RESEARCH

Assessment of Student Performance in Magnet Programs

2000–2001

Houston Independent School District • Department of Research and Accountability

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SCHOOLS WITH A MAGNET ADD ON PROGRAM (AOP)

Academy
- Horn Elementary

Aerospace Sciences/Mathematics
- Wesley Elementary

Computer Science
- Pugh Elementary

Creative and Performing Arts
- Longfellow Elementary

Fine Arts
- Crespo Elementary
- Poe Elementary
- Gregory-Lincoln Elementary

Literature
- Patterson Elementary

Math/Science
- Elrod Elementary

Math/Science/Technology
- Harvard Elementary
- Law Elementary
- West University Elementary

Music
- Bruce Elementary
- Garden Villas Elementary

Physical Development and Academics
- Bell Elementary

Skills Academy
- Codwell Elementary

SCHOOLS WITH A MAGNET SCHOOL WITHIN A SCHOOL (SWAS) PROGRAM

Architecture and Graphic Design
- Sharpstown Middle

Aviation Sciences
- Sterling High

Business Administration
- Lamar High

Classical Humanities
- Lee High

Coalition of Essential Schools
- Westbury High

Communications
- Yates High

Computer Technology
- Reagan High

Engineering Professions
- B. T. Washington High

Environmental Sciences
- Berry Elementary
- Lantrip Elementary

Fine Arts
- Burrus Elementary
- Dowling Middle
- Fleming Middle
- Gregory-Lincoln Middle School

Fine Arts/Ext. Instructional Day
- Burbank Elementary
- Anson Jones Elementary
- J. Will Jones Elementary
- Wilson Elementary

Fine Arts/Pre AP
- Pershing Middle

Foreign Language
- Kolter Elementary
- Bellaire High

Hotel/Restaurant Management
- Davis High

Integrated Technology
- Westside High School

International Studies Center
- Furr High

Leadership
- Sharpstown High

Leadership Development/Ext. Instr. Day
- Durham Elementary

Literature/Fine Arts
- Scroggins Elementary

Math/Foreign Language
- Key Middle

Math/Science
- Cornelius Elementary
- Ross Elementary
- Wainwright Elementary
- Clifton Middle
- Hartman Middle
- Revere Middle

Math/Science/Computer
- Fondren Middle

Math/Science/Technology
- Red Elementary
- Attucks Middle School
- Williams Middle School
- Worthing High

Meteorology/Space Sciences
- Madison High

Montessori
- Dodson Elementary (EC-6)
- Whidby Elementary (EC-5)

Music
- Parker Elementary

Music and Fine Arts
- Kashmere High

Performing Arts
- Johnston Middle

Physical Development
- Welch Middle

Research and Technology
- Waltrip High

Science Institute
- Milby High

Teaching Professions
- Austin High

Vanguard
- Askew Elementary (K-4)
- Carrillo Elementary
- DeZavala Elementary (Multilingual)
- Herod Elementary
- Oak Forest Elementary
- Pleasantville Elementary
- River Oaks Elementary
- T. H. Rogers Elementary
- Roosevelt Elementary
- Travis Elementary
- Windsor Village Elementary
- Burbank Middle
- Hamilton Middle
- Holland Middle
- Jackson Middle
- Lanier Middle
- Long Middle
- T. H. Rogers Middle
- Ryan Middle
- Jones High

SCHOOLS WITH A MAGNET ADD ON PROGRAM (AOP) AND A SCHOOL WITHIN A SCHOOL (SWAS) PROGRAM

Computer/Science/Ext. Instr. Day
- Lockhart Elementary

Fine Arts/Ext. Instr. Day
- Lovett Elementary
- Roberts Elementary
- Will Rogers Elementary

Literary Development/Ext. Day
- Twain Elementary

Music/Science/Ext. Instr. Day
- MacGregor Elementary

SCHOOLS that are SEPARATE and UNIQUE SCHOOLS (SUS)

Careers
- Barbara Jordan High School for Careers

Contemporary Learning Center
- C. L. C. Middle
- C. L. C. High

Health Professions
- DeBakey High School for Health Professions

Law Enforcement/Criminal Justice
- High School for Law Enforcement and Criminal Justice

Performing Arts
- High School for the Performing and Visual Arts

Technology/Spanish
- The Rice School/La Escuela Rice

Technology Careers
- Middle College for Technology Careers

Assessment of Student Performance in Magnet Programs: 2000–2001

Introduction

The HISD Magnet Program is designed and implemented to meet two objectives: a) to provide academic programs whose quality and special focus will attract students to them voluntarily from across the district, and b) to increase the percentage of students attending integrated schools. More broadly, the Magnet Program is the primary vehicle through which the district offers educational choice to students and their parents.

HISD currently sponsors three types of Magnet programs: Add-On Program (AOP), School Within a School (SWAS), and Separate and Unique School (SUS). AOP Magnet programs are structured to serve all students at a given campus with a particular academic component which has been "added-on" to the standard curriculum. SWAS Magnet programs are structured to serve a select group at a given campus by providing a distinct academic curriculum. SUS Magnet programs are the five high schools and two combined schools which offer specific academic curricula to the entire campus to which all students must apply for enrollment: DeBakey High School for Health Professions, the High School for Law Enforcement and Criminal Justice, the High School for Performing and Visual Arts, Barbara Jordan High School for Careers, and Middle College for Technology Careers, as well as the Contemporary Learning Center which serves at-risk students in grades 6–12 and The Rice School which serves students in grades K–8. For the purposes of this report, the results from the SUS programs have been aggregated with those of the AOP programs at the administrative district level and districtwide.

Three enrollment procedures are employed by HISD Magnet programs: pre-admission testing or audition; pre-admission identification as potentially gifted or talented in intellectual ability, creativity, or leadership; and enrollment on the basis of available space and demographic factors. Procedures vary from program to program. A complete listing of schools by program type along with the Magnet speciality is presented in a table proceeding this report.

HISD's Assessment Regimen

This report analyzes the performance of HISD Magnet students on three assessment instruments: the Texas Assessment of Academic Skills (TAAS), the Stanford Achievement Test Series Ninth Edition (Stanford 9), and the Aprenda: La prueba de logros en español, Segunda Edición (Aprenda 2).

