

**MEMORANDUM**

December 3, 2007

TO: School Board Members

FROM: Abelardo Saavedra, Ph.D.  
Superintendent of Schools

SUBJECT: **ADVANCED PLACEMENT (AP) MONITORING SYSTEM REPORT: 2006–2007**

CONTACT: Carla Stevens, 713-556-6700

Attached is the 2006–2007 report for the AP Monitoring System. This report assesses the impact of the Pre-Advanced Placement (Pre-AP) and Advanced Placement (AP) Programs with respect to enrollment and performance of districtwide students and underrepresented student groups.

**Enrollment in Pre-AP and AP Courses and Participation in AP Exams**

- The number of students enrolled in Pre-AP and AP courses increased for all students and underrepresented student groups (African American, Hispanic, and economically disadvantaged) from 2004–2005 to 2006–2007.
- Enrollment levels of African American, Hispanic, and economically disadvantaged students are underrepresented in both the Pre-AP and AP programs when compared to district enrollment levels.
- A total of 4,842 HISD students from 31 campuses participated in the 2007 AP test administration. This represents an increase of 25.1 percent from 2005 to 2007, and an 11.0 percent increase from 2006 to 2007.
- Although 7,586 students enrolled in AP courses for the 2006–2007 school year, only 4,842 took AP subject tests during the 2007 administration.

**AP Performance**

- In 2007, 9,118 AP examinations were taken by HISD students, where 47.4 percent of the scores were 3 or higher, reflecting a decline of 0.2 percentage points from 2006.
- White students outperformed African American, Asian, and Hispanic students on AP subject tests scoring 3 or higher by 28.9, 13.0, and 1.7 percentage points, respectively.

\_\_\_\_\_AS

Attachment

- c: Superintendent's Direct Reports  
Regional Superintendents  
Executive Principals  
Noelia Garza  
Kelly Trlica  
Cyndi Boyd  
Secondary Principals

# RESEARCH

Educational Program Report

**HOUSTON**  
Independent School District



## Advanced Placement (AP) Monitoring System Report 2006-2007



## 2007 Board of Education

---

**Manuel Rodríguez Jr.**  
PRESIDENT

**Harvin C. Moore**  
FIRST VICE PRESIDENT

**Greg Meyers**  
SECOND VICE PRESIDENT

**Arthur M. Gaines Jr.**  
SECRETARY

**Natasha M. Kamrani**  
ASSISTANT SECRETARY

**Diana Dávila**  
**Kevin H. Hoffman**  
**Dianne Johnson**  
**Lawrence Marshall**

**Abelardo Saavedra, Ph.D.**  
SUPERINTENDENT OF SCHOOLS

**Carla Stevens**  
ASSISTANT SUPERINTENDENT  
DEPARTMENT OF RESEARCH AND ACCOUNTABILITY

**Laurie Zimmerman, Ph.D.**  
RESEARCH SPECIALIST

**Renmin Ye, Ed.D.**  
APPLICATION SPECIALIST

**Harry M. Selig**  
RESEARCH MANAGER

**Houston Independent School District**

Hattie Mae White Educational Support Center  
4400 West 18th Street  
Houston, Texas 77092-8501

Website: [www.houstonisd.org](http://www.houstonisd.org)

It is the policy of the Houston Independent School District not to discriminate on the basis of age, color, handicap or disability, ancestry, national origin, marital status, race, religion, sex, veteran status, or political affiliation in its educational or employment programs and activities.

## EXECUTIVE SUMMARY

### ADVANCED PLACEMENT (AP) MONITORING SYSTEM REPORT 2006–2007

#### Introduction

##### Program Description

During the 2004–2005 school year, the Superintendent of Schools devised a one-hundred-day plan that outlined specifications for implementing an Advanced Placement (AP) Monitoring System. The overall goal addressed by this component was to increase student achievement by continuing to raise academic expectations for all students. To accomplish this, the objectives were two-fold: first, increase the enrollment of minority students in Pre-Advanced Placement (Pre-AP) and AP courses and participation in AP examinations; second, develop a monitoring process to compare enrollment projections with actual enrollment and to measure the gaps in enrollment among underrepresented student groups.

The AP Program provides participating students with the opportunity to take college-level courses while still in high school and earn college credit, advanced placement, or both. Thirty-seven AP examinations, covering 22 subject areas, are administered in May at participating schools. Italian Language and Culture, Japanese Language and Culture, and Russian Language and Culture represent the newest courses offered. AP exams for Italian Language and Culture and Japanese Language and Culture will be delivered as Internet-based tests in 2007. The examination format consists of two sections, multiple-choice and free-response (problem-solving or essay). The exceptions are Studio Art, which consists of student-submitted portfolios, Music Theory, which includes a sight-singing task, and modern language exams, which include a performance section (College Board, AP Central, 2007a and 2006a).

Students who participate in the AP program have opportunities to study a particular subject in greater depth provided by highly qualified teachers. This experience may assist students in determining what educational path they may wish to pursue. By taking AP courses, students develop advanced skills sets and study habits that ultimately prepare them for college studies. Families may experience financial benefits if their child receives advanced placement, college credit or both (College Board, 2006b).

Other benefits afforded to students include opportunities that lead to scholarships or recognition. The Siemens Awards for Advanced Placement is a scholarship with an award ranging from \$2,000 to \$5,000 given to students (one male and one female) from each of the 50 states who have earned the most number of AP grades of 5 in eight exams (Biology, Calculus BC, Chemistry, Computer Science AB, Environmental Science, Physics C: Mechanics, Physics C: Electricity and Magnetism, and Statistics). In addition, the AP program offers a number of Scholar Awards to AP students who have shown outstanding achievement (College Board, AP Central, 2006c).

Each examination subject is graded on a scale of 1 (No recommendation) to 5 (Extremely well qualified). After the examinations have been administered in May, participating schools return all AP materials to the Educational Testing Service (ETS). Multiple-choice sections are scored by computer. The free-response section is typically scored using a three-step process: development of preliminary scoring standards, establishment of final scoring standards, and the reading (College Board, AP Central, 2004).

**Key Findings**

1. What is the projected 2007–2008 Pre-AP and AP enrollment based on student enrollment for 2006–2007, 2005–2006, and 2004–2005?
  - Projected 2007–2008 Pre-AP enrollments indicated increases for all students as well as African American, Asian, Hispanic, male, female, and economically disadvantaged students.
  - A decline in Pre-AP enrollment for Native American and White students was projected for 2007–2008 by -4.35 and -8.10 percent.
  - Projected 2007–2008 AP enrollments indicated increases for all students and all student groups, with the exception of Native American students for which the percent increase resulted in an enrollment comparable to 2006–2007.
  - From 2004–2005 to 2006–2007, there was an increase in the actual Pre-AP and AP enrollment levels for all students.
  - Although there was an overall increase in actual Pre-AP enrollment for all students, a decrease occurred for Asian, Native American, and White students when comparing 2005–2006 to 2006–2007.
  - When comparing actual AP enrollment for 2005–2006 to 2006–2007, a decrease occurred for African American, Native American, male, and economically disadvantaged students.
2. What were the demographic characteristics of 2006–2007 HISD students enrolled in Pre-AP/AP courses compared to overall district enrollment?
  - When comparing the differential of Pre-AP to district enrollment, there is an underrepresentation of African American, Hispanic, male, and economically disadvantaged students in the Pre-AP program (2.4, 2.2, 3.4, and 3.1 percentage points, respectively).
  - When comparing the differential of AP to district enrollment, there is an underrepresentation of African American, Hispanic, male, and economically disadvantaged students in the AP program by 7.7, 10.8, 9.2, and 14.1 percentage points, respectively.
  - When comparing the differential of Pre-AP and AP enrollment to the district enrollment, Asian, White, and female students are overrepresented.
3. What were the completion rates of 2006–2007 HISD students in AP courses?
  - Eighty-four percent of the students completed AP courses for the 2006–2007 academic year.
  - The percentage of students completing AP courses by student group ranged from 80.0 percent for Hispanic students to 93.3 percent for Asian students.
4. What was the level of participation for 2006–2007 HISD students in the AP subject tests?
  - A total of 4,842 HISD students from 31 campuses participated in the 2007 AP test administration. This represents an increase of 25.1 percent over the past three years, and a 11.0 percent increase over the previous year.
  - Although 7,586 students enrolled in at least one AP course for 2007, only 4,842 took AP subject tests.
  - For juniors and seniors, the participation rate increased from 16.0 percent and 14.7 percent in 2006 to 17.7 percent and 17.2 percent in 2007.

- Among the ethnic groups, Native Americans and Asians comprised the lowest percentages of 2007 AP test-takers (0.1 percent and 13.6 percent, respectively).
  - Males comprised a lower percentage of 2007 AP test-takers compared to females, (40.5 percent and 59.5 percent, respectively).
  - When comparing the percentages of AP test-takers from 2005 to 2007, there was a decline in participation among Native American, Asian, White, and economically disadvantaged students.
  - Participation in taking AP exams varied markedly by campus. The number of students taking AP exams ranged from 3 at Eastwood Academy to 920 at Bellaire.
5. During 2006–2007, what were the mean scores of HISD students on the AP subject tests?
- For 2007, mean scores ranged from 2.06 in Art History to 4.81 in Chinese Language and Culture.
  - For 2007, HISD students exceeded the global mean scores for 17 out of 33 subject examinations.
  - When comparing AP subject tests for 2006 and 2007, mean scores increased in 18 out of 31 AP subject examinations where five or more students were tested.
6. What percentage of students in HISD scored a 3 or better on AP subject tests for the May 2007 administration?
- For the 2006–2007 school year, 9,118 AP examinations were taken by HISD students, where 47.4 percent of the scores were 3 or higher. This represents a slight decline from the previous year when 47.6 percent of the scores were 3 or above.
- The percentage of scores that were a 3 or higher by high school campus where 5 or more students were tested ranged from 0.0 percent at Jesse Jones and Kashmere High Schools to 82.6 percent at Bellaire High School.
7. How has participation and performance on AP subject tests progressed from 1997 to 2007?
- Although participation in the AP program has increased from 897 students in 1997 to 4,842 students in 2007, district mean scores have decreased by 0.61 points over the same time period.
  - When examining AP subject test performance from 1997 to 2007, increases in the mean score occurred for 12 examinations and decreases in the mean scores occurred for 20 out of 32 examinations where five or more students were tested.
  - When examining AP subject test performance in science from 1997 to 2007, decreases in the mean scores occurred for Biology, Chemistry, Physics C: Electricity and Magnetism, and Physics C: Mechanics.
  - Computer Science AB, Macroeconomics, Music Theory, and Spanish Language represent the subject areas for which a mean score of at least at 3.0 was maintained from 1997–2007 where five or more students tested.
8. For 2007, what was the number of AP Scholar Award Recipients?
- For 2007, there was a total of 763 AP Scholar Award recipients from 19 campuses.
  - There were 325 AP Scholars, 141 AP Scholars with Honor, 298 AP Scholars with Distinction, and 76 National AP Scholars.

- Bellaire, Michael E. DeBakey High School for Health Professions, High School for Performing and Visual Arts (HSPVA), and Westside had the greatest number of students who were AP Scholar recipients, and were the only campuses where students earned the designation of National AP Scholar.

**Recommendations**

1. Continue to identify successful efforts to promote participation and performance among students, especially minorities and males, by providing information to students and parents about the benefits of the AP program, which includes scholarships, recognition, and college credit/advanced placement.
2. To increase student achievement, continue to provide adequate and relevant professional development opportunities, especially in the area of science. Additionally, strengthen the curriculum in middle school so that students

have a strong educational foundation not only academically, but also with regard to the development of higher order thinking skills and time management skills.

3. On the campus level, monitor the students enrolled in AP courses and the students who subsequently take the AP subject examinations.
4. In order to promote equity and excellence, consideration should be given to creating opportunities for students to take prerequisite math and science courses so that those showing ability or motivation in tenth grade have the necessary foundation to be successful and meet course requirements.
5. For campuses with low participation and performance rates, focus on the development of vertical teams (elementary, middle, and high school) so that student preparation is strengthened prior to taking AP courses and monitor the rigor of the courses.

# ADVANCED PLACEMENT (AP) MONITORING SYSTEM REPORT 2006–2007

## Introduction

During the 2004–2005 school year, the Superintendent of Schools devised a one-hundred-day plan that outlined specifications for implementing an AP Monitoring System. The overall goal addressed by this component was to increase student achievement by continuing to raise academic expectations for all students. To accomplish this, the objectives were two-fold: first, increase the enrollment of minority students in Pre-Advanced Placement and Advanced Placement courses and participation in Advanced Placement examinations; second, develop a monitoring process to compare enrollment projections with actual enrollment and to measure the gaps in enrollment among underrepresented student groups.

