow-Up Study. Maureen Ewing, Wayne J. Camara, and Roger E. Millsap. http:://www.collegeboard.com/research /pdf/06898CBR06-1.pdf

Lichten, W. and Wainer, H. The Aptitude-Achievement Function: An Aid for Allocating Educational Resources with an Advanced Placement Example. Educational Psychology Review, Vol. 12, No.2, 2000, pp. 201-228. Builds upon the Camara-Millsap paper to show that ability (as shown by PSAT or SAT scores) is the best predictor of school success on the AP program. Finds little difference in educational quality (as measured by deviations from the Camara-Millsap relation) between such diverse schools as inner-city Detroit and affluent suburb of La Cañada, CA, when controlling for ability. Concludes that high schools with predominantly low ability populations (as nonselective city schools) will do poorly in demanding AP exams, as AP calculus, and will do better in less demanding exams, such as Psychology and AP Spanish.

The History Teacher 32, Number 2, February 1999. Special Issue: Advanced Placement (Gary Richard and Tom Keirn, Eds.) (Available for $\$ 12.00$, Society for History Education, P.O. Box 1105, Julian, CA) 92036

Rothschild, Eric. Four Decades of the Advanced Placement Program. pp.175-205. A comprehensive history of the AP program. On pp. 200-201, "Concluding Observations" addresses long-standing issues of the program: "Is it better or worse to expand the reach of AP?...are there enough teachers capable of teaching AP...the lack of women in mathematics and the sciences... $45 \%$ of AP students do not take AP examinations... The most severe problem of all remains that of communication between AP and the colleges and universities..unless this informational gap is
effectively addressed, the AP-college connection will become more shaky..."

DiLorenzo, Robert. Teaching Advanced Placement United States History in the Urban, Minority School: Successful Strategies. "We have done it ("doing AP") and..we know we can make it there!"

Hyser, Raymond M. Is a 3 a C? The Reliability of the Advanced Placement United States History Test for College Credit. pp. 223235. "Those students who make 1 or 2 are disappointed... who make...a 4 or 5 -can be assured that most colleges and universities will award them credit...Those students who make a 3 fall into an academic limbo; some schools award credit, while others do not...there is a remarkable diversity within American educational institutions and that a single Advanced Placement program or test cannot possibly fit all situations..." Has an extensive description of the process for constructing and grading AP examinations.

Ennis, Rosemary. Resources for United States History. pp. 237-243. "One of the great attractions of teaching AP United States history is...so many resources available, and varied approaches that a teacher can use. There is no 'required' list of resources..and no single way that the course must be taught."

Neutach, Eric. Advanced Placement United States History: A Student's Perspective. pp. 245-248. A student in a large NJ public high school scored a 5 on the AP test as a result of being "taught to the test", but feels that "The adoption of such a narrow testpreparation aim stifled the development of the skills, capacities, and habits of mind which an AP-level history course is best suited to develop, namely analytical ability, writing skill, a sense of historical imagination, and a love of history."

Meckna, Steven H. Teaching Advanced Placement European History in a Multi-Ethnic Urban Setting. pp. 249-258. Teaching strategies, textbooks, testing methods in a predominantly white and Asian student body.

Blagaich, Pete. Advanced Placement Courses are Not for Everyone. 259-262. A teacher in the same school as Meckna's "attempted, with the noblest of intentions, to more than double the number of sections and students in my Advanced Placement United States history course...I got a lesson in the law of diminishing
returns..." with no increase in the number of passing exams. Since then, he has instituted a policy of selective admissions to the AP program.

Oberjuerge, Mark. Raising the Bar: Historically Disadvantage Students Can Meet the AP Challenge. pp. 263-267. In a workingclass, predominantly minority school, AP American Government and Politics enrollment has increased greatly, up to 27 enrollees and a 51\% pass rate (3 or higher, but see Lichten, below). "...most important...quite independent of passing the AP exam, they will have acquired critical learning skills that will prepare them for college and true careers."