The TAAS is a state mandated, criterion-referenced test used as a means to monitor student performance. The English language version measures academic achievement in reading and mathematics at grades 3–8 and 10, writing at grades 4, 8, and 10, and social studies and science at grade 8. The Spanish language version measures the performance of students in reading and mathematics in grades 3–6 and at grade 4 in writing.

The Stanford 9 is a norm-referenced achievement test used to assess the level of learning that has taken place as a result of exposure to specific learning experiences and an educational environment. The following subtests on the Stanford 9 are included in this report: reading, mathematics, language, science, and social sciences for grades 3–11 and reading, mathematics, language, and environment for grades 1–2.

The Aprenda 2 is a Spanish-language test used to assess students who receive reading instruction in Spanish. Though developed by the same company, the Aprenda 2 is **not** a mere translation of the Stanford 9. Rather its structure and content are aligned with those of the Stanford 9 but its development and referencing are executed entirely in Spanish. The following subtests on the Aprenda 2 are included in this report: reading, mathematics, language, and thinking skills for grades 1–9.

Student Participation

Magnet students in SWAS programs were identified using the end-of-year School Administrative Student Information (SASI) supplemental files for 1999–2000 and 2000–2001. Students in AOP and SUS programs were

identified using end-of-year SASI student master files for 1999–2000 and 2000–2001. All Magnet students, including Special Education and Limited English Proficient (LEP) students, with valid test results from the years covered were included in this analysis.

To determine the level of participation of Magnet students in the HISD testing regimen, the number of students tested was collected and analyzed by grade and test. The data are presented by school, administrative district, and districtwide.

For the 2000–2001 school year, two new AOP programs were added: Harvard and Gregory-Lincoln elementary schools. Two middle schools, Attucks and Williams, that had AOP programs changed to SWAS programs. One new high school SWAS program was added at Westside High School and a new SUS program at Middle College for Technology Careers. These additions increased the number of schools offering magnet programs to 99 from 95 in the previous year.

Analysis

Two years of results from each of these assessment instruments were analyzed for the district as a whole, as well as at the administrative district and campus level for the appropriate grades. For the TAAS, the results from the Spring 2000 and Spring 2001 administrations were reported in terms of the percentage of students who met minimum expectations, i.e., passed the test, and the difference between those rates. For the purposes of this report, results from the English and Spanish versions of TAAS have been combined.

For the Stanford 9 and the Aprenda 2, the data are from the Spring 2000 and Spring 2001 administrations. Results reported are the National Percentile Rank (NPR) in 2001 and Normal Curve Equivalent (NCE) for both years. NPR indicates the relative academic standing of a student or group of students with other students or groups of students in the same grade for the same administration of a test. In order to compare student performance across different administrations of these tests and/or different grades, NPR data are converted into NCE scores. However, the comparison of student performance on the Stanford 9 with that of the Aprenda 2 is not appropriate with either NPR or NCE data.

Results for Students in Magnet Programs

The numbers of students enrolled in AOP, SUS, and SWAS Magnet programs who were tested during the 1999–2000 and 2000–2001 school years are presented in **Table 1**. These data represent the total number of students in grades 3–8 and 10 that were administered the English or Spanish TAAS during the spring of each school year as well as the total number of students in grades 1–11 that were administered the Stanford 9 or the Aprenda 2 in Spring 2000 and Spring 2001.

Table 1: The Number of HISD Students Enrolled in SWAS and AOP/SUS Magnet Programs Who Took the English or Spanish TAAS Examination in Spring 2000 or Spring 2001 and the Stanford 9 or Aprenda 2 in Spring 2000 or Spring 2001

	TAAS		Stanford		Aprenda	
Magnet Program	**2000**	**2001**	**2000**	**2001**	**2000**	**2001**
SWAS	10,952	11,404	15,842	16,426	484	497
AOP/SUS	9,136	8,253	15,289	14,204	1,260	1,596

- The number of students who were in the SWAS program and who took the TAAS, Stanford, and Aprenda increased from 1999–2000 to 2000–2001. During the same time, the number of students enrolled in AOP/SUS programs and taking the TAAS and Stanford decreased while the number taking the Aprenda increased. These trends reflect the fact that the number of students enrolled in SWAS programs increased over last year, while the number of students in AOP/SUS programs declined.

- The greatest fluctuation of students taking any of the three examinations occurred with the AOP/SUS students on the TAAS and Stanford where the number taking decreased by approximately, 10% and 7%, respectively.

The following discussion will compare the performance of students in AOP or SUS programs to those in SWAS programs on the TAAS and the Stanford by subject: reading, mathematics, writing, and science. The figures present two years of data for each program by grade and include districtwide passing rates for all students for further reference and comparison. The measure from TAAS is the percentage of students passing and from Stanford is the normal curve equivalent. Results from the Aprenda and the remaining TAAS and Stanford subtests are presented in the tables at the end of this report.

Reading

TAAS

Figure 1 and **Figure 2** present the percentage of students in grades 3–5, and grades 6–8 and 10, respectively, who passed the 2000 and 2001 TAAS reading section by Magnet program type. The district's 2001 passing rates for all students are provided below the graph for reference.