The philosophy of the Houston Independent School District (HISD) fosters equity and excellence in education by offering open enrollment that enables all motivated students to participate in Pre-Advanced Placement (Pre-AP) and Advanced Placement (AP) courses (Houston Independent School District, 2007). Similarly, the College Board and the Advanced Placement Program encourage equitable access.

## Program Description

The AP Program provides participating students with the opportunity to take college-level courses while still in high school and earn college credit, advanced placement, or both. Thirty-seven examinations, covering 22 subject areas, are administered in May at participating schools. Italian Language and Culture, Japanese Language and Culture, and Russian Language and Culture represent the newest courses offered. AP exams for Italian Language and Culture and Japanese Language and Culture will be delivered as Internet-based tests in 2007. The examination format consists of two sections, multiple-choice and free-response (problem-solving or essay).

The exceptions are Studio Art, which consists of student-submitted portfolios; Music Theory, which includes a sight-singing task; and modern language exams, which include a performance section (College Board, AP Central, 2007a and 2006a).

For the 2007–2008 school year, schools must have courses labeled as “AP” authorized through the College Board AP Course Audit process. This audit process will ensure that quality courses meeting “AP” requirements are being offered, and that colleges and universities have a venue to review authorized courses offered by secondary schools (College Board, AP Central, 2007b). For the 2007–2008 school year, HISD has 390 authorized courses at 30 high schools.

Students who participate in the AP program have opportunities to study a particular subject in greater depth provided by highly qualified teachers. This experience may assist students in determining what educational path they may wish to pursue. By taking AP courses, students develop advanced skills sets and study habits that ultimately prepare them for college studies. Families may experience financial benefits if their child receives advanced placement, college credit or both (College Board, AP Central, 2006b).

Other benefits afforded to students include opportunities that lead to scholarships or recognition. The Siemens Awards for Advanced Placement is a scholarship with an award ranging from \$2,000 to \$5,000 given to two students (one male and one female) from each of the 50 states who have earned the most number of AP grades of 5 in eight exams (Biology, Calculus BC, Chemistry, Computer Science AB, Environmental Science, Physics C: Mechanics, Physics C: Electricity and Magnetism, and Statistics). (College Board, AP Central, 2006c).

The AP program also offers a number of Scholar Awards to AP students who have shown

---



outstanding achievement. Students receive an award certificate, and this achievement is acknowledged on any grade report that is sent to colleges the following fall. There are four different levels. These include the following:

1. AP Scholar—granted to students who receive grades of 3 or higher on three or more AP exams.
2. AP Scholar with Honor—granted to students who receive an average grade of at least 3.25 on all AP exams taken, and grades of 3 or higher on four or more of these exams.
3. AP Scholar with Distinction—granted to students who receive an average grade of at least 3.5 on all AP exams taken, and grades of 3 or higher on five or more of these exams.
4. National AP Scholar—granted to students in the United States who receive an average grade of at least 4 on all AP exams taken, and grades of 4 or higher on eight or more of these exams (College Board, AP Central, 2007d).

In addition, teachers involved in the AP program benefit from professional development opportunities such as workshops and Summer Institutes. Furthermore, experienced AP teachers may be selected to become “Readers” for the AP exams or Workshop Consultants. Teachers also receive support from AP through on-line materials, publications, conferences, and consultants (College Board, AP Central, 2006d).

### **Scoring**

Each examination subject is graded on a scale of 1 (No recommendation) to 5 (Extremely well qualified). Typically, scores of 3 or above qualify a student to receive advanced placement, college credit, or both. After the examinations have been administered in May, participating schools return all AP materials to the Educational Testing Service (ETS). Multiple-choice sections are scored by computer. The free-response section is typically scored using a three-step process: development of preliminary scoring standards, establishment of final scoring standards, and the reading. AP examinations

may be compared from one year to another through equating (College Board, AP Central, 2004).

### **Program Costs and Funding Source**

The AP examination fee was \$83 per exam for the 2006–2007 school year. The College Board provides a \$22 fee reduction per exam for students in financial need that qualify so that the final costs is \$53 per exam if the school waives its \$8 administrative fee. In addition to the College Board fee reduction, the State of Texas provides a \$48 subsidy for each examination so that the final exam costs for qualified students totals \$5. For students in public school who do not qualify for the College Board fee reduction, the State of Texas funds \$30 per AP exam, making the final cost \$45 if schools forgo their \$8 administrative fee (College Board, AP Central, 2007c).

In 1993, the Texas Legislature adopted the Advanced Placement/International Baccalaureate (IB) Incentive Program. One facet of the law provides for campus awards up to \$100 for each student who scored either a 3 or better on at least one AP examination or a 4 or above on an IB examination. Campus awards are used for academic enhancement purposes, and campuses earning the funds determine how the funds are to be used (Texas Education Agency, 2007a).

A second facet of the law provides teacher training reimbursements of up to \$450 per teacher for teachers completing the approved five-day AP summer institutes. The reimbursement includes not only high school teachers, but also middle school teachers (Texas Education Agency, 2007b).

For the 2006–2007 school year, a total of \$609,600 was allocated from Title II for AP Strategies.

### **Admission**

The philosophy of HISD is based on excellence and equity which offers open enrollment that enables all motivated students to participate in Pre-AP and AP courses (Houston Independent School District, 2007).

During the 2004–2005 school year, HISD implemented the *Advanced Placement Initiative*. It is the first public school district in the nation to require students to take more demanding Pre-AP and AP courses. There are two components. Since Pre-AP courses provide the foundation necessary to prepare students for the AP college level courses, the first component of the Advanced Placement Initiative begins by scheduling all sixth and seventh grade students for Pre-AP Language Arts and Reading. For eighth grade students, a roster was created to default students into Pre-AP English who passed the previous years TAKS exam. It is important to emphasize that an open enrollment policy exists in the district, and by creating rosters in no way excludes any student from participating. Additionally, instruction was provided by teachers who have completed the College Board Pre-AP English training (Houston Independent School District, 2007).

The second component incorporates the philosophy of open enrollment to all motivated students to participate in AP courses and further uses students' tenth grade scores from the PSAT to default students into AP courses where they demonstrate strengths and for which they have completed prerequisite courses (Houston Independent School District, 2007).

### **Curriculum**

Pre-AP classes are aligned with the College Board Advanced Placement course curriculum objectives. These classes provide a foundation that prepares students for taking AP courses. The AP curriculum consists of university level courses that have been developed by the College Board. Students are encouraged to take AP exams after completing AP courses. Successful completion of AP exams gives students the possibility of receiving advanced placement and/or college credit. AP course offerings vary at every campus (Houston Independent School District, 2007).

### **Purpose**

The purpose of this report was to assess the impact of the AP program on the educational

opportunities available to HISD students by addressing the following research questions:

1. What is the projected 2007–2008 Pre-AP and AP enrollment based on student enrollment for 2006–2007, 2005–2006, and 2004–2005?
2. What were the demographic characteristics of 2006–2007 HISD students enrolled in Pre-AP/AP courses compared to overall district enrollment?
3. What were the completion rates of 2006–2007 HISD students in AP courses?
4. What was the level of participation for 2006–2007 HISD students in the AP subject tests?
5. During 2006–2007, what were the mean scores of HISD students on the AP subject tests?
6. What percentage of students in HISD scored a 3 or better on AP subject tests for the May 2007 administration?
7. How has participation and performance on AP subject tests progressed from 1997 to 2007?
8. For 2007, what was the number of AP Scholar Award Recipients?

## **Methods**

### **Data Limitations**

Due to issues related to mobility, the unduplicated count of students taking AP courses by campus will not equal the unduplicated count of students taking AP courses for the district. More specifically, a student may attend more than one campus during an academic year. If the student enrolled in AP courses at two campuses, then each campus will count that student as taking at least one AP course; however, districtwide, the student will not be counted twice.

To provide disaggregated student level demographic information, the College Board AP electronic database was matched to the Public Education Information Management System (PEIMS) database. Since the PEIMS database reflects a snapshot taken on the last Friday in October, those students who were not present

would not be included in the database. There was a total of 20 students taking AP exams who could not be matched to PEIMS.

Students who were identified as enrolled in Pre-AP or AP courses were required to be active students and to have at least one conduct mark and/or grade recorded. Economic status was extracted from the PEIMS database. If a student could not be matched to PEIMS, then they were included in the analysis, but their economic status was stated as “missing.”

### **Data Collection and Analysis**

Test performance for 2007, along with demographic information supplied by students, was reported to HISD for each participating campus by the College Board via printed reports and an electronic database. The 2007 global scores for test performance by subject were extracted from the 2007 College Board Report. These data, together with enrollment data from PEIMS, were analyzed. State level data, including the number of AP subject tests taken along with the percentage of scores that were 3 or above, were extracted from the 2007 College Board Report. Participation rates for juniors and seniors were calculated by dividing the number of students tested by the PEIMS snapshot of fall enrollment for the same group. Participation rates for juniors and seniors were calculated across the district and by school. AP Scholar Awards were extracted from the 2007 College Board School Rosters.

The number of students eligible to complete AP courses consists of those enrolled in the second semester of a two-semester course and/or those enrolled in a one semester course. Completion percentages are based on the number eligible to complete and the number completing.

Course completion was determined by counting those students who received a semester average grade of 70 or higher for the second semester (Part B) of a two-semester course or receiving a 70 or higher for a one-semester course. Once this was computed, it was divided by the total number of students who were eligible to complete.

AP examinations were linked to corresponding AP courses by student. Some counts may be imprecise because data required to match students to each database were not available. Additionally, completion rates and subsequent testing were based on the 2006–2007 school year. Therefore, a student was required to complete the course within the school year and test in the spring of 2007 to be considered as taking the course with the corresponding exam.

Mean test scores by gender, race/ethnicity, and economic status for AP subjects were analyzed by comparing mean and differential scores. For race/ethnicity, the number of Hispanic students combines the total populations for the Chicano/Mexican, Puerto Rican, and Other Hispanic racial/ethnic categories. When examining differential scores, White students were used as a reference group because White students typically outperform minority students on standardized tests. To determine the percentage of students who scored 3 or above on AP subject tests by race/ethnicity, the total number of tests scoring a 3 or higher was divided by the total number of tests taken for each ethnic category.

The projected enrollment was calculated by averaging the proportional increase or decrease in the actual enrollment over the 3-year period and multiplying the 2006–2007 actual enrollment by the average increase or decrease (percent) to arrive at a 2007–2008 enrollment projection.

## **Results**

### **What is the projected 2007–2008 Pre-AP and AP enrollment based on student enrollment for 2006–2007, 2005–2006, and 2004–2005?**

**Tables 1 and 2** depict actual Pre-AP and AP enrollment data for 2004–2005, 2005–2006, and 2006–2007, as well as the projected enrollment for the 2007–2008 school year by gender and student group. Pre-AP enrollment encompasses grades 6–12, while AP enrollment consists of grades 9–12. The projected enrollment was calculated by averaging the proportional increase

or decrease in the actual enrollment over the 3-year period and multiplying the 2006–2007 actual enrollment by the average increase or decrease (proportional) to arrive at a 2007–2008 enrollment projection. Other factors, such as policy decisions, may ultimately impact projected enrollments, but these factors were not taken into account. For example, Pre-AP and AP enrollment figures may increase by a larger factor for all student groups because of the implementation of the *Advanced Placement Initiative*, or by a smaller factor if overall district enrollment decreases.

Over the past three years, there has been an increase in the number of students enrolled in Pre-AP courses (see Table 1). Projected

enrollments for 2007–2008 mirror this trend with overall increases in the total number of Pre-AP participants. Alternatively, the number of Asian, Native American, and White students has declined when comparing 2005–2006 enrollment to 2006–2007 by 1.7, 19.5, and 9.1 percent, respectively. A decline was projected for 2007–2008 Pre-AP enrollment for Native American and White students enrolled in Pre-AP courses by -4.35 and -8.10 percent.

A similar trend is apparent for students enrolled in AP courses when comparing 2005–2006 to 2006–2007 enrollments; there was an overall increase in student enrollment (see Table 2). However, there was a decline in enrollment for African American, Native American,

Table 1. HISD Pre-AP Enrollment and Projected Enrollment (Grades 6–12) by Race/Ethnicity, Gender and Economic Status (unduplicated)

	2004–2005	2005–2006	2006–2007	Average Proportional Change	Projected 2007–2008
<b>All Students</b>	29,347	33,743	38,271	14.20	43,705
<b>African American</b>	7,992	10,492	11,125	18.66	13,201
<b>Asian</b>	1,948	2,024	1,990	1.11	2,012
<b>Hispanic</b>	13,663	15,884	20,304	22.04	24,779
<b>Native American</b>	37	41	33	-4.35	32
<b>White</b>	5,707	5,302	4,819	-8.10	4,429
<b>Male</b>	13,206	15,678	18,009	16.79	21,033
<b>Female</b>	16,141	18,065	20,262	12.04	22,702
<b>Econ. Disadv.</b>	19,193	22,288	25,771	15.88	29,863
<b>Missing Econ. Disadv.</b>	0	1,013	1,175	-	-

Note: Economically disadvantaged status was stated as “missing” if a student could not be matched to the PEIMS database.