Hill, James. The Special Role of the AP European History Course. pp.269-275. Successful AP program in a suburban high school.

In addition there are several articles on the new AP world history course.

The History Teacher 32, Number 4, August 1999. Special Section: Advanced Placement (Available for $\$ 12.00$, Society for History Education, P.O. Box 1105, Julian, CA) 92036.

Rothschild, Eric and Stovel, John E., papers on document based analysis.

Lurie, Maxine. AP U.S. History: Beneficial or Problematic? pp. 522-525. The author, a history teacher at Seton Hall University and a table leader at A.P. History grading sessions, takes a critical view of trends in the program. "What started out as a means of selecting the best and brightest of high school students...is becoming a test of minimum standards that reputable colleges may soon ignore..." She points out several problems connected with the program: the large number of substandard examinations (partly due to the fact that some states now have many students who take the exam without taking the AP course), high school teachers who push for more permissive grading 'because so much is going on in their (students) lives', the difficulty of keeping standards when so many of the exams are depressingly poor, difficulty in maintaining standards when ETS allegedly curves the scores, the fact that ETS (and/or College Board) considers a 3 passing, but many colleges only accept 4s, teaching to the test narrows
teaching to what was on previous exams, and the lack of college teachers to grade the exams and thus uphold higher standards.

Chu, Jonathan M. Preparing for the AP Exam: The Dangers of Teaching to the Test. pp. 511-520. Echoes Lurie's evidence that students are taught to the test, rather than to the subject. Points out that students on the last exam gave the answers to the previous DBQ (which was worth a zero).

Briley, Ron. What Do You Mean You Don't Do Advanced Placement?: Confessions of an Educational Heretic. pp 527-530. Teacher at a private school explains why it does not teach AP courses.

College Board News, Sept, 2000, p.10: Speaking Out. Should AP be offered in every high school? Is AP for all students? Dan Galloway, Principal, Adlai Stevenson High School, Lincolnshire, IL; Sheila Smith, District Coordinator for Gifted and Talented Programs, L.A. Unified School District, and Theodore Spencer, Dir. of Undergraduate Admissions, U. of MI, Ann Arbor comment with some reservations on College Board President Gaston Caperton's announced goal to put AP in every high school in the country.

Lichten, W. (2000). Whither Advanced Placement. Educational Policy Analysis Archives 8, No. 29, June 24. (HTTP://epaa.asu.edu/epaa/ v8n29.html). Finds evidence that, in disagreement with College Board claims, that the AP qualification scale disagrees with college practice. This is interpreted as a decline in program quality.

Ganeshananthan, V. V. (2000). AP Program Faces New Criticism Over Its Testing Standards. The Chronicle of Higher Education, July 14. Summary of above and comments by Lee Jones, head of AP program, and Robert Schaeffer of FairTest.

Viadero, D. (2000). Study Suggests Fewer Students Receive AP Credit. Education Week, July 12, p.5. Also a summary and comments by Lichten and Jones.

Camara, W., Dorans, N, Morgan, R. and Myford, C. Advanced Placement: Access Not Exclusion. Educational Policy Analysis Archives 8, No. 40, August 1. (HTTP://epaa.asu.edu/epaa/ v8n40.html). Rebuttal to Lichten's article. Defends the College Board's policy of increasing access to AP and points out the benefits.

States that "Quality, as AP defines it, should be measured by the number of students who have been positively influenced by taking AP courses, rather than by the ratio of the number of advanced placements to the number of exams administered."

Russo, Francine. (2000). Beyond Advanced Placement. Prep Schools rethink a standard. Village Voice, April 12-18.
http://www.villagevoice.com/issues/0015/russo.shtml
"Fieldston is...joining such elite schools as Brearley and Phillips Exeter. Which offer no AP courses, and others like Trinity and Spence, which offer few...Stanford's Kinnaly (Dean of admission and financial aid) ..acknowledges, the tests do make evaluations easier, especially when he doesn't know a school well. 'I like APs,' he says, 'The good thing about them is they're standard.' And the downside? 'They're standard.'" (See Zhao below for a follow-up.)