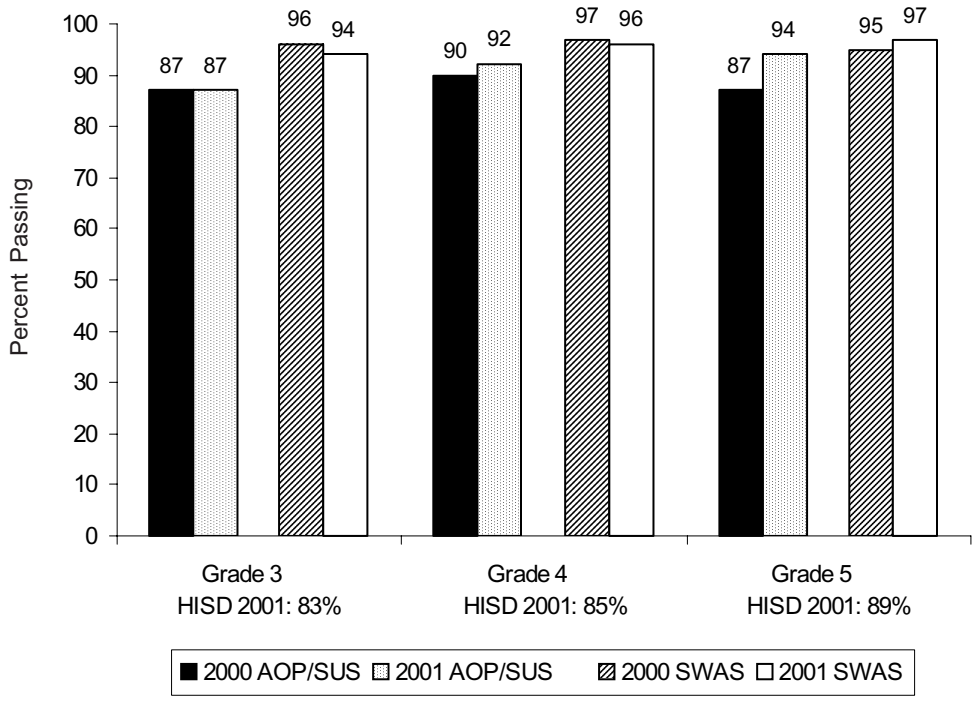

Figure 1: The percent of students in grades 3–5 from AOP/SUS and SWAS magnet programs who passed the TAAS reading section, Spring 2000 and Spring 2001.

- Students in grades 3–5 from AOP/SUS had equal or higher passing rates on the reading section of the TAAS from 2000 to 2001. The largest increase was found in the AOP/SUS Magnet programs at the fifth grade where the passing rate increased from 87% in 2000 to 94% in 2001.

- Passing rates in 2001 for SWAS magnet program students in grades 3–5 decreased slightly compared to the 2000 passing rates but still remained no lower than the 94% passing rate seen in the third grade. An increase was witnessed in the fifth grade with a 2001 passing rate of 97% compared to the 2000 rate of 95%.

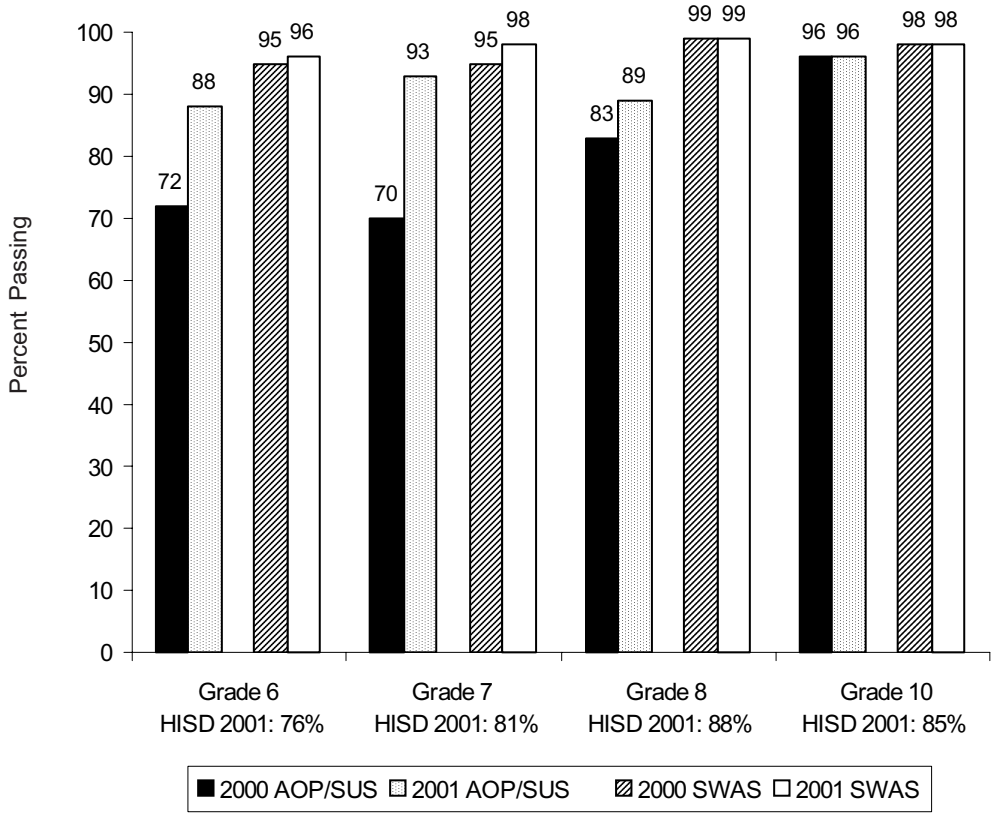

Figure 2: The percent of students in grades 6–8 and 10 from AOP/SUS and SWAS magnet programs who passed the TAAS reading section, Spring 2000 and Spring 2001.

- In 2001, students in grades 6–8 and 10 from AOP/SUS and SWAS Magnet programs all had passing rates that were equal to or greater than the 2000 passing rates. The seventh grade AOP/SUS Magnet programs had the largest passing rate increase from 70% in 2000 to 93% in 2001.

- While students in SWAS magnet programs outperformed their AOP/SUS counterparts, both groups exceeded the 2001 passing rates of the district in grades 6–8 and 10.

Stanford

Figures 3–5 present the normal curve equivalent scores of students in grades 1–5, grades 6–8, and grades 9–11, respectively, on the Spring 2000 and Spring 2001 Stanford 9 reading section by Magnet program type. The district's 2001 performance for all students is provided below the graph for reference.