Table 2. HISD AP Enrollment and Projected Enrollment (Grades 9–12) by Race/Ethnicity, Gender and Economic Status (unduplicated)

	2004–2005	2005–2006	2006–2007	Average Proportional Change	Projected 2007–2008
<b>All Students</b>	6,703	7,529	7,586	6.54	8,082
<b>African American</b>	1,699	1,931	1,825	4.08	1,900
<b>Asian</b>	687	748	780	6.58	831
<b>Hispanic</b>	2,790	3,156	3,198	7.22	3,429
<b>Native American</b>	9	10	9	0.56	9
<b>White</b>	1,518	1,684	1,774	8.14	1,918
<b>Male</b>	2,722	3,123	3,105	7.08	3,325
<b>Female</b>	3,981	4,406	4,481	6.19	4,758
<b>Econ. Disadv.</b>	3,665	4,064	3,731	1.35	3,781
<b>Missing Econ. Disadv.</b>	0	78	53	-	-

Note: Economically disadvantaged status was stated as “missing” if a student could not be matched to the PEIMS database.

males, and economically disadvantaged students by 5.5, 10.0, 0.6, and 8.2 percent, respectively. Based on the percent change, increases were projected for all students and all students groups for enrollment in AP courses.

**What were the demographic characteristics of 2006–2007 HISD students enrolled in Pre-AP/ AP courses compared to overall district enrollment?**

An important component of the AP Monitoring System was to measure the gaps in enrollment among underrepresented student groups. To accomplish this, Pre-AP and AP enrollment was compared to enrollment in the

district by gender and student group. Ultimately, the demographic composition of students enrolled in the Pre-AP and AP program should reflect the composition of the district. **Tables 3 and 4** show a comparison of Pre-AP and AP student demographics to the district for the 2006–2007 academic year. Percentages may not add up to 100 percent due to rounding. A total of 38,271 students enrolled in Pre-AP courses (grades 6–12) and 7,586 students enrolled in AP courses (grades 9–12). Of the 38,271 Pre-AP students, 29.1 percent were African American, 5.2 percent were Asian, 53.1 percent were Hispanic, and 12.6 percent were White. The percentage of Native American students enrolled in Pre-AP and AP classes was comparable to the

Table 3. Comparison of Pre-AP Student Demographics to the District, 2006–2007 (unduplicated)

	<u>Pre-AP</u>		<u>District 6–12</u>		<u>Differential</u>
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	
<b>All Students</b>	38,271		89,467		
<b>African American</b>	11,125	29.1	28,224	31.5	-2.4
<b>Asian</b>	1,990	5.2	3,100	3.5	1.7
<b>Hispanic</b>	20,304	53.1	49,455	55.3	-2.2
<b>Native American</b>	33	0.1	73	0.1	0.0
<b>White</b>	4,819	12.6	8,615	9.6	3.0
<b>Male</b>	18,009	47.1	45,151	50.5	-3.4
<b>Female</b>	20,262	52.9	44,316	49.5	3.4
<b>Economically Disadvantaged</b>	25,771	67.3	62,969	70.4	-3.1
<b>Missing Economically Disadvantaged</b>	1,175	3.1	0	0.0	3.1

Note: Economically disadvantaged status was stated as “missing” if a student could not be matched to the PEIMS database.

Table 4. Comparison of AP Student Demographics to the District, 2006–2007 (unduplicated)

	<u>AP</u>		<u>District 9–12</u>		<u>Differential</u>
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	
<b>All Students</b>	7,586		47,696		
<b>African American</b>	1,825	24.1	15,186	31.8	-7.7
<b>Asian</b>	780	10.3	1,874	3.9	6.4
<b>Hispanic</b>	3,198	42.2	25,280	53.0	-10.8
<b>Native American</b>	9	0.1	44	0.1	0.0
<b>White</b>	1,774	23.4	5,312	11.1	12.3
<b>Male</b>	3,105	40.9	23,905	50.1	-9.2
<b>Female</b>	4,481	59.1	23,791	49.9	9.2
<b>Economically Disadvantaged</b>	3,731	49.2	30,169	63.3	-14.1
<b>Missing Economically Disadvantaged</b>	53	0.7	0	0.0	0.7

Note: Economically disadvantaged status was stated as “missing” if a student could not be matched to the PEIMS database.

district enrollment. Regarding gender, the percentage of females enrolled in Pre-AP classes (52.9 percent) exceeded the percentage of males (47.1 percent). The predominant racial/ethnic groups for the AP program consisted of Hispanic (42.2 percent) and African American (24.1 percent) students. Enrollment of female students exceeded male students (59.1 percent and 40.9 percent respectively).

When comparing the differential of Pre-AP enrollment to the district enrollment by gender and student group, an under-representation occurs for African American, Hispanic, male and economically disadvantaged students (2.4, 2.2, 3.4, and 3.1 percentage points, respectively). A similar pattern emerges when comparing the differential of AP enrollment to the district by gender and student group. African American, Hispanic, male, and economically disadvantaged students are under represented by 7.7, 10.8, 9.2 and 14.1 percentage points, respectively. When comparing the differential of Pre-AP and AP enrollment to the district enrollment, Asian, White, and female students were over-represented.

**Table 5** compares the number and percentage of students enrolled in the Pre-AP and AP program by grade level to that of the district. The highest levels of Pre-AP enrollment occurred in sixth (67.0 percent), seventh (64.4 percent), and eighth grades (60.5 percent), reflecting the implementation of the *AP Initiative*. As part of the *AP Initiative*, all sixth

and seventh grade students were scheduled for Pre-AP Language Arts and Reading classes. Rosters of eighth grade students who passed the previous years TAKS were created to ensure that students were automatically enrolled in Pre-AP English. Since HISD continues to endorse the open enrollment policy for all Pre-AP and AP courses, creating a roster would in no way preclude any student from participating. When comparing the overall district enrollment (grades 6–12) to Pre-AP enrollment, 42.8 percent of the students in the district were enrolled in at least one Pre-AP class. The highest levels of AP enrollment occurred in grades 12 (28.7 percent) and 11 (26.5 percent). Overall, only 15.9 percent of the students in the district (grades 9–12) were enrolled in at least one AP class.

**What were the completion rates of 2006–2007 HISD students in AP courses?**

During the 2006–2007 school year, the percentages of students completing AP courses districtwide and by campus were analyzed. **Table 6** summarizes the number of students enrolled in AP courses districtwide, the number eligible to complete, the number completing, and the percent completing disaggregated by student group. The number of students eligible to complete AP courses consists of those enrolled in the second semester of a two-semester course and/or those enrolled in a one semester course. Completion percentages are based on the number of stu-

Table 5. Comparison of Pre-AP and AP Course Enrollment, and Percent of District Enrolled, by Grade Level for 2006–2007

Grade	Pre-AP Enrollment	District Enrollment (6–12)	% District Enrollment (Pre-AP)	AP Enrollment	District Enrollment (9–12)	% District Enrollment (AP)
6	9,458	14,118	67.0			
7	9,082	14,101	64.4			
8	8,202	13,552	60.5	81		
9	3,896	16,010	24.3	196	16,010	1.2
10	3,590	12,159	29.5	1,931	12,159	15.9
11	2,741	10,192	26.9	2,698	10,192	26.5
12	1,302	9,335	13.9	2,680	9,335	28.7
<b>Total</b>	<b>38,271</b>	<b>89,467</b>	<b>42.8</b>	<b>7,586</b>	<b>47,696</b>	<b>15.9</b>

Note: There were 81 eighth grade students enrolled in AP Spanish Language classes.

Table 6. AP Course Completion by Race/Ethnicity, Gender, and Economic Status, 2006–2007 (duplicated)

	# Enrolled	# Eligible to Complete	# Completing	% Completing
<b>All Students</b>	24,581	13,185	11,074	84.0
<b>African American</b>	5,127	2,724	2,198	80.7
<b>Asian</b>	3,409	1,845	1,722	93.3
<b>Hispanic</b>	9,442	4,964	3,970	80.0
<b>Native American</b>	35	20	18	90.0
<b>White</b>	6,568	3,632	3,166	87.2
<b>Male</b>	10,291	5,497	4,656	84.7
<b>Female</b>	14,290	7,688	6,418	83.5
<b>Economically Disadvantaged</b>	10,952	5,733	4,644	81.0
<b>Missing Econ. Disadvantaged</b>	88	74	52	70.3

Note: The number of students eligible to complete AP courses consists of those enrolled in the second semester of a two-semester course and/or those enrolled in a one semester course. Completion percentages are based on the number eligible to complete and the number completing. Economically disadvantaged status was stated as “missing” if a student could not be matched to the PEIMS database.

dents eligible to complete and the number completing. Since students may have been enrolled in more than one AP class, the number taking reflects duplicated student counts. Districtwide, a total of 24,581 students enrolled in AP courses and 13,185 or 84.0 percent of those enrolled completed the course. The percentage of students completing AP courses by student group ranged from 80.0 percent for Hispanic students to 93.3 percent for Asian students. A summary of the completion rates by campus and disaggregated by student group is provided in **Appendix A**. Out of 29 high schools, the enrollment in AP classes for all students ranged from 113 at Mira-beau B. Lamar to 4,173 at Bellaire High School. Completion rates for all students ranged from 18.6 percent at Challenge Early College High School to 99.2 percent at Bellaire High School.

Albert S. Johnston, Sidney Lanier, and Jane Long Middle Schools had eighth grade students enrolled in AP Spanish Language classes during the 2006–2007 academic year. These schools are included in Appendix A. Enrollment ranged from 46 for Long Middle School to 63 for Johnston Middle School. All of the students at Johnston Middle School completed the AP courses.

**Table 7** summarizes the correspondence between AP Examinations and AP courses completed for high school students during the 2006–2007 school year. Districtwide, 63.1 percent of the students completed AP courses and

took the corresponding AP examination. Regarding race/ethnicity, only 42.6 percent of African American students completed AP courses and took the corresponding AP examination. Alternatively, 81.5 percent of Asian students completed AP courses and took the corresponding AP examination. Regarding gender, the percentage of males slightly exceeded the percentage of females that completed the AP course and took the corresponding AP examination (63.4 percent and 62.9 percent, respectively). Approximately 61 percent of students who were classified as economically disadvantaged completed the AP course and subsequently took the corresponding AP examination. Districtwide, 46.2 percent of the students who took the corresponding AP exam scored a 3 or higher.

### **What was the level of participation for 2006–2007 HISD students in AP subject tests?**

#### **Districtwide Participation**

During the 2006–2007 school year, a total of 4,842 students participated in taking AP examinations, which included 28 students who were not yet in ninth grade, 1,187 freshmen/sophomores, 1,801 juniors, 1,607 seniors, and 219 with an unspecified grade level. For the 2006–2007 school year, 30 high schools and one middle school participated.

Table 7. AP Course Completion with Corresponding Examination by Race/Ethnicity, Gender, and Economic Status, 2006–2007

	AP Courses Completed	# Taking Corresponding Exam	% Completing Course and Taking Corresponding Exam	Examination with scores of 3–5	
				N	%
<b>All Students</b>	11,074	6,986	63.1	3,226	46.2
<b>African American</b>	2,198	937	42.6	170	18.1
<b>Asian</b>	1,722	1,403	81.5	1,001	71.3
<b>Hispanic</b>	3,970	2,441	61.5	554	22.7
<b>Native American</b>	18	12	66.7	8	66.7
<b>White</b>	3,166	2,193	69.3	1,493	68.1
<b>Male</b>	4,656	2,950	63.4	1,531	51.9
<b>Female</b>	6,418	4,036	62.9	1,695	42.0
<b>Economically Disadvantaged</b>	4,644	2,827	60.9	639	22.6
<b>Missing Econ. Disadvantaged</b>	52	31	59.6	15	48.4

Note: A completed course was based on a passing grade for the second semester of a two-semester course and/or those enrolled in a one semester course. Students who could not be matched were excluded from the analysis (only 6,986 exams could be matched from a total of 9,118). Economically disadvantaged status was stated as “missing” if a student could not be matched to the PEIMS database.