Weeks, Anne Macleod. (2001). To AP or Not To AP? Education Week, February 7, p. 31. "The Advanced Placement program should be seen as academic acceleration only. It should not be used as a college-admission tool."

Lichten, W. (2001). Where Should We Go With Advanced Placement? Text of an invited paper given at the April Meeting of the American Physical Society, Washington, DC, April 28- May 1 in the session Whither Advanced Placement? Gives a brief summary of the previous arguments (Lichten, 2000). Points out that the College Board has a Hobson's choice: either 1. to meet college standards and preserve excellence, or 2. curve the exam grades to encourage more participation and equity. The College Board is seen as following the second choice and lowering program quality.

It is argued that the larger group of students, which the program is trying to reach would be better served by working at their level, rather than be further expansion of the A.P. program. Also if the bulk of students, who only go as far as algebra 2 or less, were to move up to trig, it is projected that the increase in percentage of students finishing college would be much larger than that brought by further expansion of the A.P. program.
http://units.aps.org/units/fed/newsletters/fall2001/lichten.cfm
Lichten, William. (2002). The Future of Advanced Placement testing. Yale Daily News, February 26, p. 2. www.yaledailynews.com Gives evidence from the Great City Schools-College Board report (see below) that only a tiny fraction of inner-city students could qualify for the AP exam. Also shows that of the incremental exams during the 2000-2001 year only 29\% would qualify, thereby verifying the projections in the EPAA article (see above.) Estimates that, if the qualifying score for AP were raised to 5 at Yale, as at Harvard, about half of the AP exams taken by matriculants would qualify.

Lichten, William. (2007). Equity and Excellence in the College Board Advanced Placement Program.Teachers College Record. Date published: January 16, 2007. http://www.tcrecord.org ID Number: 12928, Date Accessed: 1/29/2007 3:59:04 March. This paper uses college standards to evaluate the advanced placement (AP) program. This follow-up verifies the author's (2000) projections of diminishing returns in the AP program. The College Board's claim that a score of 3 "qualifies" disagrees with the facts of college acceptance. The pass rate has dropped from 51 percent in 1998 to 39 percent in 2006. More telling is the incremental pass rate of 29 percent,
which reflects the changes over the 1998-2006 period. By objective measure, the expansion of AP courses into inner city schools has failed: African American and Mexican American (AP Spanish excepted) minorities have an incremental pass rate near 10 percent. These shortcomings, which contradict the claim that AP is "for everyone," call for a reform of AP admissions policy.

A Report on Advanced Placement Examinations in the Great City Schools. Apparently no longer available on the Council of Great City Schools Web site (cgcs.org). For a summary and for links to other reports, see Reid, Karla Scoon, "Reports Track to Student Achievement in Urban Districts," Education Week, May 2, 2001, p. 13. Available on Education Week Web Site: www.edweek.org. See figures 33-39, which show Great City Schools African-American test scores are in the 1's with few exceptions, which explains why so few qualify. (2 never qualified and 3 passed only 50\% at that time. Now, Lichten, 2007 finds the qualification rate for 3 's has dropped to $30 \%$ )

Zhao, Yilu. (2002). High School Drops Its A. P. Courses, and Colleges Don't Seem to Mind. New York Times February 2, p B1. The A.P. program was abandoned because its "classes, often survey courses covering a lot of broad ground in a short period of time, restrict teacher creativity and the ability to probe enticing themes, while increasing stress on students," say Fieldston's teachers.

Fieldston's early acceptance rate was the highest in several years. At least 40 out of 65 applicants received early acceptance at the school of their first choice. Harvard's director of admissions, Marilyn McGrath said, "We look at whether the applicant has taken the high school's most demanding courses. But whether the classes are designated as A.P. or not is irrelevant. Abolishing A.P. classes won't hurt the kids." Robert Kinnally, former Dean of Admissions at Stanford wrote, "I applaud Fieldstone's proposed decision to drop the A.P. curriculum. Your decision reflects the courage of your convictions about teaching and learning."