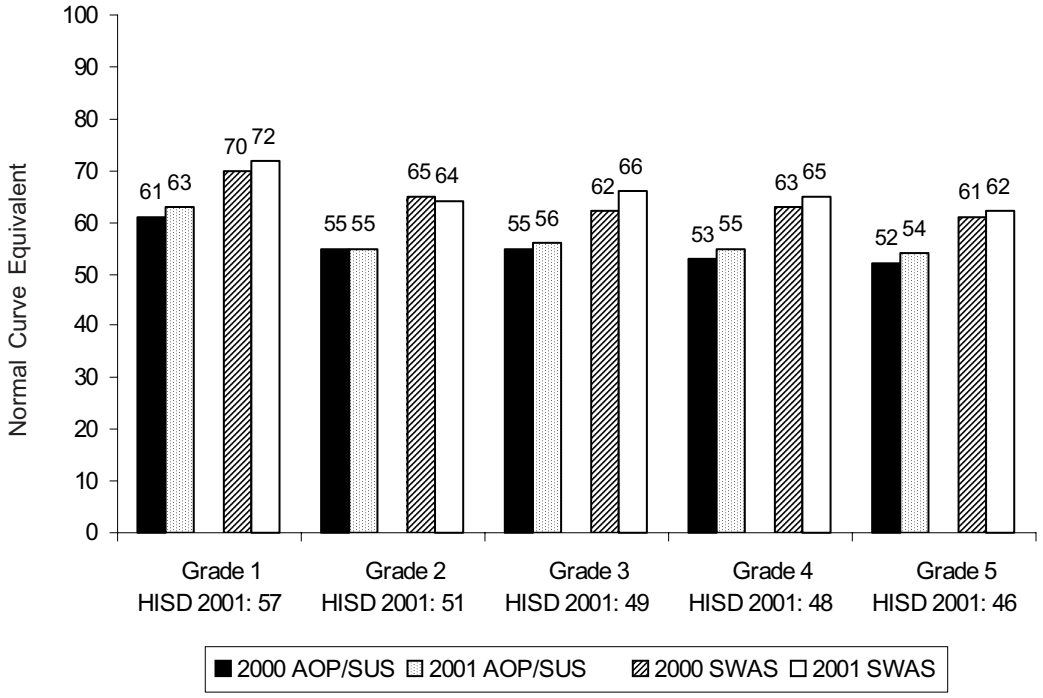

Figure 3: The normal curve equivalent scores of students in grades 1–5 from AOP/SUS and SWAS magnet programs on the Stanford 9 reading subtest, Spring 2000 and Spring 2001.

- On the 2001 administration of the Stanford reading subtest, students in grades 1–5 in both AOP/SUS and SWAS Magnet programs had normal curve equivalents that were higher than the normal curve equivalents for their respective grade levels for students districtwide.

- With the exception of a one-point drop in the second grade SWAS program, students from the elementary AOP/SUS and SWAS Magnet programs all had 2001 normal curve equivalents on the Stanford reading subtest that were equal to or greater than their 2000 normal curve equivalents.

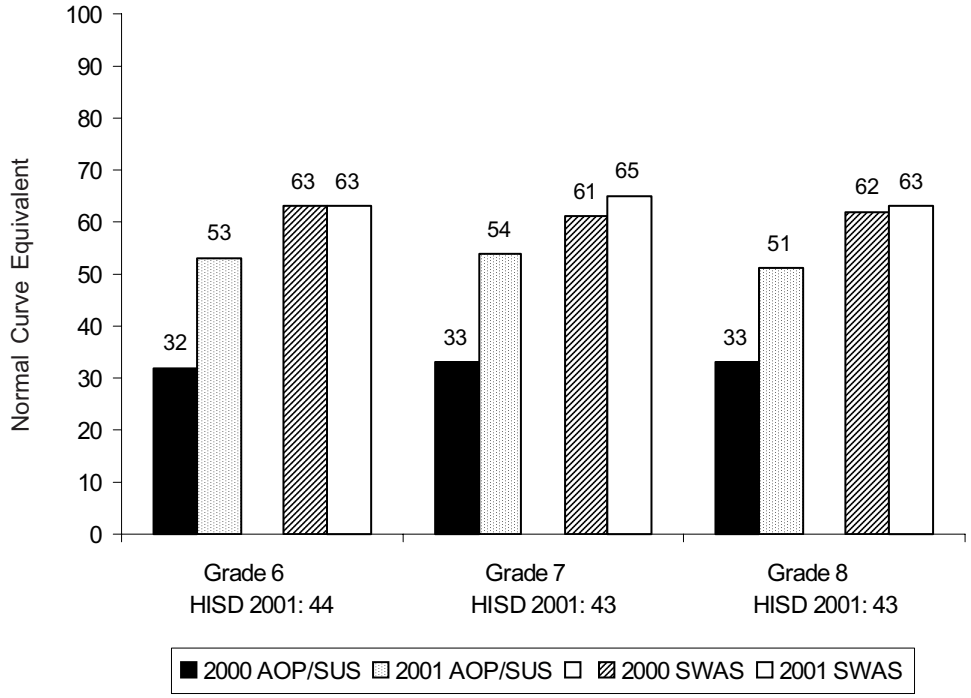

Figure 4: The normal curve equivalent of students in grades 6–8 from AOP/SUS and SWAS magnet programs on the Stanford 9 reading subtest, Spring 2000 and Spring 2001.

- In 2001, the normal curve equivalents held relatively constant on the Stanford reading subtest for middle school students in SWAS programs. A dramatic increase was observed for students in AOP/SUS programs in grades 6–8. The smallest increase for AOP/SUS middle school students was in grade 8 where the 2001 NCE's increased 18 points over the 2000 NCE's. Both the sixth and seventh grade NCE's increased by 21 points during the same span of time.

- In 2000, only students in the SWAS programs outperformed the district level NCE's. With the substantial increase in 2001 NCE's by AOP/SUS middle school students, both programs had higher NCE's than the district scores in 2001.