**Table 8** summarizes the level of participation and performance for HISD from 1997 through 2007. For juniors and seniors, the level of participation increased from 3.9 percent and 4.6 percent in 1997 to 17.7 percent and 17.2 percent in 2007. Over the past eleven years, the number of participants, total exams, and the total exams scoring 3 or higher, have increased. Alternatively, the percentage of students scoring 3 or higher decreased from 68.3 percent in 1997 to 47.4 percent in 2007. The number of participating schools has remained fairly constant since 2004 with at least 31 campuses. Middle College

for Technology and Careers closed in 2007, and therefore, the number of campuses dropped from 32 in 2006 to 31 in 2007. Since 2005, campus totals have included one middle school, Johnston.

**Participation by Gender, Race/Ethnicity, and Economic Status**

**Table 9** compares the gender, racial/ethnic composition, and economic status of HISD AP test-takers from 2005 to 2007. Over the past three years, the number of students taking AP tests increased from 3,872 to 4,842, representing

Table 8. Summary of Participation and Performance on AP Exams, 1997–2007

Year	Juniors	% of District Juniors	Seniors	% of District Seniors	Total Test-Takers	Total Exams	Total Exams 3–5	% of Exams 3–5	# of Schools in HISD
1997	357	3.9	434	4.6	897	1,526	1,043	68.3	-
1998	442	4.9	465	4.6	1,025	1,889	1,320	69.9	-
1999	456	4.8	657	6.7	1,240	2,278	1,437	63.1	-
2000	698	7.4	917	11.4	1,756	3,402	2,076	61.0	22
2001	860	9.4	945	11.9	1,968	3,769	2,160	57.3	23
2002	1,114	11.6	937	12.1	2,403	4,724	2,774	58.7	27
2003	1,091	11.4	1,091	13.1	2,723	5,351	3,233	60.4	24
2004	1,292	13.2	1,142	13.7	3,246	6,068	3,297	54.3	31
2005	1,449	13.8	1,291	14.0	3,872	7,188	3,539	49.2	31
2006	1,629	16.0	1,374	14.7	4,363	8,120	3,862	47.6	32
2007	1,801	17.7	1,607	17.2	4,842	9,118	4,323	47.4	31



Table 9. Comparison of HISD AP Test-Takers by Gender, Race/Ethnicity, and Economic Status, 2006–2007

Test-Takers	Total	Female	Male	African American	Asian	Hispanic	Native American	White	Econ. Disadv.
<b>2005</b>	3,872	2,285	1,587	553	547	1,657	11	896	1,949
Percent		59.0	41.0	14.3	14.1	42.8	0.3	23.1	50.3
<b>2006</b>	4,363	2,574	1,789	689	609	1,791	6	988	2,250
Percent		59.0	41.0	15.8	14.0	41.0	0.1	22.6	51.6
<b>2007</b>	4,842	2,881	1,961	763	657	2,091	7	1,085	2,394
Percent		59.5	40.5	15.8	13.6	43.2	0.1	22.4	49.4

Note: For 2007, 107 students did not state their ethnicity and 132 indicated “other,” and economic status was not available for 45 students. For 2006, 165 students did not state their ethnicity, 115 indicated “other,” and economic status was not available for 87. For 2005, 107 students did not state their ethnicity, 101 indicated “other,” and economic status was not available for 65.

a 25.1 percent increase. Moreover, participation increased by 11.0 percent from 2006 to 2007. The percentage of female participants was higher than males from 2005 to 2007. Among Native American, Asian, White and economically disadvantaged test-takers, the percentage of participation decreased by 0.2, 0.5, 0.7, and 0.9 percentage points, respectively over the past three years. Alternatively, the percentage of participation for African American and Hispanic students increased by 1.5 and 0.4 percentage points from 2005 to 2007. Since one of the

district’s objectives was to increase underrepresented student group enrollment in test participation, the data indicate that this objective has been met for African American and Hispanic students; however, the proportion of African American students is still underrepresented when looking at the percentage taking AP courses and the percentage of African American students enrolled in high school.

**Figure 1** compares the percent of AP test-takers with scores of 3 or higher on at least one AP test by race/ethnicity from 2005–2007. For

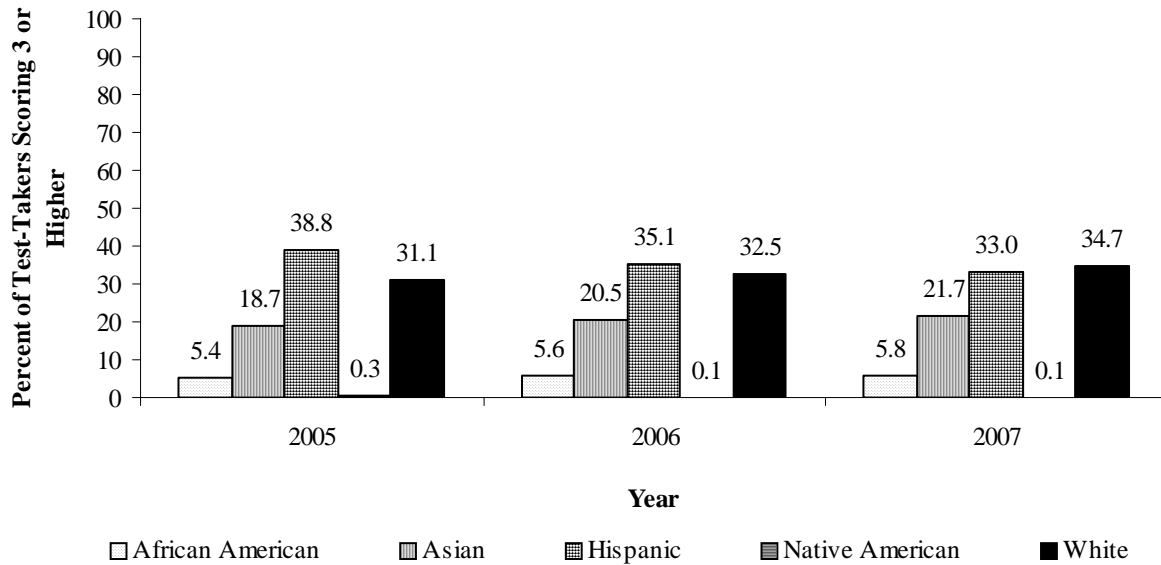


Figure 1. Percent of AP test-takers scoring 3 or higher on at least one AP exam by ethnicity, 2005–2007.

2007, the percentage of students attaining a score of 3 or above on at least one AP test ranged from 0.1 percent for Native Americans to 34.7 percent for White students. The percentage of students scoring 3 or higher ranged from 0.1 percent for Native Americans to 35.1 percent for Hispanics for 2006. Similarly, the percentage of students scoring 3 or higher in 2005 on at least one AP exam ranged from 0.3 percent for Native Americans to 38.8 percent for Hispanics. For 2005 and 2006, Hispanic students outperformed all other racial/ethnic groups, while White students outperformed all other racial/ethnic groups for 2007. Over the past three years, the percentage of African American, Asian, and White students scoring 3 or more on at least one AP exam increased by 0.4, 3.0, and 3.6 percentage points, respectively. Alternatively, performance for Hispanic and Native American students decreased by 5.8 and 0.2 percentage points, respectively.

**Participation by Schools**

A total of 30 high schools had students taking Advanced Placement examinations for the 2006–2007 school year. **Table 10** presents the participation of those students that took at least one AP exam based on grade level enrollment. There was considerable variation among the high schools with regard to participation, with sophomores reflecting the lowest levels (8.5 percent) and juniors with the highest levels (17.7 percent). For tenth grade students, percentages ranged from 0.0 percent at Jesse Jones, Kashmere, and Evan Worthing High Schools to 41.3 percent at Carnegie Vanguard High School. For juniors, the percentage was highest for Carnegie Vanguard High School with 65.8 percent. Eastwood Academy (0.0 percent) had the lowest participation rates for juniors. With regard to seniors, Michael DeBakey High School for Health Professions had the highest participation rates with 82.1 percent. The lowest participation rates, 2.0 percent, were found at Eastwood Academy. The schools with the highest participation levels, Carnegie Vanguard and DeBakey were both Magnet schools that required testing as a basis for matriculation.

**Table 10. Participation of Sophomores, Juniors, and Seniors in AP Tests**

School	% of Enrollment by Grade		
	10 <sup>th</sup>	11 <sup>th</sup>	12 <sup>th</sup>
Austin	2.7	17.7	16.3
Bellaire	25.0	40.5	48.0
Carnegie	41.3	65.8	48.0
Challenge	25.2	27.2	2.5
Chavez	11.1	23.1	20.9
Davis	0.7	23.1	16.8
DeBakey	3.8	40.6	82.1
Eastwood	2.8	0.0	2.0
Furr	1.3	15.7	13.0
Houston	8.9	14.1	12.9
HSLECJ	1.5	32.4	20.7
HSPVA	14.7	32.8	50.6
Jones	0.0	15.0	15.2
Jordan	6.2	8.3	9.9
Kashmere	0.0	7.4	4.5
Lamar	0.4	0.8	7.1
Lee	2.2	14.1	16.4
Madison	10.7	22.9	13.8
Milby	9.6	17.3	16.2
Reagan	11.1	15.9	13.9
Scarborough	4.0	8.0	7.3
Sharpstown	5.9	11.6	9.2
Sterling	8.8	11.2	3.1
Waltrip	0.9	14.9	4.3
Washington	5.3	9.0	5.9
Westbury	6.4	12.4	10.4
Westside	34.9	34.1	35.4
Wheatley	1.0	7.5	18.1
Worthing	0.0	12.7	8.7
Yates	1.5	8.0	5.4
<b>HISD</b>	<b>8.5</b>	<b>17.7</b>	<b>17.2</b>

Note: Only high school participation is reflected. Grade level was not specified for 219 students.

**During 2006–2007, what were the mean scores of HISD students on the AP subject tests?**

**Table 11** compares the mean scores by subject for HISD students with the mean scores of global test-takers. The global data reflect totals for both public and private school students. The subject examinations for HISD are reported only in areas where five or more students were tested. As a result, the number of students taking the examination may appear different from the overall total and/or from the school total. For 2007, Studio Art: 3-D Design was the only

Table 11. Global Mean Scores Compared to HISD

Subject	HISD			Global 2007
	2007 N	2006	2007	
Art: History	54	3.54	2.06	2.88
Art: Studio Drawing	18	2.94	3.11	3.05
Art: Studio 2-D Design	20	3.56	3.75	3.06
Art: Studio 3-D Design	0	-	-	2.90
Biology	357	3.04	2.69	3.04
Calculus AB	526	2.70	2.60	2.94
Calculus BC	179	3.74	3.91	3.71
Chemistry	104	3.00	2.78	2.79
Chinese Lang. & Culture	68	-	4.81	4.70
Comp. Sci. A	58	3.00	3.22	2.84
Comp. Sci AB	10	3.00	3.00	3.38
Econ. Micro	56	3.31	3.68	3.04
Econ. Macro	429	3.06	3.13	2.80
<b>English Lang.&amp;Comp.</b>	1,447	2.06	2.22	2.85
<b>Eng. Lit. &amp; Comp.</b>	1,019	2.30	2.39	2.87
Environmental Science	178	2.12	2.45	2.66
European Hist.	30	3.44	3.53	2.84
French: Lang.	61	2.55	2.31	2.82
French: Lit.	13	1.90	2.69	3.30
German: Lang.	19	4.07	3.84	3.24
Gov. Politics U.S.	668	2.19	2.41	2.67
Gov. Politics Comparative	1	*	*	2.92
Human Geog.	175	3.64	2.61	2.58
Italian Language	1	*	*	2.67
Japanese Lang. & Culture	5	-	3.40	3.48
Latin: Vergil	1	2.62	*	3.00
Latin: Lit.	11	1.00	2.82	2.65
Music Theory	46	3.49	3.72	2.97
Phys. B	193	2.39	2.96	2.88
Phys.C: Elec & Magnetism	20	4.16	3.85	3.53
Phys. C: Mech.	43	3.71	2.95	3.35
Psychology	139	3.26	3.83	3.09
Spanish: Lang	726	3.95	3.27	3.12
Spanish: Lit.	66	2.81	2.95	2.83
Statistics	155	2.79	2.70	2.80
<b>U.S. History</b>	1,227	2.30	2.11	2.75
World History	995	2.17	2.28	2.72

\*Scores not reported for less than 5 students.  
AP Subjects with highest levels of participation are in bold.

subject examination in which HISD students did not participate.

In 2007, students in HISD scored a mean of 3 or higher on a five-point scale on 15 of the 33 AP subject examinations where five or more students were tested. Typically, a score of 3 qualifies a student to receive advanced placement or college credit. HISD students exceeded the global mean scores for 17 out of 33 subject examinations. These included: Art: Studio Drawing, Art: Studio 2-D Design, Calculus BC, Chinese Language and Culture, Computer Science A, Economics: Macro, Economics: Micro, European History, German: Language, Human Geography, Latin Literature, Music Theory, Physics B, Physics C: Electricity and Magnetism, Psychology, Spanish: Language, and Spanish: Literature. Mean scores ranged from 2.06 in Art:History to 4.81 in Chinese Language and Culture. English Language and Composition, English Literature and Composition, and U.S. History represented the three subject tests taken by the highest number of students (1,447, 1,019, and 1,227, respectively); however, mean scores for these exams were lower than the global mean scores by -0.63, -0.48, and -0.64, respectively. Advanced Placement tests characterized by having fewer than 10 participants included: Art: Studio 3-D Design, Government Politics: Comparative, Italian Language, Latin: Vergil, and Japanese Language and Culture.