Phillips Exeter Academy. This top-level prep school, one of the co-founders of the Advanced Placement program, now takes a somewhat reserved position with regard to AP. In general the course descriptions specify which College Board exams
(SAT II, AP) the student will be prepared to take, although the history department is somewhat more standoffish.
The American history sequence - 331,332 , and 333 - is required for the diploma. This rigorous, yearlong course culminates in a major research paper in the spring term. Although these courses help prepare students for the Advanced Placement examination, they do not completely cover the AP curriculum. We believe that such an effort compromises our commitment to student-centered discussion, close reading of primary sources, analytical writing, and independent research. http://www.exeter.edu/academics/84 795.aspx retrieved July 15, 2007, 11:45 A.M.

Andover Academy. Also a founding school of the AP program, explicitly lists many of its courses as preparation for College Board SAT-II and AP examinations. Definitely still on board the AP bandwagon.

Programs like No Child Left Behind and associated national and state testing...(have) driven schools and teaching to be more standardized. This standardization threatens to undermine the special character that is the source of educational excellence. By definition, after all, excellence is distinctive."

Fitzgerald, Maureen. Advanced classes come under microscope. Phila Inquirer, Friday, March 08, 2002. Available on www.philly.com (archives). Notes, as an aftermath of the news about Harvard and the National Academy report, criticisms of AP courses trying to cover too much too fast. Also notes that several elite private schools have dropped or are considering dropping AP. In the Phila. Area, Germantown Friends and Friends Select schools do not and never have offered AP. Episcopal Academy is considering dropping it. Other schools are in favor of the program, although some complain about the excessive workload.

Arenson, Karen W. (2002) Study Faults Advanced-Placement Courses. The New York Times, February 15, p. A14. A two-year study of AP math and science programs by the National Academy of Sciences "is highly critical of the curriculums that most of these courses cover and the way they are taught." Points out that biology and chem courses have not kept up with the field and that many students are poorly prepared for AP, having skipped the high school level course "so that they could squeeze advanced-placement courses onto their high school transcript. The College Board's response to these criticisms was that it did not want to verify quality, but preferred to continue leaving it up to the teachers as to how the course was taught.

Hoff, David J. Scholars Critique Advanced Classes in Math, Science. Education Week, February 20 2002, p. 1,12. "The nation's most popular honors programs for high school students fail to offer an enriched learning experience to high achievers in math and science, says a study from a panel of leading mathematicians and scientists...'They're focusing too much on accelerated learning,' said Jerry P. Gollub, a professor of physics at Haverford College outside Philadelphia and a co-chairman of the panel that wrote the report. 'That tends to produce shallow learning, because there's just too much material, particularly for the high school audience that is learning it.'"

Cavanagh, Sean. "With NSF Grant, AP Science Tests Set for Redesign", Education Week, May 10, 2006 , p. $6 . \quad \$ 1.8$ million grant to the College Board to redesign the AP science courses to emphasize depth vs. breadth of understanding, to be completed in one year.

Healy, Patrick. (2002) Harvard Raises its AP credit standards. Boston Globe, 2/21/2002. Harvard has decided only to award advanced placement for a 5 . Schools such as Stanford, Yale and B.U. also are reconsidering how they award credit. Other schools, such as Cal Tech simply do not award AP at all. See also article in the New York Times, 2/22/2002 by Tamar Lewin.

Bleske-Rechek, April; Lubinski, David; and Benbow, Camilla P. (2004). Meeting the Educational Needs of Special Populations. Advanced Placement's Role in Developing Exceptional Human Capital. Psychological Science, 15, No. 4, 217-224. A study of how AP meets the needs of "the most appropriate population...that for which AP was originally designed-highly motivated and intellectually talented students," taken from the authors' Study of Mathematically Precocious Youth. This group places a premium on intellectuality over the usual social activities in high school. It is capable of learning at a much faster pace than the average high school student. AP helped to meet the interests and demands of this group.