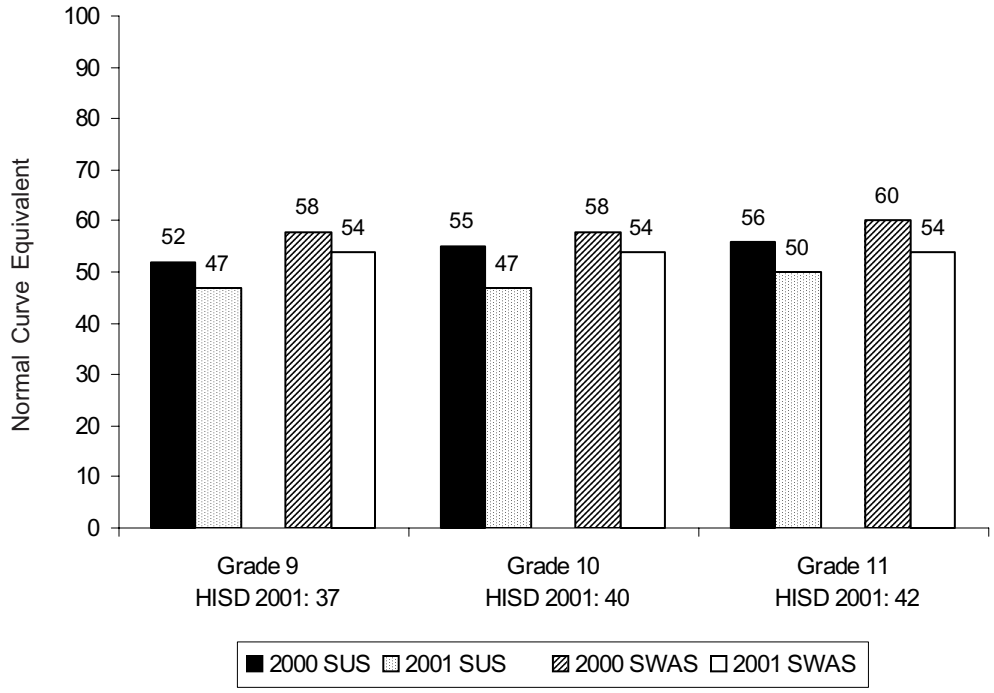

Figure 5: The normal curve equivalent of students in grades 9–11 from SUS and SWAS magnet programs on the Stanford 9 reading subtest, Spring 2000 and Spring 2001.

- While the NCE's for both magnet programs dropped across all high school grade levels from 2000 to 2001, they remained well above the corresponding district levels.

- The decreases in NCE's that were observed at the high school level were similar for both the SUS and SWAS programs. The average drop in NCE's from 2000 to 2001 for the SWAS programs was 4.7 and for the SUS programs was 6.3.

Mathematics

TAAS

Figure 6 and **Figure 7** present the percentage of students in grades 3–5, and grades 6–8 and 10, respectively, who passed the 2000 and 2001 TAAS mathematics section by Magnet program type. The district's 2001 passing rates for all students are provided below the graph for reference.

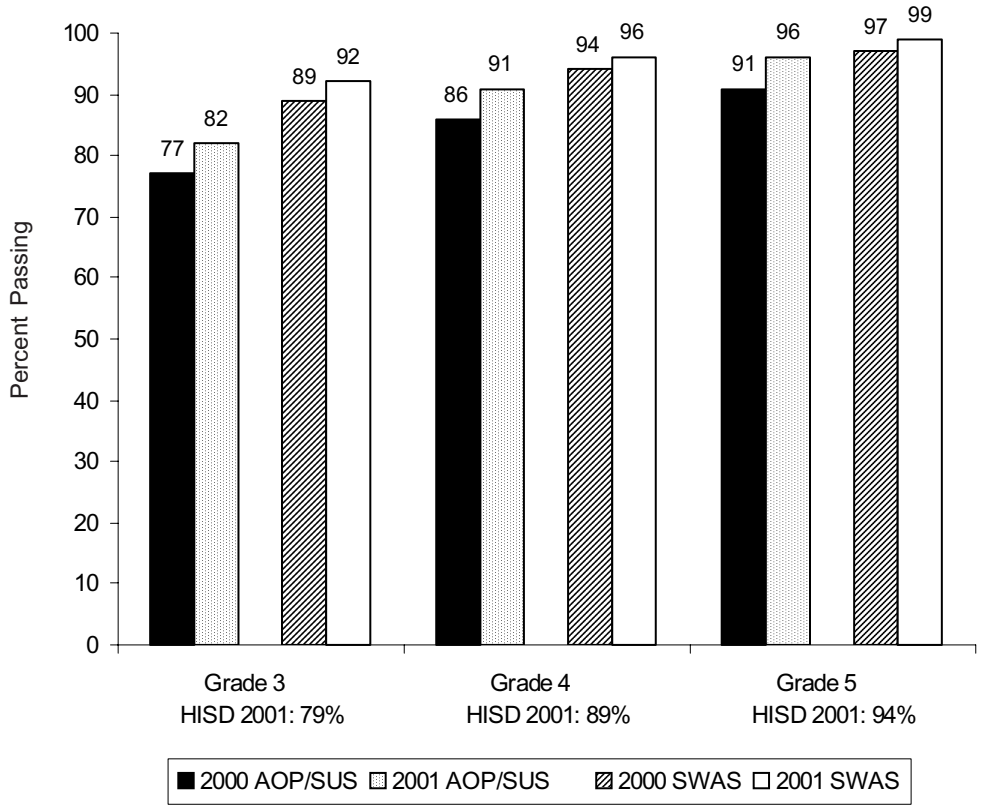

Figure 6: The percent of students in grades 3–5 from AOP/SUS and SWAS magnet programs who passed the TAAS mathematics section, Spring 2000 and Spring 2001.

- Students in grades 3–5 from AOP/SUS and SWAS Magnet programs had higher passing rates on the mathematics section of the TAAS from 2000 to 2001. The largest increases occurred in AOP/SUS programs where each of the elementary school grades had their passing rate increase by 5% from 2000 to 2001.

- Results from the 2001 TAAS indicate that students in the AOP/SUS and SWAS Magnet programs in each of the elementary grades had higher passing rates on the mathematics section of the TAAS than their respective grade levels in the district.