For 2006, students in HISD scored a mean of 3 or higher on 17 of 32 AP subject examinations where five or more students were tested. Mean scores ranged from 1.00 in Latin: Literature to 4.16 in Physics C: Electricity and Magnetism. When comparing AP subject tests for 2006 and 2007, mean scores increased in 18 out of 31 AP subject examinations where five or more students were tested.

### Performance and Gender/Ethnicity

**Appendix B** summarizes the differential in AP subject test scores for HISD students by gender and race/ethnicity for 2007. When examining the differential in AP subject test scores by gender, males outperformed females

on 20 of the 29 subjects for which both groups participated with at least five or more students in 2007. The mean differential ranged from -0.93 in Art: Studio Art Drawing to 0.75 in Calculus AB.

When examining the racial/ethnic differential between White and African American students, White students outperformed African American students in all 17 subject tests for which both groups participated in 2007. The mean differential ranged from 0.06 points in Spanish Language to 2.67 points in Physics C: Mechanics. When examining the differential between White students and Hispanic students, Hispanic students outperformed White students by 0.45 points in the Spanish Language test. White students outperformed Hispanic students on 24 out of 26 subject tests for which both groups participated. The mean differential between White and Hispanic students ranged from -0.45 points in Spanish Language to 2.46 in Chemistry.

**Figure 2** compares the percentage of AP tests with scores of 3 or more by race/ethnicity and gender based upon the total number of AP tests taken for 2006 and 2007. When examining

gender, 52.2 percent of males and 43.9 percent of females scored 3 or higher on the total number of AP subject tests in 2007. In 2007, males exceeded the performance of females by 8.3 percentage points. When comparing 2006 to 2007, the percentage of females scoring 3 or higher on AP tests decreased from 44.8 to 43.9 percent. This may in part be related to the 14.6 percent increase in the number of AP exams taken by females, as well as their disproportionate participation when compared to males.

When examining gender, 51.0 percent of the males and 44.8 percent of the females scored 3 or higher on the total number of AP subject tests in 2006. In 2006, males exceeded the performance of females by 6.2 percentage points. When comparing 2006 to 2007, the percentage of males scoring 3 or higher on AP tests increased from 51.0 percent to 52.2 percent.

Regarding race/ethnicity, the percentages of students attaining a score of 3 or above ranged from 17.7 percent for African Americans to 71.6 percent for Asians in 2007. The percentages scoring 3 or higher ranged from 17.4 percent for African Americans to 69.6 percent for Whites for 2006. Comparing 2006 to 2007, the percent-

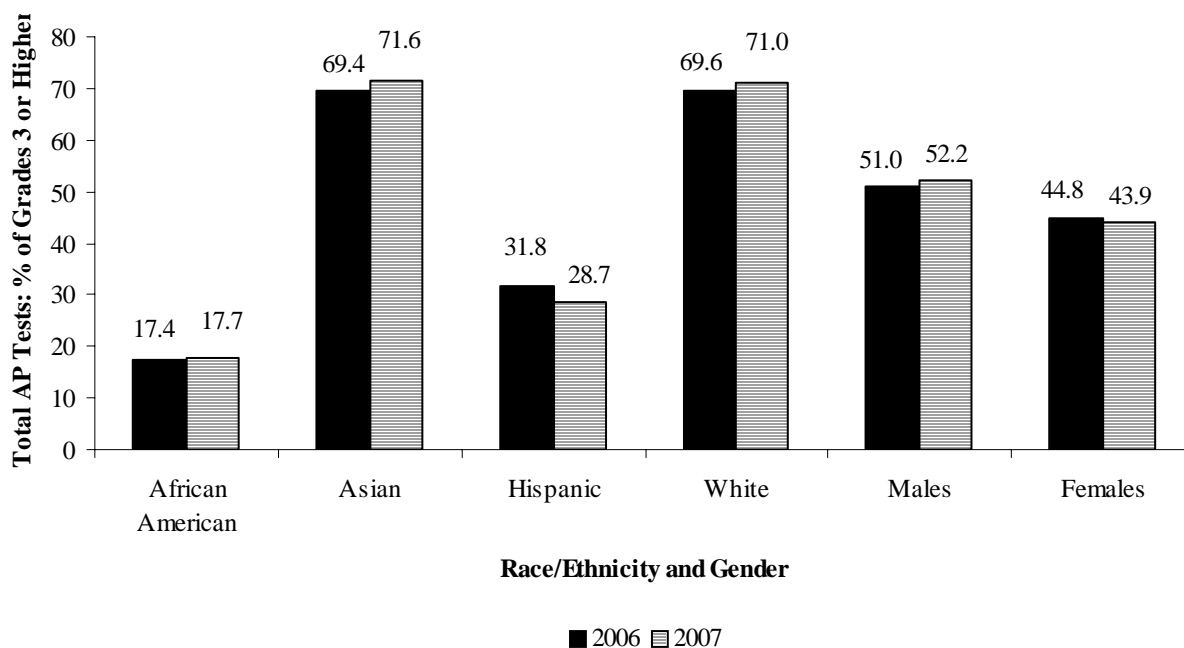


Figure 2. Percentage of AP tests scoring three or higher by race/ethnicity and gender, 2006 and 2007.

age of African American, Asian, and White students scoring 3 or higher increased by 0.3, 2.2 and 1.4 percentage points, respectively. Alternatively, the percentage of Hispanic and students scoring 3 or higher declined by 3.1 percentage points.

### What percentage of students in HISD scored a 3 or better on AP subject tests for the May 2007 administration?

**Table 12** summarizes the number of AP test-takers, the number of AP tests taken and the percentage of total examinations for which participants scored a 3 or higher by campus. Typically, a score of 3 qualifies a student to receive advanced placement and/or college credit. For the 2007 school year, a total of 4,842 students took 9,118 AP exams. Out of the total 9,118 exams taken, 47.4 percent of the scores were 3 or higher. This represents a slight decrease from the previous school year when 47.6 percent of the scores were 3 or above. When comparing district performance to that of the state, Texas AP test-takers outperformed district students by only 0.1 percentage point for those exams scored at 3 or higher. However, global AP test-takers outperformed HISD AP test-takers by 11.9 percentage points.

The number of students taking AP exams ranged from 3 at Eastwood Academy to 920 at Bellaire High School. For 2007, the number of AP tests taken ranged from 7 at Eastwood Academy to 2,501 at Bellaire High School. The percentage of scores that were a 3 or higher by high school campus ranged from 0.0 percent at Jesse Jones and Kashmere High Schools to 82.6 percent at Bellaire High School. At the state level, 47.5 percent of the AP scores were 3 or above, and seven campuses exceeded the state percentage in 2007. There were ten campuses where fewer than 10 percent of the scores were 3 or above.

Measures of AP success have typically focused on the percentage of students scoring 3 or higher. Although still used, this metric may be inflated, for example, by allowing only top students to test or participate in the AP program.

Table 12. Number of Test-Takers, AP Exams Taken and Percentage of Exams Scoring 3–5 by Campus, 2007

School	N of Students Taking AP Exams	N of Exams Taken	% of Exams Scored 3–5
<i>High Schools</i>			
Austin	154	236	8.9
Bellaire	920	2,501	82.6
Carnegie	132	254	62.2
Challenge	56	63	54.0
Chavez	341	578	20.6
Davis	141	175	28.6
DeBakey	211	462	70.8
Eastwood	3	7	*
Furr	59	102	17.6
Houston	189	301	2.7
HSLECJ	93	143	41.3
HSPVA	180	400	69.3
Jones	57	87	0.0
Jordan	77	113	2.7
Kashmere	16	23	0.0
Lamar	67	67	80.6
Lee	126	257	14.4
Madison	249	301	6.0
Milby	206	358	29.1
Reagan	149	223	11.2
Scarborough	44	61	14.8
Sharpstown	92	168	21.4
Sterling	57	63	1.6
Waltrip	79	159	28.9
Washington	48	82	35.4
Westbury	131	226	11.9
Westside	777	1,457	52.4
Wheatley	63	99	1.0
Worthing	48	63	3.2
Yates	46	58	1.7
<i>Middle School</i>			
Johnston Middle	31	31	77.4
HISD	<b>4,842</b>	<b>9,118</b>	47.4
Texas	135,130	246,096	47.5
Global	1,464,254	2,533,431	59.3

Source: 2007 College Board Report.

\*Scores are not reported for less than 5 students.

Alternatively, another measure involves centering on the participation in AP exams by school, without looking at the level of performance. This latter measure does examine

equity with regard to access to AP courses and testing, but without taking into account the actual performance of the students, the level of excellence cannot be measured (College Board, AP Central, 2005). Therefore, a new measure of equity and excellence has been put forth by the College Board. It is calculated by taking the “percentage of students in a total population (school, district, state, etc.), who had a least one AP experience resulting in an exam score of 3 or higher” (College Board, AP Central, 2005).

**Appendix C** summarizes 2007 AP performance based on the percentage of students enrolled in grades 10, 11, and 12 scoring 3 or higher on at least one AP exam by campus and the graduating class summary. For the former performance measure, students were required to score a 3 or higher during the 2007 AP administration. Alternatively, the graduating class summary shows the percentage by campus of twelfth grade students that scored 3 or higher at any point in their high school tenure. For tenth grade students, percentages ranged from 0.0 percent at Eastwood Academy, Ebbert Furr, High School for Law Enforcement and Criminal Justice (HSLEECJ), Jones, Kashmere, James Madison, George Scarborough, Ross Sterling, Phillis Wheatley, Worthing, and Jack Yates High Schools, to 41.7 percent at DeBakey High School. For eleventh grade students, percentages ranged from 0.0 percent at Eastwood, Furr, HSLEECJ, Jones, Barbara Jordan, Kashmere, Sterling, and Yates High Schools to 62.1 percent at DeBakey High School. For twelfth grade students, percentages ranged from 0.0 percent at Eastwood, Furr, HSLEECJ, Jones, Kashmere, Sterling, Wheatley, Worthing, and Yates High Schools, to 73.0 percent at DeBakey High School.

College Board summary data indicate that 90.2 percent of the graduating senior class attending DeBakey High School scored 3 or higher on at least one AP subject exam at some point in their high school tenure. Alternatively, none of the graduating seniors attending Eastwood, Furr, HSLEECJ, Sterling, Wheatley, or Yates High Schools met this measure.

### **How has participation and performance on AP subject tests progressed from 1997 to 2007?**

**Appendix D** summarizes the mean AP subject test scores from 1997–2007. Comparisons were made for subject tests that included at least three years of test data. Data from 2007 were compared to data from 1997, if scores were available for those years. If not, the differences were calculated by subtracting the year in which data were first available from the final year of data. Overall, scores have fluctuated slightly with mean score increases occurring in 12 examinations and decreases occurring in 20 out of 32 examinations. Differences ranged from -1.87 points in Statistics to 2.13 points in Psychology. Decreases in the mean scores occurred for four of the AP subject tests related to the area of science. These included: Biology (-0.69), Chemistry (-0.51), Physics C: Electricity & Magnetism (-0.70), and Physics C: Mechanics (-1.26). Computer Science AB, Economics: Macro, Music Theory, and Spanish Language represent the subject areas for which a mean score of at least a 3.0 was maintained from 1997–2007. Overall, district mean scores have decreased by 0.61 points over the past 11 years.