However, the College Board has changed the goals of AP from a program for the gifted to one in which "AP isn't just for top students or those heading for college. AP offers
something for everyone" (College Board, 2002). The lowering of standards accompanying this democratization of AP is harmful to gifted students and also to those at the other end of the ability distribution, in the authors' opinion.

Nina and Sol Hurwitz, "Is the Shine off the AP Apple?" American School Board Journal, July, 2004 (http://www.asbj.com/2003/03/0303coverstory.html). Reviews the equity vs. excellence problem, as it affects AP.
"College Bound Black Students are Making Inroads in A.P. Tests," Journal of Blacks in Higher Education, Sept. 24, 2004. Up to date statistical data on Blacks in A.P.

Total numbers taking the exam: in 2003, 78,368 exams, up by over a factor of 10 from 1990.

Performance on exam: Average grades for whites is 3.03, for blacks, 2.11. Number with a grade of 3 or higher: whites 64.9\%; blacks 31.8\%. As pointed out by Lichten, 2000, a 3 is no longer a passing grade. The reason is that Educational testing Service, the administrators of the exams, curves the grades to keep constant the percentage of 3 or higher exams. Probably, the actual qualification figures are only half the size of the percentages given above.

Geiser, S. \& Santelices, V. (2004). The role of Advanced Placement and honors courses in college admissions. University of California at Berkeley: Center for Studies in Higher Education. Retrieved December 18, 2006, at
http://cshe.berkeley.edu/publications/docs/ROP.Geiser.4.04.pdf
The researchers studied U-Cal students and found that the only discernible AP advantage existed for students who took, and passed, the AP examinations in the courses they had taken in high school. This flies in the face of older, and much more published, research by Willingham and Morris that the AP advantage is much more pervasive than just exam-taking. The College Board's response: yeah, we knew that. The exams are the important thing. But for a rebuttal, see Camara, W. J. and Michaelides (2005). AP Use in Admissions: A Response to Geiser and Santelices. Retrieved on Dec. 18, 2006 at
http://www.collegeboard.com/research/pdf/051425Geiser_050406.pdf

Klopfenstein, K. (2002) Advanced Placement in Texas: maintaining program quality in a period of growth. University of Texas at Dallas working paper. Retrieved on March 28, 2005, on HYPERLINK
"http://www.utdallas.edu/research/tsp/pdfpapers/paper31.pdf" http://www.utdallas.edu/research/tsp/pdfpapers/paper31.pdf Klopfenstein, K. (2003). Recommendations for maintaining the quality of Advanced Placement programs. American Secondary Education, 32, 1 (Fall 2003), 39-48. Perhaps the best place to start with Klopfenstein's articles.

Klopfenstein, K. (2004a). Advanced Placement: do minorities have equal opportunity? Economics of Education Review, 23, 2, 115-131.

Klopfenstein, K. (2004b). The Advanced Placement expansion of the 1990s: how did traditionally underserved students fare? Education Policy Analysis Archives, 12, 68. Retrieved on February 14, 2005 from
HYPERLINK "http://www.epaa.asu.edu/epaa/v12n68"
http://www.epaa.asu.edu/epaa/v12n68
. This article got the attention of folks at the College Board; this and the article with Thomas both find that taking AP courses alone does not comprise an advantage in terms of college success.
The College Board's response: yeah, we knew that. The exams are the important thing.

Klopfenstein, K. \& Thomas, M. K. (2002). The Advanced Placement performance advantage: fact or fiction? University of Texas at Dallas working paper. Retrieved on March 28, 2005
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"http://www.aeaweb.org/annual_mtg_papers/2005/0108_1015_0302.pdf" http://ishi.lib.berkeley.edu/cshi/
http://www.utdallas.edu/research/tsp/pdfpapers/paper31.pdf
http://www.epaa.asu.edu/epaa/v12n68
http://www.aeaweb.org/annual_mtg_papers/2005/0108_1015_0302.pdf (2006) Later draft. "We find no evidence that the average student derives a positive benefit from AP experience beyond that provided by a non-AP curriculum strong in math and science. Studies finding positive AP effects do so because they fail to control for the student's non-AP curriculum." Finds CEEb and ETS studies are inferior in quality to a recent upsurge of independent studies, which control for non-AP variables. (p. 7)

See her comments in Hacker's article in 2010.