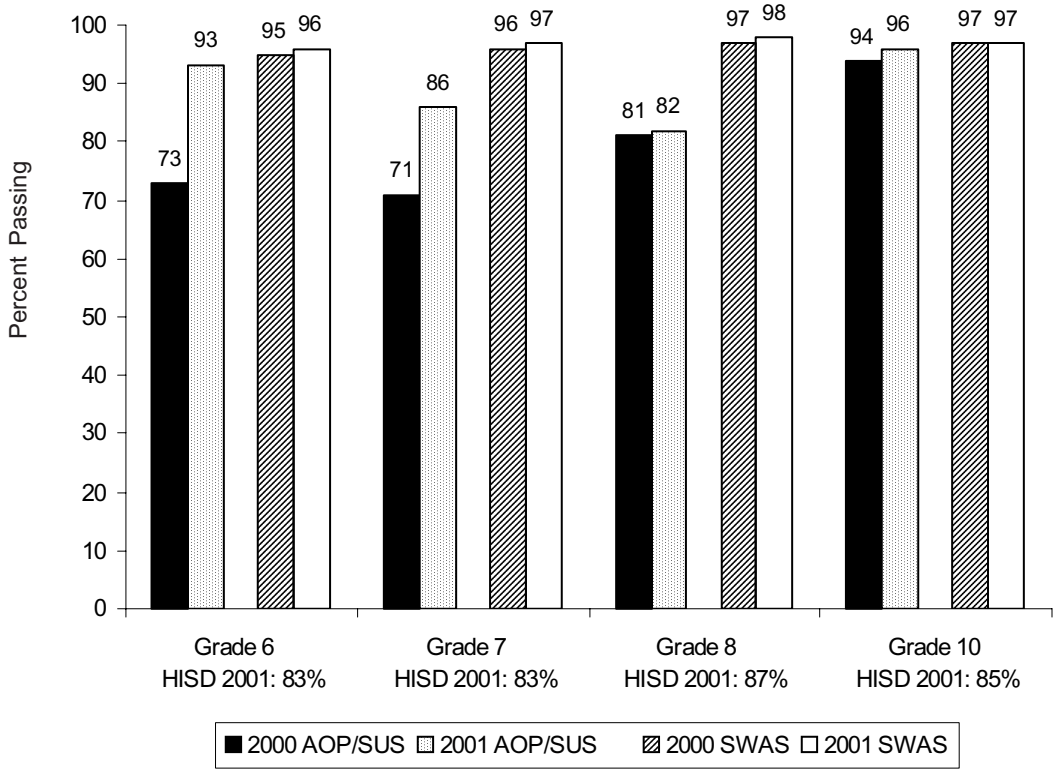

Figure 7: The percent of students in grades 6–8 and 10 from AOP/SUS and SWAS magnet programs who passed the TAAS mathematics section, Spring 2000 and Spring 2001.

- Students in grades 6–8 and 10 from AOP/SUS and SWAS Magnet programs all posted higher or equal passing rates on the TAAS mathematics section from Spring 2000 to Spring 2001. The largest gains were made by AOP/SUS students in the sixth and seventh grades where the passing rates increased 20% and 15%, respectively.

- When compared to the district passing rates, students in SWAS programs in grades 6–8 and 10 surpassed the district average by grade. Students in AOP/SUS programs in the eighth grade were the only grade level not to meet or exceed the districtwide results.

Stanford

Figures 8–10 present the normal curve equivalent scores of students in grades 1–5, grades 6–8, and grades 9–11, respectively, on the Spring 2000 and Spring 2001 Stanford 9 mathematics section by Magnet program type. The district's 2001 performance for all students is provided below the graph for reference.

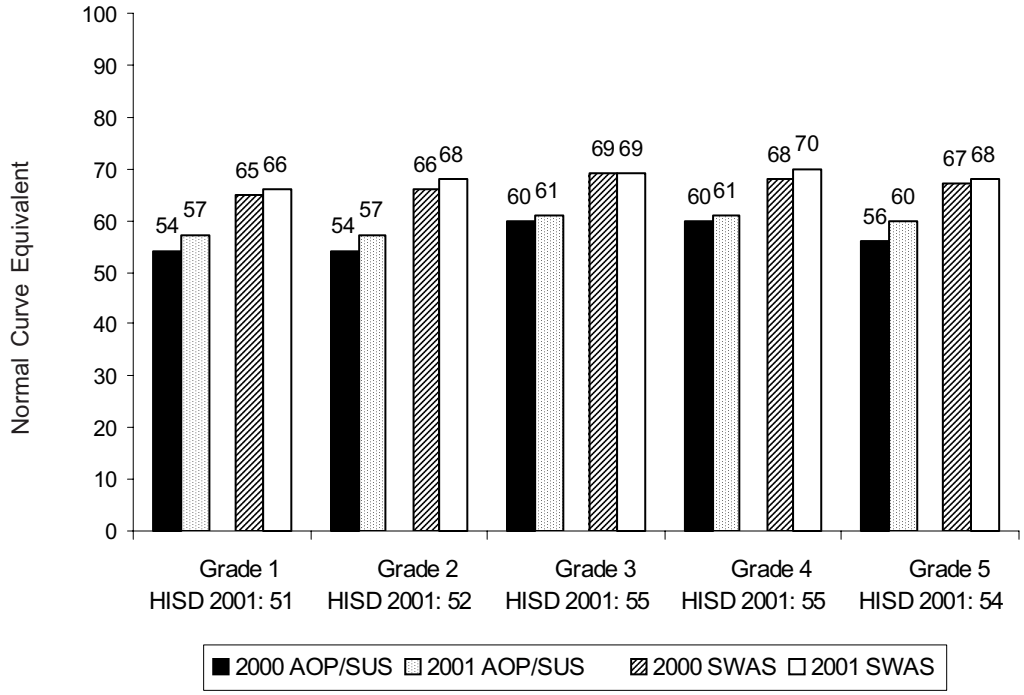

Figure 8: The normal curve equivalent of students in grades 1–5 from AOP/SUS and SWAS magnet programs on the Stanford 9 mathematics subtest, Spring 2000 and Spring 2001.

- Students in grades 1–5 from AOP/SUS and SWAS Magnet programs met or exceeded the normal curve equivalents from the previous year on the mathematics subtest of the Stanford.

