

RESEARCH BRIEF

Department of Research Services

March 2002

Dr. Terry Froman
Department of Research Services
Gisela Feild
Joseph Bayne
Department of Data Quality Management

Advanced Placement Courses and Examinations The Relationship Between Grades and Scores

The Advanced Placement Program provides college-level courses for senior high school students. Students who successfully complete the Advanced Placement examinations, developed by the College Entrance Examination Board and Educational Testing Service, are awarded college credit and/or advanced standing in over 2,000 participating colleges and universities.

This study looks at the relationship between the grades students received in Advanced Placement Courses and the scores those same students achieved in the related Advanced Placement Tests.

Methodological Notes

- Subjects included 7,386 M-DCPS students with both Advanced Placement course grades and test scores during the 2000-2001 school year.
- A selection of ten courses/tests in which the most students were participating were analyzed.
- There were 37 schools represented. These schools were categorized into three performance groups (High, Middle, and Low) based on average student test scores.
- The test scores were collapsed into two categories: Passing (scores of 3,4, or 5) and Failing (scores of 1 or 2).
- The course grades were collapsed into three categories: **A**, **B**, and **C,D, or F**.

Summary Findings

- Overall, there was general congruity between course grades and test scores, although this relationship was inconsistent and far from reliable.
- Approximately 60% of students earning a grade of **A** received passing test scores. About 30% of the **B**'s and 13% of the **C,D, & F**s, passed the tests.

- There was great discrepancy in passing rates between schools. Among the higher-performing third of the schools, 79% of the **A** students passed the tests. In the middle- and low-performing groups of schools, the proportions of **A** students passing were 55% and 37% respectively (see attached).
- The relationship between grades and scores varied widely among the different test content areas, from over 70% of the **A**'s passing to over 70% of the **A**'s failing (see attached).
- The relationship between grades and scores varied widely among individual schools, from over 80% of the **A**'s passing to over 80% of the **A**'s failing (see attached).

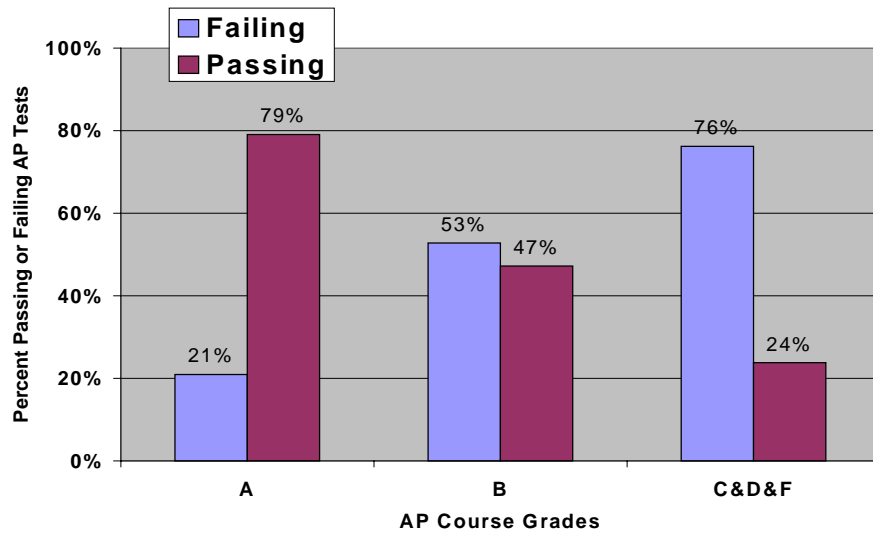
Points to Consider When Interpreting the Results

- Advanced Placement Courses are directly targeted to test preparation much more than regular courses and it is reasonable to expect greater agreement between grades and test scores.
- The intention of the courses is made manifest to the teachers of Advanced Placement Courses by virtue of the fact that they receive direct financial benefit for every student passing the Advanced Placement Tests.
- Students receive grade-point bonuses for taking Advanced Placement Courses. In some cases, the concrete benefit to the student's GPA may outweigh the potential benefit of passing the test.
- Letter grades, while most meaningful and easiest to interpret when reflecting achievement only, are sometimes combined with various aspects of pupil effort and conduct. For some uses, most notably for the development of student self-esteem, both achievement and effort are relevant constructs.
- Grades are typically assigned on the basis of both performance in relation to prespecified standards (criterion-referenced) as well as performance in relation to other group members (norm-referenced).
- In addition to norm-referenced and criterion-referenced grading systems, it may be that some teachers are also reporting pupil performance in relation to learning potential or amount of improvement shown.
- It may be that some teachers yield the student-judging role to external assessment in order to function more fully as advocates, coaches, and mentors to their students.