Plan for AP teachers raises doubts
By Stephanie Banchero and Jo Napolitano, Chicago Tribune staff reporters. Tribune staff reporter Jamie Francisco contributed to this report
Published February 2, 2006
President Bush's plan to triple the number of advanced high school math and science teachers comes as educators nationwide worry that the rapid growth of the Advanced Placement program is diluting the curriculum.
Bush's plan, announced Tuesday, calls for training 70,000 new high school AP math and science teachers over the next five years.
About 32,000 educators now teach the college-level courses in U.S. high schools. Bush hopes the expansion will provide more opportunities for low-income students.
Officials with the College Board, which administers the AP program, praised the plan but raised concerns about a big ramp-up of the teaching corps.
"The devil will be in the details," said Trevor Packer, College Board director of Advanced Placement courses. "It is not enough to simply send some teachers to a weekend workshop and expect them to teach college-level courses. "
Bush's education proposal would set aside $\$ 380$ million in new federal money to improve math, science and technology education in the nation's elementary and high schools. The initiative also calls for encouraging 30,000 math and science professionals to become adjunct high school teachers and boosting the rigor of math classes in elementary and middle schools.
Still, some educators are wondering how a country that struggles to find enough teachers in basic math and science is going to find educators qualified to teach advanced classes.
The Advanced Placement program has exploded in popularity. Participation has ballooned to more than a million students. But as the program has broadened, educators have grown concerned that some high schools are slapping the AP label on courses not rigorous enough to deserve it. They also fear that some students are signing up for the classes to boost their academic transcript. Thousands enroll in AP classes but never take the end-of-year exam that serves for college credit.
Barmak Nassirian, spokesman for the American Association of Collegiate Registrars and Admissions Officers, said he wasn't sure
what Bush meant when he talked about increasing the number of teachers who can lead AP courses.
"Merely because the course is designated as AP, that does not say a lot about the kind of teaching and learning that goes on in the classroom," he said. "There are no obvious qualification requirements to teach AP courses."
Carol Lunkenheimer, dean of undergraduate admissions at
Northwestern University, said department heads met two years ago to re-evaluate their position on advanced placement courses. She said that at least 80 percent of Northwestern applicants have taken the courses. "It seems to me, on the face of it, our faculty doesn't think [AP courses] are as valuable as they were," she said.
Responding to these concerns, the College Board plans to audit every high school AP course. Schools will not be allowed to call a course Advanced Placement without prior approval, Packer said. U.S. Secretary Of Education Margaret Spellings said Wednesday her agency would monitor the program to ensure expansion does not lead to a further dilution of AP offerings. But she also said students who take AP courses but don't take or perform poorly on the exam are still well-served.
"The mere task of taking the coursework prepares students to be more successful in higher education," she said. "This is important, inasmuch as 90 percent of the fastest-growing jobs in America...require post-secondary education and most are rooted in the more technical capabilities of math and science."
Even schools that can find enough AP teachers said expansion of the program will not help their cause.
Community Unit School District 300 in Carpentersville would like to hire more AP math and science teachers but does not have the money.
AP class sizes at the district's three high schools have swelled to 40, versus the preferred 29. "The class sizes now are unacceptable," said Tom Hay, assistant superintendent of curriculum and instruction. "Many times you can only offer AP in a schedule once per day, those classes are way too big."

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"Odd Math for 'Best High Schools' List," by Michael Winerip, New York Times, Wednesday, May 17, 2006, p. B9. Criticizes Newsweek rankings of high schools, which are based purely on fraction of students in high taking the AP exams, with no attention paid to number of passing grades.