- Each of the AOP/SUS and SWAS programs from the elementary school levels surpassed the normal curve equivalents set by the corresponding HISD grade levels.

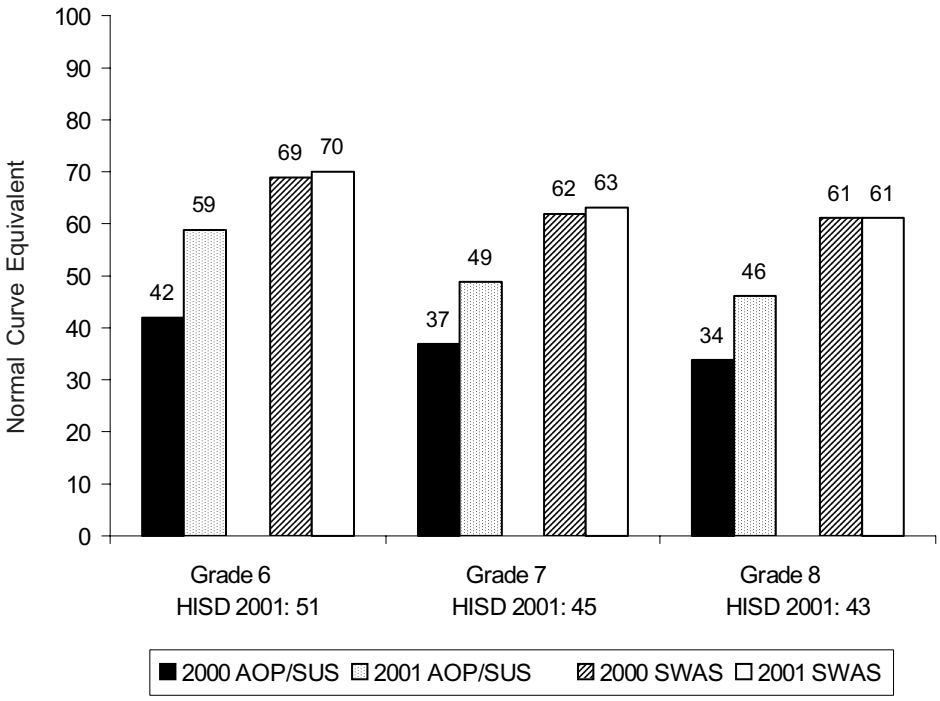

Figure 9: The normal curve equivalent of students in grades 6–8 from AOP/SUS and SWAS magnet programs on the Stanford 9 mathematics subtest, Spring 2000 and Spring 2001.

- Students in grades 6–8 from AOP/SUS and SWAS Magnet programs had 2001 normal curve equivalents on the mathematics subtest of the Stanford that were the same or higher than the 2000 results.

- The middle school grade levels in both the AOP/SUS and SWAS had normal curve equivalents that were higher than the district results.

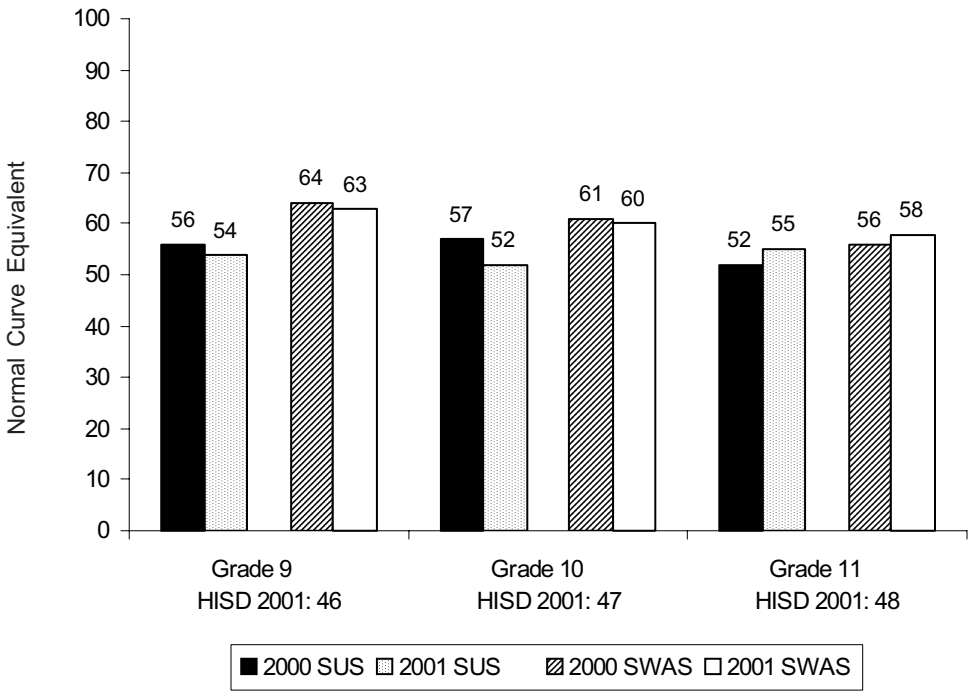

Figure 10: The normal curve equivalent of students in grades 9–11 from SUS and SWAS magnet programs on the Stanford 9 mathematics subtest, Spring 2000 and Spring 2001.

- With the exception of the eleventh grade which had increases in both magnet programs, the ninth and tenth grade SUS and SWAS programs experienced decreases in the normal curve equivalents from 2000 to 2001. These decreases ranged from one point to five points.

- When compared to the district results, each of the high school level SUS and SWAS programs exceeded the normal curve equivalents on the Stanford mathematics subtest in 2001.

Writing

TAAS

Figure 11 presents the percentage of students in grades 4, 8, and 10 who passed the 2000 and 2001 TAAS writing section by Magnet program type. The district's 2001 passing rates for all students are provided below the graph for reference.