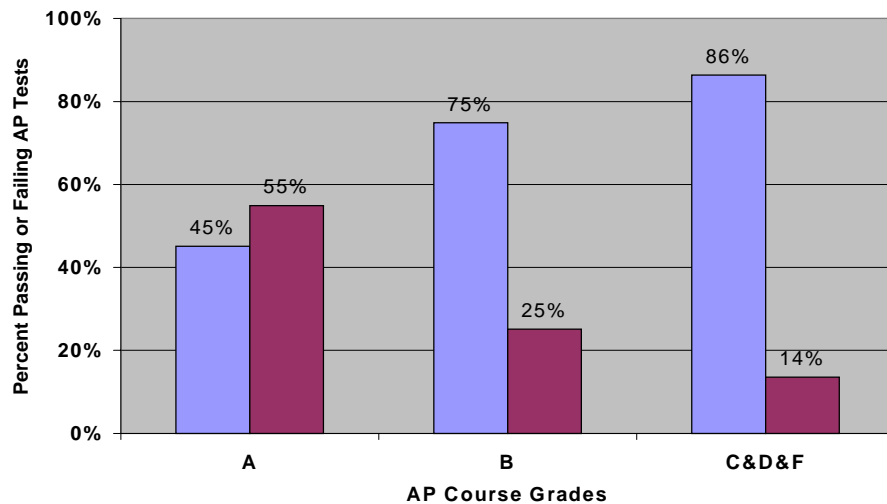
In conclusion, objective scoring based on standardized tests and subjective appraisal of student classroom performance apparently represent different, perhaps complementary aspects of Advanced Placement evaluation.

Comparing AP Grades and Test Scores

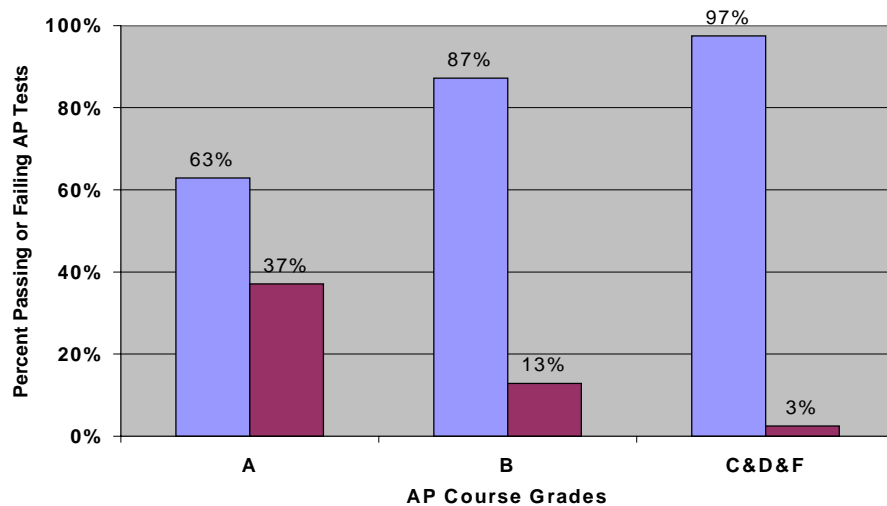
*High Test-Scoring
Schools*



*Middle Test-Scoring
Schools*



Low Test-Scoring Schools



Divergent Grade-Score Relationships

Example Courses and Schools

Biology and Biology Gifted				Example Senior High School X			
A	B	C,D,&F		A	B	C,D,&F	
34 28%	36 19%	18 13%	88	13 16%	7 10%	2 8%	22
Passing				Passing			
88 72%	153 81%	121 87%	362	70 84%	60 90%	23 92%	153
Failing				Failing			
122 100%	189 100%	139 100%	450	83 100%	67 100%	25 100%	175
Calculus AB and BC				Example Senior High School Y			
A	B	C,D,&F		A	B	C,D,&F	
114 71%	142 45%	62 28%	318	180 84%	283 52%	59 22%	522
Passing				Passing			
47 29%	176 55%	161 72%	384	34 16%	264 48%	212 78%	510
Failing				Failing			
161 100%	318 100%	223 100%	702	214 100%	547 100%	271 100%	1032