The Rush to Take More AP Courses Hurts Students, High Schools, and Colleges. By David W. Oxtoby,
http:/chronicle.com/weekly/v53/i34/34b02201.htm from the issue dated April 27, 2007.
The author, president of Pomona College, worries that AP programs "are rapidly becoming the latest way in which schools are
'teaching to the test', rather than using creativity to excite and challenge students. Too much of the high school curriculum is turning into a pale imitation of college courses instead of providing the solid foundation that students need to build on in the future..."
"At Pomona College, students can use only two AP courses-with scores of 4 or 5 on the AP exam- to earn credits needed toward graduation."

Whither AP--Now? By William Lichten. Text of a talk given May 11, 2007 at Conference on Advanced High School Coursework in Science and Mathematics, at Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. To be a chapter in "AP: A Critical Examination."

What's good about AP? "It's standard." AP is a successful national curriculum.

What's bad about AP? "It's standard." AP has failed to reach the diverse groups at both top and bottom test scores. The failure is total for students in non-selective urban high schools, the majority in the great cities. The author proposes a new AP program to address the needs of college bound students with below average test scores.

Dillon, Sam.
Advanced Placement Tests Are Leaving Some Behind. New York Times, February 7, 2007. Non- Asian minority scores are far behind. Average scores for Blacks are in the ones, for Hispanics are about 2, American Indian or Alaskan native are less than 2.5.

Talbot, Ret. (2007). Education Week, 26, \#37, p.29. Replacing AP. Do Its Ends and Means Still Live Up to the Ideal? A teacher at an independent school that has dropped the AP curriculum (Sage Hill School, Newport Coast, CA.) points out that "AP examinations were to be used 'not for admission to college, but for placement after admission.' How far we have come from that original vision." He calls for independent schools to follow his school and to drop the AP designation from accelerated courses.

Scarsdale Residents For Maintaining AP Classes. (2007). Retrieved from the web page of a group of Scarsdale, NY parents who oppose dropping the AP designation to Scarsdale public schools. http://www.maintainadvancedplacement.org/, July 14, 2007 at 9:46 P.M. Contains extensive material and links on the side of the Advanced Placement program, largely from the standpoint of college admissions. Because of this opposition, the proposal to drop the AP appellation at Scarsdale High School appeared to be at risk of failure. Nevertheless, the Scarsdale School Board voted on May 8, 2007 to eliminate AP art and social studies courses in September to find if an advanced topics program works in these areas. If the changes succeed, the Board will eliminate AP English, math, science and foreign languages.

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McGill, Michael V. (2007). Ahead of the Class. The New York
    Times, February 18, 2007. p. 13 (op-ed page). "The faculty of
    Scarsdale High School wants to drop the Advanced Placement
    designation from the course catalog and to make A.P. exams
    optional. Instead, students will take rigorous courses aimed
    at tests developed by the faculty. As the superintendent of
    schools here and as a parent, I think it's an idea worth
    supporting...
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Scharfenberg, David. Scarsdale Seeks Alternative to Advanced Placement. New York Times. , February 18, 2007. Scarsdale School Board unanimously voted to replace Advanced Placement with its own curriculum.

Cech, Scott J. Number of Schools Offering AP Falls After First Audit of Courses. Educators Divided Over First Ever Audit of AP Courses. Education Week, November 14, 2007, pp. 1, 13.

Mattimore, Patrick.
Put the Brakes on AP. Education Week, March 5, 2008, p. 28. "The backstory of Advanced Placement's expansion is not that it is a means of benefiting minorities, but that it has become an out-of-control shootout for top students vying for spots at selective colleges ...Before we invest more dollars in expanding the Advancd Placement program, we must provide the pre-AP infrastructure in our middle schools to ensure that students are prepared to meet the challenges of the program. Otherwise, we can expect that our AP failure rates will continue to climb."