### **For 2007, what were the number of AP Scholar Award Recipients?**

**Table 13** summarizes the number of AP Scholar Award Recipients by campus. Total AP Scholars reflect the number of AP Scholar, AP Scholar with Honor, and AP Scholar with Distinction recipients as these are mutually exclusive categories. National AP Scholar award recipients meet the requirements for an AP Scholar with Distinction. For 2007, there were a total of 763 AP Scholar Award recipients from 19 campuses. HISD had 325 AP Scholars, 141 AP Scholars with Honor, 298 AP Scholars with Distinction, and 76 National AP Scholars. Out of the 19 campuses, Bellaire, DeBakey, HSPVA, and Westside High Schools had the greatest number of students who were AP Scholar recipients, and

Table 13. Number of AP Scholar Award Recipients by Campus, 2007

School	AP Scholar	AP Scholar with Honor	AP Scholar with Distinction	Total AP Scholars	National AP Scholar
Austin	1			<b>1</b>	
Bellaire	124	76	218	<b>418</b>	58
Carnegie	12	12	9	<b>33</b>	
Challenge	3			<b>3</b>	
Chavez	2	1		<b>3</b>	
Davis		1		<b>1</b>	
DeBakey	39	7	19	<b>65</b>	7
Eastwood	1			<b>1</b>	
Houston	1			<b>1</b>	
HSLECJ	5	3		<b>8</b>	
HSPVA	31	13	16	<b>60</b>	2
Lamar			1	<b>1</b>	
Milby	2	2		<b>4</b>	
Scarborough	1			<b>1</b>	
Sharpstown	3			<b>3</b>	
Waltrip	4			<b>4</b>	
Washington	5		1	<b>6</b>	
Westbury	3	1		<b>4</b>	
Westside	87	25	34	<b>146</b>	9
<b>HISD</b>	<b>324</b>	<b>141</b>	<b>298</b>	<b>763</b>	<b>76</b>

Source: 2007 College Board AP School Scholar Roster Report.

Note: Total AP Scholars reflect the number of AP Scholar, AP Scholar with Honor, and AP Scholar with Distinction recipients as these are mutually exclusive categories. National AP Scholar award recipients meet the requirements for an AP Scholar with Distinction.

were the only campuses where students earned the designation of National AP Scholar.

### Discussion

For the 2006–2007 school year, a total of 7,586 students were enrolled in AP courses, but the number of test-takers for the AP subject exams totaled 4,842. Moreover, in an analysis matching students who completed AP courses and then took the corresponding AP test, only 63.1 percent of the students who completed the AP course took the corresponding AP test. In addition, 3,198 Hispanic, 1,825 African American, and 1,774 White students enrolled in AP courses during the 2006–2007 academic year; however, only 2,091 Hispanic, 763 African American, and 1,085 White students were test-takers based upon self-reported demographic information. These data suggest that although

there are students enrolling in AP courses, all are not taking the examinations.

Over the past eleven years, participation in the AP program has increased dramatically from 897 students in 1997 to 4,842 students in 2007. Moreover, the diversity of test-takers has increased markedly over the past ten years. The percentage of African American AP test-takers increased from 8.0 percent in 1997 to 15.8 percent in 2007. Furthermore, Hispanic AP test-takers increased from 27.3 percent in 1997 to 43.2 percent in 2007. Although this is clearly a very positive step districtwide, there is a great deal of variability among campuses. Out of 30 high school campuses for which the College Board provided AP testing results, the percentage of seniors who took AP subject tests ranged from 2.0 percent to 82.1 percent while the participation rate for juniors ranged from 0.0 percent to 65.8 percent. Since there are benefits

such as scholarships, recognition, and college credit/advanced placement, a large number of students may be missing out on the opportunities afforded them by participating. According to the College Board website (2006e), “Students whose AP grades exempt them from introductory college courses typically do better in subsequent higher-level courses than those students who actually take the introductory college course.” To motivate students to take AP tests, counselors and school staff should incorporate the assistance of parents by educating them on the benefits, particularly, financial ones.

The data indicate that student performance has been declining from a longitudinal perspective. This may be attributed to the dramatic increase in the number and diversity of test-takers as well as policy decisions to eliminate any barriers to participation by implementing the *AP Initiative*. Over the past eleven years, the mean test scores for the district have declined from 3.19 to 2.58. Although more students are participating, strategic planning is needed to increase the level of performance, especially on those campuses where both participation and performance are low. Components to increase student achievement would encompass strengthening professional development, implementing AP vertical teams to strengthen student preparation at the elementary, middle, and high school levels, conducting a needs assessment to ensure that sufficiently qualified science and mathematics teachers are available at all schools, providing opportunities for students to take prerequisite science and math courses, and monitoring the quality of the classes.

The State Board of Education mandated that students entering high school during the 2007–2008 school year will be required to take four years of math and four years of science under the Recommended High School Program. Since AP and IB science courses in Physics, Chemistry, Biology, and Environmental Science are options to fulfill the new requirements, it would behoove the district to strengthen performance in science, since the data indicate

that mean scores have declined in biology, chemistry and Physics C-related AP exams. Conducting a needs assessment of staff and resources (labs and materials), should also be undertaken to ensure that a fourth course in science can be met at the high school level. Moreover, there are students that show AP potential based upon their PSAT scores, but lack the necessary prerequisites to take the advanced science or math courses. In view of the changes in graduation requirements, additional opportunities to take prerequisite courses for these tenth grade students are needed.

Students require an educational foundation so that they are prepared to take advanced classes in high school. At the elementary level, a greater emphasis should be placed on critical and analytical thinking skills. When students enter middle school, it is imperative they have the opportunity to take advanced courses in the four core areas during their tenure so that they have a foundation onto which they can build for high school and college. All HISD middle school campuses should offer algebra and integrated physics and chemistry. Vertical teams within feeder patterns should be developed at the elementary, middle, and high school level to ensure a seamless transition and a strong educational foundation for all students in the district.

Issues pertaining to performance are more pronounced when looking at campus-level data. There are a few campuses for which participation and performance are high relative to other HISD campuses, such as Bellaire, Carnegie Vanguard, DeBaKey High Schools, and HSPVA; however, campuses such as Eastwood, Furr, Jones, Kashmere, Wheatley, Worthing, and Yates High Schools had low levels of participation and performance. It is imperative that these schools emphasize professional development and work in vertical teams to strengthen the preparation of students in grades prior to taking AP courses and exams. Further, provide assistance to ensure that courses offered on the campus level follow the rigorous



standards set forth by the Advanced Placement program.

### Recommendations

1. Continue to identify successful efforts to promote participation and performance among students, especially minorities and males, by providing information to students and parents about the benefits of the AP program, which includes scholarships, recognition, and college credit/advanced placement.
2. To increase student achievement, continue to provide adequate and relevant professional development opportunities, especially in the area of science. Additionally, strengthen the curriculum in middle school so that students have a strong educational foundation not only academically, but also with regard to the development of higher order thinking skills and time management skills.
3. On the campus level, monitor the students enrolled in AP courses and the students who subsequently take the AP subject examinations.
4. In order to promote equity and excellence, consideration should be given to creating opportunities for students to take prerequisite math and science courses so that those showing ability or motivation in tenth grade have the necessary foundation to be successful and meet course requirements.
5. For campuses with low participation and performance rates, focus on the development of vertical teams (elementary, middle, and high school) so that student preparation is strengthened prior to taking AP courses and monitor the rigor of the courses.

### References

- College Board, AP Central. (2007a). *About AP*. Retrieved on August 9, 2007, from <http://www.collegeboard.com/student/testing/ap/about.html>
- College Board, AP Central. (2007b). *AP Course Audit Information*. Retrieved August 9, 2007, from [http://apcentral.collegeboard.com/apc/public/courses/teachers\\_corner/46361.html](http://apcentral.collegeboard.com/apc/public/courses/teachers_corner/46361.html)
- College Board, AP Central. (2007c). *Federal and State AP Exam Fee Assistance*. Retrieved on August 9, 2007 from <http://apcentral.collegeboard.com/apc/public/program/20673.html>
- College Board, AP Central. (2007d). *AP Scholar Awards*. Retrieved on October 4, 2007 from <http://apcentral.collegeboard.com/apc/public/program/initiatives/2057.html>
- College Board, AP Central. (2006a). *The AP Exams*. Retrieved November 9, 2006, from <http://apcentral.collegeboard.com/apc/public/exam/index.html>
- College Board, AP Central. (2006b). *Bulletin for AP® Students and Parents, 2006–07*. Retrieved on August 9, 2007 from [http://www.collegeboard.com/prod\\_downloads/student/testing/ap/AP-bulletin.pdf](http://www.collegeboard.com/prod_downloads/student/testing/ap/AP-bulletin.pdf)
- College Board, AP Central. (2006c). *Siemens Awards for Advanced Placement*. Retrieved November 13, 2006, from <http://www.collegeboard.com/student/pay/scholarships-and-aid/23639.html>
- College Board, AP Central. (2006d). *Professional Development*. Retrieved November 13, 2006, from <http://apcentral.collegeboard.com/apc/public/teachers/index.html>
- College Board, AP Central. (2006e). *The Courses: Facts*. Retrieved December 4, 2006 from <http://apcentral.collegeboard.com/apc/public/courses/index.html>
- College Board, AP Central. (2005). *Advanced Placement Report to the Nation 2005*. Retrieved April 18, 2005 from [http://www.collegeboard.com/prod\\_downloads/about/news\\_info/ap/2005/ap-report-nation.pdf](http://www.collegeboard.com/prod_downloads/about/news_info/ap/2005/ap-report-nation.pdf)
- College Board, AP Central. (2004). *Interpreting and Using AP® Grades*. Retrieved November 13, 2006, from [http://apcentral.collegeboard.com/apc/public/repository/2003\\_interpreting\\_pdf\\_7925.pdf](http://apcentral.collegeboard.com/apc/public/repository/2003_interpreting_pdf_7925.pdf)
- Houston Independent School District. (2007). *Secondary School Guidelines, Advanced Academics, XIII*. Houston, Texas: Printing Services.
- Texas Education Agency (2007a). *TEA Correspondence: Advanced Placement/International Baccalaureate Awards for May 2006 Exams*. Retrieved August 9, 2007, from <http://www.tea.state.tx.us/taa/stanprog031407.html>
- Texas Education Agency (2007b). *2006 AP/IB Awards*. Retrieved August 9, 2007, from <http://www.tea.state.tx.us/gted/aaannouncements.html>

**APPENDIX A**  
**AP Course Completion by Race/Ethnicity, Gender, Economic Status, and Campus**

School Name	Group	# Enrolled	# Eligible to Complete	# Completing	% Completing
Austin High School	All Students	714	375	277	73.9
Austin High School	Female	508	266	198	74.4
Austin High School	Male	206	109	79	72.5
Austin High School	Asian	6	4	3	75.0
Austin High School	African American	43	21	17	81.0
Austin High School	Hispanic	657	346	254	73.4
Austin High School	White	8	4	3	75.0
Austin High School	Non-Econ Disadv	88	47	34	72.3
Austin High School	Econ Disadv	625	327	243	74.3
Austin High School	Econ Status Missing	1	1	0	0.0
Bellaire High School	All Students	4,173	2,358	2,340	99.2
Bellaire High School	Female	2,279	1,298	1,290	99.4
Bellaire High School	Male	1,894	1,060	1,050	99.1
Bellaire High School	Asian	1,718	946	939	99.3
Bellaire High School	African American	154	90	85	94.4
Bellaire High School	Hispanic	293	170	167	98.2
Bellaire High School	White	2,008	1,152	1,149	99.7
Bellaire High School	Non-Econ Disadv	3,749	2,112	2,101	99.5
Bellaire High School	Econ Disadv	412	235	230	97.9
Bellaire High School	Econ Status Missing	12	11	9	81.8
Carnegie Vanguard	All Students	1,061	596	583	97.8
Carnegie Vanguard	Female	491	280	273	97.5
Carnegie Vanguard	Male	570	316	310	98.1
Carnegie Vanguard	Asian	30	17	16	94.1
Carnegie Vanguard	African American	203	118	117	99.2
Carnegie Vanguard	Hispanic	268	146	140	95.9
Carnegie Vanguard	Native American	6	4	4	100.0
Carnegie Vanguard	White	554	311	306	98.4
Carnegie Vanguard	Non-Econ Disadv	754	424	418	98.6
Carnegie Vanguard	Econ Disadv	307	172	165	95.9
Challenge HS	All Students	379	177	33	18.6
Challenge HS	Female	219	105	21	20.0
Challenge HS	Male	160	72	12	16.7
Challenge HS	Asian	25	11	1	9.1
Challenge HS	African American	71	33	7	21.2
Challenge HS	Hispanic	195	93	10	10.8
Challenge HS	Native American	4	2	1	50.0
Challenge HS	White	84	38	14	36.8
Challenge HS	Non-Econ Disadv	174	80	20	25.0
Challenge HS	Econ Disadv	205	97	13	13.4

**APPENDIX A (continued)**  
**AP Course Completion by Race/Ethnicity, Gender, Economic Status, and Campus**

School Name	Group	# Enrolled	# Eligible to Complete	# Completing	% Completing
Chavez High School	All Students	1,006	471	355	75.4
Chavez High School	Female	602	281	228	81.1
Chavez High School	Male	404	190	127	66.8
Chavez High School	Asian	88	42	33	78.6
Chavez High School	African American	79	32	24	75.0
Chavez High School	Hispanic	801	380	285	75.0
Chavez High School	White	38	17	13	76.5
Chavez High School	Non-Econ Disadv	228	105	74	70.5
Chavez High School	Econ Disadv	776	364	280	76.9
Chavez High School	Econ Status Missing	2	2	1	50.0
Davis High School	All Students	404	198	148	74.7
Davis High School	Female	271	132	101	76.5
Davis High School	Male	133	66	47	71.2
Davis High School	Asian	4	2	2	100.0
Davis High School	African American	21	10	10	100.0
Davis High School	Hispanic	375	184	135	73.4
Davis High School	White	4	2	1	50.0
Davis High School	Non-Econ Disadv	50	24	20	83.3
Davis High School	Econ Disadv	351	171	126	73.7
Davis High School	Econ Status Missing	3	3	2	66.7
DeBakey HSHP	All Students	1,249	646	637	98.6
DeBakey HSHP	Female	800	413	405	98.1
DeBakey HSHP	Male	449	233	232	99.6
DeBakey HSHP	Asian	525	273	272	99.6
DeBakey HSHP	African American	299	153	152	99.3
DeBakey HSHP	Hispanic	308	157	151	96.2
DeBakey HSHP	Native American	8	5	5	100.0
DeBakey HSHP	White	109	58	57	98.3
DeBakey HSHP	Non-Econ Disadv	702	367	365	99.5
DeBakey HSHP	Econ Disadv	537	273	266	97.4
DeBakey HSHP	Econ Status Missing	10	6	6	100.0
Furr High School	All Students	175	101	99	98.0
Furr High School	Female	113	66	64	97.0
Furr High School	Male	62	35	35	100.0
Furr High School	Asian	4	2	2	100.0
Furr High School	African American	8	4	4	100.0
Furr High School	Hispanic	150	87	85	97.7
Furr High School	White	13	8	8	100.0
Furr High School	Non-Econ Disadv	44	23	23	100.0
Furr High School	Econ Disadv	131	78	76	97.4

**APPENDIX A (continued)**  
**AP Course Completion by Race/Ethnicity, Gender, Economic Status, and Campus**

School Name	Group	# Enrolled	# Eligible to Complete	# Completing	% Completing
Houston High School (Sam Houston)	All Students	741	408	361	88.5
Houston High School (Sam Houston)	Female	396	221	199	90.0
Houston High School (Sam Houston)	Male	345	187	162	86.6
Houston High School (Sam Houston)	Asian	11	7	6	85.7
Houston High School (Sam Houston)	African American	11	6	5	83.3
Houston High School (Sam Houston)	Hispanic	700	386	343	88.9
Houston High School (Sam Houston)	White	19	9	7	77.8
Houston High School (Sam Houston)	Non-Econ Disadv	188	110	98	89.1
Houston High School (Sam Houston)	Econ Disadv	550	295	262	88.8
Houston High School (Sam Houston)	Econ Status Missing	3	3	1	33.3
HSLECJ	All Students	443	280	221	78.9
HSLECJ	Female	319	198	150	75.8
HSLECJ	Male	124	82	71	86.6
HSLECJ	Asian	10	5	3	60.0
HSLECJ	African American	95	58	50	86.2
HSLECJ	Hispanic	313	199	154	77.4
HSLECJ	White	25	18	14	77.8
HSLECJ	Non-Econ Disadv	140	88	70	79.5
HSLECJ	Econ Disadv	303	192	151	78.6
HSPVA	All Students	1,406	820	406	49.5
HSPVA	Female	939	548	264	48.2
HSPVA	Male	467	272	142	52.2
HSPVA	Asian	74	46	23	50.0
HSPVA	African American	269	152	69	45.4
HSPVA	Hispanic	186	108	58	53.7
HSPVA	White	877	514	256	49.8
HSPVA	Non-Econ Disadv	1,300	761	378	49.7
HSPVA	Econ Disadv	106	59	28	47.5
Johnston Middle School	All Students	63	31	31	100.0
Johnston Middle School	Grade 8	63	31	31	100.0
Johnston Middle School	Female	35	18	18	100.0
Johnston Middle School	Male	28	13	13	100.0
Johnston Middle School	Hispanic	59	29	29	100.0
Johnston Middle School	White	4	2	2	100.0
Johnston Middle School	Non-Econ Disadv	15	7	7	100.0
Johnston Middle School	Econ Disadv	48	24	24	100.0
Jones High School	All Students	171	96	41	42.7
Jones High School	Female	111	61	24	39.3
Jones High School	Male	60	35	17	48.6
Jones High School	Asian	3	2	1	50.0
Jones High School	African American	123	68	29	42.6
Jones High School	Hispanic	45	26	11	42.3
Jones High School	Non-Econ Disadv	37	21	9	42.9
Jones High School	Econ Disadv	132	73	31	42.5
Jones High School	Econ Status Missing	2	2	1	50.0

**APPENDIX A (continued)**  
**AP Course Completion by Race/Ethnicity, Gender, Economic Status, and Campus**

<b>School Name</b>	<b>Group</b>	<b># Enrolled</b>	<b># Eligible to Complete</b>	<b># Completing</b>	<b>% Completing</b>
Jordan High School for Careers	All Students	915	491	482	98.2
Jordan High School for Careers	Female	618	335	328	97.9
Jordan High School for Careers	Male	297	156	154	98.7
Jordan High School for Careers	African American	510	275	270	98.2
Jordan High School for Careers	Hispanic	405	216	212	98.1
Jordan High School for Careers	Non-Econ Disadv	287	155	150	96.8
Jordan High School for Careers	Econ Disadv	628	336	332	98.8
Kashmere High School	All Students	130	65	13	20.0
Kashmere High School	Female	104	52	12	23.1
Kashmere High School	Male	26	13	1	7.7
Kashmere High School	African American	109	55	11	20.0
Kashmere High School	Hispanic	21	10	2	20.0
Kashmere High School	Non-Econ Disadv	24	13	1	7.7
Kashmere High School	Econ Disadv	106	52	12	23.1
Lamar High School	All Students	113	54	50	92.6
Lamar High School	Female	58	27	25	92.6
Lamar High School	Male	55	27	25	92.6
Lamar High School	Asian	23	11	10	90.9
Lamar High School	African American	5	2	2	100.0
Lamar High School	Hispanic	26	12	11	91.7
Lamar High School	White	59	29	27	93.1
Lamar High School	Non-Econ Disadv	79	37	34	91.9
Lamar High School	Econ Disadv	34	17	16	94.1
Lanier Charter Middle School	All Students	48	23	17	73.9
Lanier Charter Middle School	Grade 8	48	23	17	73.9
Lanier Charter Middle School	Female	32	15	10	66.7
Lanier Charter Middle School	Male	16	8	7	87.5
Lanier Charter Middle School	Hispanic	48	23	17	73.9
Lanier Charter Middle School	Non-Econ Disadv	15	7	4	57.1
Lanier Charter Middle School	Econ Disadv	33	16	13	81.3
Lee High School	All Students	626	326	229	70.2
Lee High School	Female	384	202	139	68.8
Lee High School	Male	242	124	90	72.6
Lee High School	Asian	111	61	50	82.0
Lee High School	African American	92	46	28	60.9
Lee High School	Hispanic	388	198	133	67.2
Lee High School	Native American	1	0	0	N/A
Lee High School	White	34	21	18	85.7
Lee High School	Non-Econ Disadv	87	44	28	63.6
Lee High School	Econ Disadv	532	277	200	72.2
Lee High School	Econ Status Missing	7	5	1	20.0

**APPENDIX A (continued)****AP Course Completion by Race/Ethnicity, Gender, Economic Status, and Campus**

School Name	Group	# Enrolled	# Eligible to Complete	# Completing	% Completing
Long Middle School	All Students	46	23	18	78.3
Long Middle School	Grade 8	46	23	18	78.3
Long Middle School	Female	28	14	12	85.7
Long Middle School	Male	18	9	6	66.7
Long Middle School	Hispanic	46	23	18	78.3
Long Middle School	Non-Econ Disadv	6	3	2	66.7
Long Middle School	Econ Disadv	40	20	16	80.0
Madison High School	All Students	804	408	341	83.6
Madison High School	Female	506	258	221	85.7
Madison High School	Male	298	150	120	80.0
Madison High School	Asian	15	8	8	100.0
Madison High School	African American	492	253	211	83.4
Madison High School	Hispanic	295	146	121	82.9
Madison High School	White	2	1	1	100.0
Madison High School	Non-Econ Disadv	319	159	135	84.9
Madison High School	Econ Disadv	480	245	202	82.4
Madison High School	Econ Status Missing	5	4	4	100.0
Milby High School	All Students	975	491	358	72.9
Milby High School	Female	549	274	198	72.3
Milby High School	Male	426	217	160	73.7
Milby High School	Asian	46	26	23	88.5
Milby High School	African American	50	26	14	53.8
Milby High School	Hispanic	870	434	317	73.0
Milby High School	White	9	5	4	80.0
Milby High School	Non-Econ Disadv	231	121	79	65.3
Milby High School	Econ Disadv	744	370	279	75.4
Reagan High School	All Students	715	393	331	84.2
Reagan High School	Female	406	220	183	83.2
Reagan High School	Male	309	173	148	85.5
Reagan High School	Asian	28	16	14	87.5
Reagan High School	African American	19	9	7	77.8
Reagan High School	Hispanic	632	349	292	83.7
Reagan High School	White	36	19	18	94.7
Reagan High School	Non-Econ Disadv	155	86	71	82.6
Reagan High School	Econ Disadv	558	305	258	84.6
Reagan High School	Econ Status Missing	2	2	2	100.0
Scarborough High School	All Students	274	145	133	91.7
Scarborough High School	Grade 9	2	1	1	100.0
Scarborough High School	Female	154	80	73	91.3
Scarborough High School	Male	120	65	60	92.3
Scarborough High School	Asian	17	10	7	70.0
Scarborough High School	African American	60	32	30	93.8
Scarborough High School	Hispanic	140	75	70	93.3
Scarborough High School	White	57	28	26	92.9
Scarborough High School	Non-Econ Disadv	102	54	49	90.7
Scarborough High School	Econ Disadv	172	91	84	92.3

**APPENDIX A (continued)**  
**AP Course Completion by Race/Ethnicity, Economic Status, and Campus**

School Name	Group	# Enrolled	# Eligible to Complete	# Completing	% Completing
Sharpstown High School	All Students	358	193	129	66.8
Sharpstown High School	Female	246	137	94	68.6
Sharpstown High School	Male	112	56	35	62.5
Sharpstown High School	Asian	47	25	16	64.0
Sharpstown High School	African American	72	43	24	55.8
Sharpstown High School	Hispanic	215	112	80	71.4
Sharpstown High School	White	24	13	9	69.2
Sharpstown High School	Non-Econ Disadv	68	39	30	76.9
Sharpstown High School	Econ Disadv	286	150	98	65.3
Sharpstown High School	Econ Status Missing	4	4	1	25.0
Sterling High School	All Students	166	70	54	77.1
Sterling High School	Female	100	45	34	75.6
Sterling High School	Male	66	25	20	80.0
Sterling High School	Asian	1	0	0	N/A
Sterling High School	African American	124	52	37	71.2
Sterling High School	Hispanic	39	17	16	94.1
Sterling High School	White	2	1	1	100.0
Sterling High School	Non-Econ Disadv	38	17	12	70.6
Sterling High School	Econ Disadv	128	53	42	79.2
Waltrip High School	All Students	1,476	760	565	74.3
Waltrip High School	Female	836	432	329	76.2
Waltrip High School	Male	640	328	236	72.0
Waltrip High School	Asian	22	12	7	58.3
Waltrip High School	African American	187	99	69	69.7
Waltrip High School	Hispanic	722	362	263	72.7
Waltrip High School	White	545	287	226	78.7
Waltrip High School	Non-Econ Disadv	856	447	338	75.6
Waltrip High School	Econ Disadv	620	313	227	72.5
Washington High School	All Students	721	399	358	89.7
Washington High School	Female	312	171	157	91.8
Washington High School	Male	409	228	201	88.2
Washington High School	Asian	12	6	5	83.3
Washington High School	African American	455	250	232	92.8
Washington High School	Hispanic	189	108	93	86.1
Washington High School	White	65	35	28	80.0
Washington High School	Non-Econ Disadv	405	224	204	91.1
Washington High School	Econ Disadv	316	175	154	88.0
Westbury High School	All Students	772	426	329	77.2
Westbury High School	Female	430	243	187	77.0
Westbury High School	Male	342	183	142	77.6
Westbury High School	Asian	51	29	23	79.3
Westbury High School	African American	342	188	139	73.9
Westbury High School	Hispanic	259	139	109	78.4
Westbury High School	White	120	70	58	82.9
Westbury High School	Non-Econ Disadv	380	211	170	80.6
Westbury High School	Econ Disadv	391	214	159	74.3
Westbury High School	Econ Status Missing	1	1	0	0.0