5 Fundamental Misconceptions About AP Courses. Chronicle of Higher Education. Febuary 6,
2009. http://chronice.com/article/5-Fundamental-Misconceptions/21090/

Taught AP Psych. "About 90 percent of them (his students) passed the AP exam, and many of them subsequently earned college credit for the class." Myths:
Memorization
Teachers lack expertise to teach AP. "With regard to upper-level college courses this assertion is generally true."
Awarding college credit reduces students chances for wider intellectual exploration in college.
Colleges provide greater intellectual breadth and depth. Reverse is more likely to be true for intro courses.

Hacker, Holly K. More Texas students taking, failing Advanced Placement exams. Dallas Morning News, December 6, 2006 http://www.dallasnews.com/sharedcontent/dws/dn/latestnews/stories/120609dnmetapfail. $3 \mathrm{~b} 6 \mathrm{c} 6 \mathrm{f} 2 . \mathrm{html}$ Texas high school students fail more than half (54\%) of the college level exams; their performance trails national averages (43\%).
At top campuses like Highland Park H.S. and some magnet schools, about half or more 9008 grads flunked.
Several urban, high poverty schools in North Texas have single digit pass rates. Some say they aren't surprised by failing rates at some schools, because AP was never supposed to be an agent of reform for low-performing schools.
Researchers in Texas found that students who score 1s and 2s on AP exams did not perform as well in college as those who scored 3 or higher, and they did only marginally better thab students who took no AP exams.
Kristin Klopfenstein, a TCU economist who has extensively studied AP, said that disappointing scores show that that educators and policymakers may have misused AP in their zeal to ready students for college. "They ended up helicopter-dropping AP programs into all those schools that were challenged, low performing schools. To just plunk down those high expectations without providing the support these kids need to meet them, it's no wonder you end up with all those kids failing those exams." "To Klopfenstein, it raises the question of whether the resources and emphasis spent on AP would be better invested elsewhere."

Mervis, Jeffrey. Revision to AP Courses Expected to Have Domino Effect. Science vol. 325,18 September 2009. In July 2009, the College Board announced the new AP Biology course, which will incorporate changes recommended by the National Research Council Committee (see Hoff, 2002 above). These changes are anticipated in other AP science courses.

Inside Higher Education. http://www.insidehighered.com/layout/set/print/news/2010/02/11/ap "...But all that popularity has led not only to a rapid increase in he participation, but to questions about whether about whether the high failure rates suggest that schools have been too quick to send too many students into AP programs, when more educational
gains might be achieved through other improvements...."
Trevor Packer, director of the AP program, said he questioned 'the ethics' of journalists who have focused on these failure rates without paying equal attention to the growing number of students passing AP exams---evidence, he said, that the growth in the program is healthy. All of the attention going to failure rates is 'an attempt to get a headline' he said."

Bressoud, David M. The Rocky Transition From High -School Calculus. The Chronicle of Higher Education, January 17, 2010. The author, President of Mathematical Association of America, says for students who took AP Calculus,
"Unfortunately, for the majority of these students, AP calculus has become not a steppingstone but a stumbling block...We urgently need to fix the problems of how AP calculus fits into the college curriculum."

AP: A Critical Examination of the Advanced Placement Program. Edited by Philip M. Sadler, Gerhard Sonnert, Robert H. Tai, and Kristin Klopfenstein. Cambridge, MA: Harvard Education Press. Printed in May, 2010. A collection of talks on the AP program by a group of researchers.

For more information about this book, see http://www.hepg.org/hep/book/120. Has excerpts from the book: Introduction (PDF) and Table of Contents (PDF) Also "More about AP" has discussions and reviews.

Gillum, Jack and Toppo, Greg. USA Today. Failure rate for AP tests climbing. (http://www.usatoday.com/news/education/2010-02-04-1Aapscores04 ST N.htm) In 2009, $41.5 \%$ of Advanced Placement tests in the USA scored 1 or 2, considered a failing score.

Robelen, Erik W. Education Week, February 24, 2010, p. 4. More Low-Income Pupils Taking AP. The number of exams with a 3 or higher has nearly doubled from 2001 to 2009 , from 653,000 to 1.3 million. The number of exams getting a 1 or 2 has grown from 421,000 to 1 million.

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