**APPENDIX A (continued)**  
**AP Course Completion by Race/Ethnicity, Economic Status, and Campus**

School Name	Group	# Enrolled	# Eligible to Complete	# Completing	% Completing
Westside High School	All Students	3,552	1,864	1,707	91.6
Westside High School	Female	1,853	970	897	92.5
Westside High School	Male	1,699	894	810	90.6
Westside High School	Asian	526	278	253	91.0
Westside High School	African American	453	222	194	87.4
Westside High School	Hispanic	699	372	339	91.1
Westside High School	Native American	10	6	5	83.3
Westside High School	White	1,864	986	916	92.9
Westside High School	Non-Econ Disadv	2,673	1,402	1,296	92.4
Westside High School	Econ Disadv	856	441	395	89.6
Westside High School	Econ Status Missing	23	21	16	76.2
Wheatley High School	All Students	298	167	153	91.6
Wheatley High School	Female	183	103	96	93.2
Wheatley High School	Male	115	64	57	89.1
Wheatley High School	Asian	8	4	3	75.0
Wheatley High School	African American	209	115	103	89.6
Wheatley High School	Hispanic	73	44	43	97.7
Wheatley High School	White	8	4	4	100.0
Wheatley High School	Non-Econ Disadv	80	44	39	88.6
Wheatley High School	Econ Disadv	214	119	110	92.4
Wheatley High School	Econ Status Missing	4	4	4	100.0
Worthing High School	All Students	146	69	65	94.2
Worthing High School	Female	111	53	49	92.5
Worthing High School	Male	35	16	16	100.0
Worthing High School	African American	138	65	61	93.8
Worthing High School	Hispanic	2	1	1	100.0
Worthing High School	Native American	6	3	3	100.0
Worthing High School	Non-Econ Disadv	52	23	23	100.0
Worthing High School	Econ Disadv	91	45	41	91.1
Worthing High School	Econ Status Missing	3	1	1	100.0
Yates High School	All Students	461	261	210	80.5
Yates High School	Female	297	170	139	81.8
Yates High School	Male	164	91	71	78.0
Yates High School	Asian	4	2	2	100.0
Yates High School	African American	434	247	197	79.8
Yates High School	Hispanic	23	12	11	91.7
Yates High School	Non-Econ Disadv	215	123	96	78.0
Yates High School	Econ Disadv	240	134	111	82.8
Yates High School	Econ Status Missing	6	4	3	75.0



## APPENDIX B

<b>Ethnic and Gender Differential, 2007</b>			
<b>Subject</b>	<b>Male-Female</b>	<b>White-Af.Am.</b>	<b>White-Hisp.</b>
Art: Studio 2-D	0.33	N/A	N/A
Art: Studio Art-Drawing	-0.93	N/A	N/A
Biology	0.23	1.90	1.91
Calculus AB	0.75	1.15	1.06
Calculus BC	0.68	N/A	0.55
Chemistry	0.63	2.37	2.46
Chinese Lang. & Culture	-0.09	N/A	N/A
Computer Science A	-0.32	N/A	2.42
Computer Science AB	N/A	N/A	N/A
Economics: Macroeconomics	0.54	1.32	1.21
Economics: Microeconomics	-0.33	N/A	1.40
English Language & Composition	0.17	1.43	1.43
English Literature & Composition	0.06	1.60	1.58
Environmental Science	0.15	1.34	1.84
European History	0.61	N/A	1.35
French Language	0.11	N/A	0.67
French Literature	N/A	N/A	N/A
German Language	-0.16	N/A	0.86
Government & Politics: Comparative	N/A	N/A	N/A
Government & Politics: U.S.	0.26	1.65	1.58
History of Art	-0.25	N/A	0.79
Human Geography	0.43	1.48	1.21
Italian Languages & Culture	N/A	N/A	N/A
Japanese Language & Culture	N/A	N/A	N/A
Latin: Literature	0.33	N/A	N/A
Latin: Vergil	N/A	N/A	N/A
Music Theory	0.33	1.25	N/A
Physics B	0.56	1.27	2.06
Physics C - Electricity & Magnetism	N/A	N/A	N/A
Physics C - Mechanics	0.08	2.67	0.81
Psychology	-0.05	0.90	0.97
Spanish Language	-0.38	0.06	-0.45
Spanish Literature	-0.39	N/A	1.24
Statistics	0.67	0.90	1.47
United States History	0.24	1.57	1.61
World History	0.21	1.48	1.29

Note: Differential scores are not reported for exams with less than five students.

**APPENDIX C**

**2007 AP Performance Based on Percentage of Student Enrollment and Graduating Class Summary**

<b>AP Test-Takers Scoring 3 or Higher Based on Enrollment by Grade</b>				
<b>School Name</b>	<b>% of 10<sup>th</sup> Grade</b>	<b>% of 11<sup>th</sup> Grade</b>	<b>% of 12<sup>th</sup> Grade</b>	<b>% of Graduating Class</b>
Austin	0.2	1.1	3.3	10.9
Bellaire	22.6	37.3	41.2	55.8
Carnegie	28.9	50.7	34.7	66.7
Challenge	13.0	14.0	2.5	16.3
Chavez	3.9	8.3	5.8	17.8
Davis	0.2	8.9	3.0	14.4
DeBakey	41.7	62.1	73.0	90.2
Eastwood	0.0	0.0	0.0	0.0
Furr	0.0	0.0	0.0	0.0
Houston	0.2	0.2	0.7	5.1
HSLECJ	0.0	0.0	0.0	0.0
HSPVA	9.0	27.3	44.3	56.9
Jones	0.0	0.0	0.0	1.1
Jordan	0.7	0.0	0.3	4.1
Kashmere	0.0	0.0	0.0	3.0
Lamar	0.5	0.8	5.3	6.9
Lee	0.2	2.6	4.8	5.9
Madison	0.0	0.8	2.8	3.9
Milby	3.6	9.9	4.0	9.1
Reagan	1.0	3.1	2.3	11.1
Scarborough	0.0	1.5	1.5	3.0
Sharpstown	0.5	2.3	5.4	11.1
Sterling	0.0	0.0	0.0	0.0
Waltrip	0.6	3.7	2.7	5.6
Washington	4.6	6.6	19.1	23.4
Westbury	1.4	1.2	2.2	2.7
Westside	15.3	17.8	27.9	40.5
Wheatley	0.0	0.5	0.0	0.0
Worthing	0.0	0.5	0.0	0.4
Yates	0.0	0.0	0.0	0.0

Source: 2007 College Board Report.

Note: Results do not include data for students enrolled in ninth grade or lower. The percentage of enrollment by grade measures the students enrolled in grades 10, 11, and 12 who scored 3 or higher on at least one AP exam during the 2006 school year. The Graduating Class Summary shows what percentage of students in grade 12 scored a 3 or higher at any point in their high school years.

## APPENDIX D

## HISD Mean Scores by AP Subject Test, 1997–2007

Subject	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Diff.
Total AP Test-Takers	897	1,025	1,240	1,756	1,968	2,403	2,723	3,246	3,872	4,363	4,842	3,945
Art: History	*	*	*	*	1.55	3.16	3.72	3.84	3.21	3.54	2.06	0.51
Art: Studio Drawing	3.20	3.58	3.27	*	3.79	3.20	2.42	3.55	3.63	2.94	3.11	-0.09
Art: Studio General	-	*	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Art: Studio 2-D Design	±	±	±	*	*	2.33	3.40	3.50	2.58	3.56	3.75	1.42
Art: Studio 3-D Design	±	±	±	-	-	-	-	-	-	-	-	N/A
Biology	3.38	3.39	3.57	3.26	3.18	3.14	2.84	3.09	2.73	3.04	2.69	-0.69
Calculus AB	2.51	2.79	2.73	2.96	2.89	2.97	3.06	2.85	2.51	2.70	2.60	0.09
Calculus BC	3.57	3.04	2.93	3.26	3.25	3.46	3.58	3.69	3.70	3.74	3.91	0.34
Chemistry	3.29	2.69	2.81	3.24	2.25	2.88	2.57	2.96	3.11	3.00	2.78	-0.51
Chin. Lang. & Culture	±	±	±	±	±	±	±	±	±	±	4.81	N/A
Comp. Sci. A	*	*	2.30	2.05	2.64	2.65	2.77	2.87	2.86	3.00	3.22	0.92
<b>Comp. Sci AB</b>	*	*	-	<b>3.33</b>	<b>3.00</b>	<b>3.75</b>	<b>3.00</b>	*	*	<b>3.00</b>	<b>3.00</b>	-0.33
Econ. Micro	3.32	3.80	3.38	3.02	2.41	2.78	3.00	3.04	3.37	3.31	3.68	0.36
<b>Econ. Macro</b>	<b>3.47</b>	<b>3.49</b>	<b>3.84</b>	<b>3.57</b>	<b>3.83</b>	<b>3.79</b>	<b>3.68</b>	<b>3.43</b>	<b>3.43</b>	<b>3.06</b>	<b>3.13</b>	-0.34
Eng. Lang.&Comp.	3.01	3.11	2.95	2.58	2.55	2.52	2.49	2.37	2.20	2.06	2.22	-0.79
English Lit.&Comp.	3.14	3.06	2.67	2.80	2.80	2.73	2.73	2.62	2.36	2.30	2.39	-0.75
Environmental Sci.	-	-	1.09	1.36	1.19	1.78	1.38	2.49	2.52	2.12	2.45	1.36
European Hist.	2.75	2.91	2.78	3.04	2.51	2.97	2.73	3.56	2.65	3.44	3.53	0.78
French: Lang.	2.95	3.10	3.19	2.36	2.66	2.89	2.58	2.29	2.31	2.55	2.31	-0.64
French: Lit.	*	*	*	3.17	*	3.33	2.86	2.67	2.53	1.90	2.69	-0.48
German: Lang.	*	2.60	3.83	2.88	4.00	4.06	2.20	3.65	3.31	4.07	3.84	1.24
Gov. Politics U.S.	3.46	3.09	2.75	2.73	2.85	2.86	2.76	2.56	2.30	2.19	2.41	-1.05
Gov. Politics Comp	*	3.43	2.50	2.42	2.38	*	*	*	1.88	2.50	*	-0.93
Human Geog.	±	±	±	-	4.38	3.43	3.94	4.06	3.03	3.64	2.61	-1.77
International Eng. Lang.	-	-	-	-	-	*	-	-	-	-	-	N/A
Italian Language	±	±	±	±	±	±	±	-	-	*	*	N/A
Japan. Lang. & Culture	±	±	±	±	±	±	±	±	±	±	3.40	N/A
Latin: Vergil	-	-	*	*	-	-	*	2.75	*	2.62	*	N/A
Latin: Lit.	-	-	*	-	-	1.00	3.00	*	3.60	1.00	2.82	N/A
<b>Music Theory</b>	*	<b>3.77</b>	<b>3.79</b>	<b>3.92</b>	<b>4.14</b>	<b>3.87</b>	<b>4.23</b>	<b>3.81</b>	<b>3.70</b>	<b>3.49</b>	<b>3.72</b>	-0.05
Phys. B	2.31	1.67	1.56	2.15	2.70	2.77	3.20	2.55	2.52	2.39	2.96	0.65
Phys.C: Elec& Mag.	4.55	3.67	3.75	2.80	2.00	4.10	4.06	3.67	3.85	4.16	3.85	-0.7
Phys. C: Mech.	4.21	3.76	4.20	2.47	2.67	3.38	3.77	4.28	3.35	3.71	2.95	-1.26
Psychology	1.70	3.40	3.16	2.77	2.33	2.00	3.00	3.63	3.27	3.26	3.83	2.13
<b>Spanish: Lang</b>	<b>4.19</b>	<b>4.09</b>	<b>4.24</b>	<b>4.23</b>	<b>4.37</b>	<b>3.96</b>	<b>4.22</b>	<b>4.02</b>	<b>3.59</b>	<b>3.95</b>	<b>3.27</b>	-0.92
Spanish: Lit.	2.83	2.92	3.20	3.22	3.23	3.06	2.82	2.70	2.81	2.81	2.95	0.12
Statistics	4.57	4.15	4.50	4.00	3.83	3.61	3.10	2.79	2.82	2.79	2.70	-1.87
U.S. History	2.33	2.45	2.36	2.20	2.13	2.24	2.16	2.38	2.13	2.30	2.11	-0.22
World History	±	±	±	-	-	2.67	3.03	2.45	2.48	2.17	2.28	-0.39
District	3.19	3.20	3.04	2.98	2.92	2.91	2.97	2.81	2.63	2.58	2.58	-0.61

\*Scores are not reported for less than five students. A dash (-) indicates no test-takers, ± indicates the exam was not administered and N/A was reported when differentials were not calculated.

Source: College Board Reports, 1997–2007. Data reflect the most current results.

Note: Subject Tests in bold reflect areas for which mean scores were at least a 3.0 from 1997–2007.