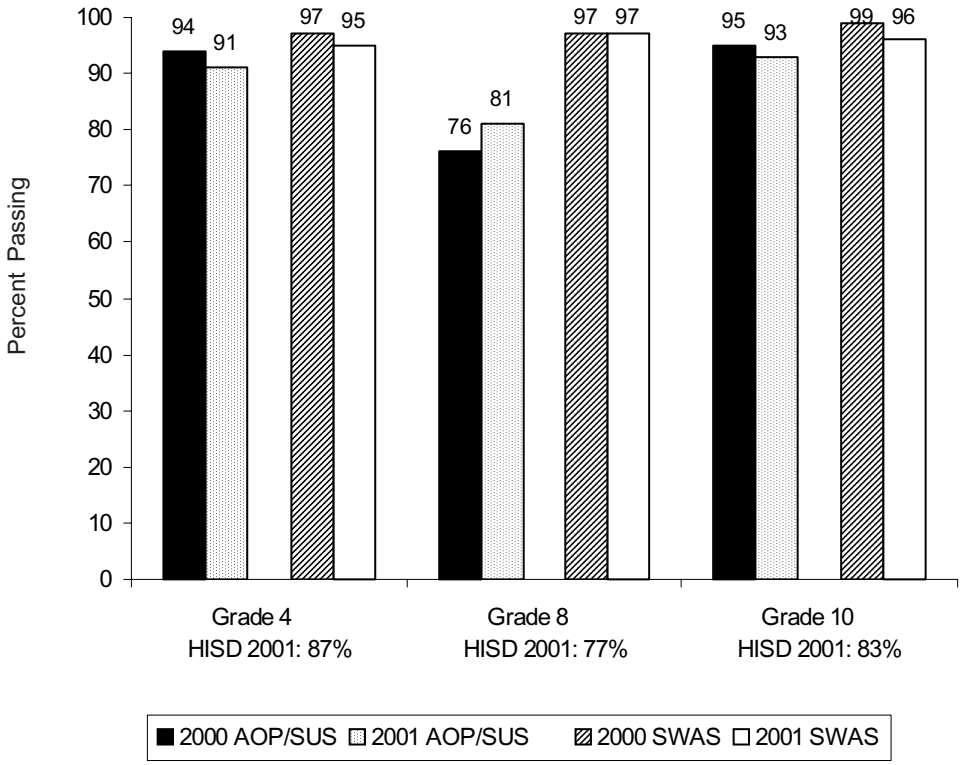

Figure 11: The percent of students in grades 4, 8, and 10 from AOP/SUS and SWAS magnet programs who passed the TAAS writing section, Spring 2000 and Spring 2001.

- The levels of achievement on the writing section of the TAAS that were reached in 2000 were not repeated in 2001 but high passing rates were realized. Both magnet programs in the fourth grade sustained decreases from the 2000 results, but passing rates remained in the low to mid 90's. The AOP/SUS and SWAS students in the tenth grade fell 2% and 3%, respectively, but this only brought their passing rates to 93% and 96%, respectively.

- The only improvement in passing rates was evidenced at the eighth grade for the AOP/SUS programs, increasing from 76% passing in 2000 to 81% passing in 2001.

- Despite the high passing rates posted by the district in general on the writing section of the TAAS, students at every grade from both the AOP/SUS and SWAS programs managed to achieve higher passing rates than the district as a whole.

Science and Social Studies

TAAS

Figure 12 presents the percentage of students in grade 8 who passed the 2000 and 2001 TAAS science and social studies sections by Magnet program type. The district's 2001 passing rates for all students are provided below the graph for reference.

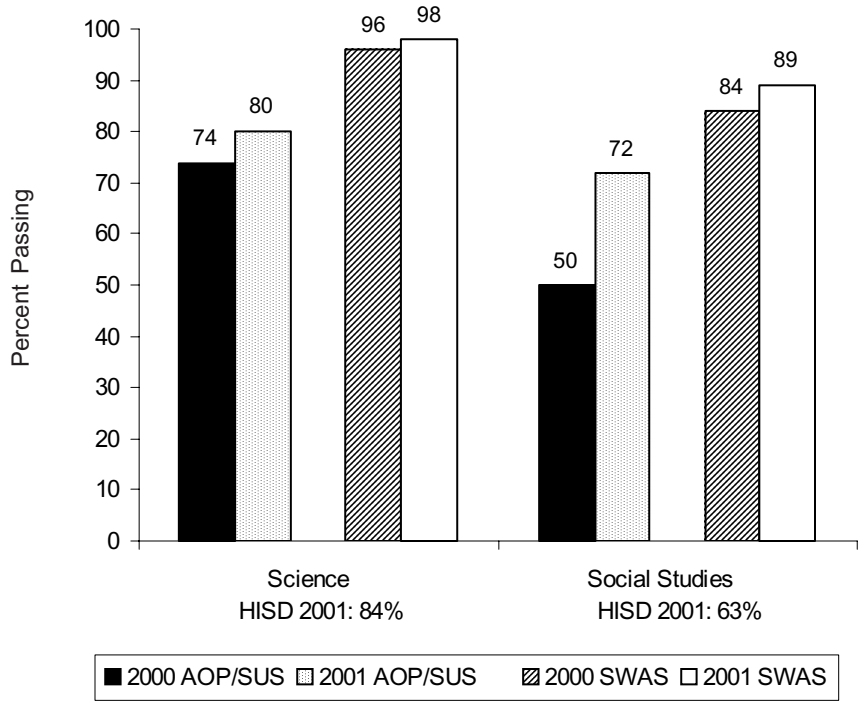

Figure 12: The percent of students in grade 8 from AOP/SUS and SWAS magnet programs who passed the TAAS science and social studies sections, Spring 2000 and Spring 2001.

- Whereas students from SWAS programs had passing rates higher than HISD as a whole, students from AOP/SUS programs had a passing rate on the science subtest that was lower than the district rate and a passing rate on the social studies section of the TAAS that was higher than the district average.

- Students from both magnet programs in the eighth grade showed increased gains on the science and social studies sections of the TAAS, but the largest gains were posted by AOP/SUS students on the social studies subtest who raised the passing rate from 50% in 2000 to 72% in 2001.

Stanford

Figures 13–15 present the normal curve equivalent scores of students in grades 1–5, grades 6–8, and grades 9–11, respectively, on the Spring 2000 and Spring 2001 Stanford 9 science section by Magnet program type. The district's 2001 performance for all students is provided below the graph for reference.

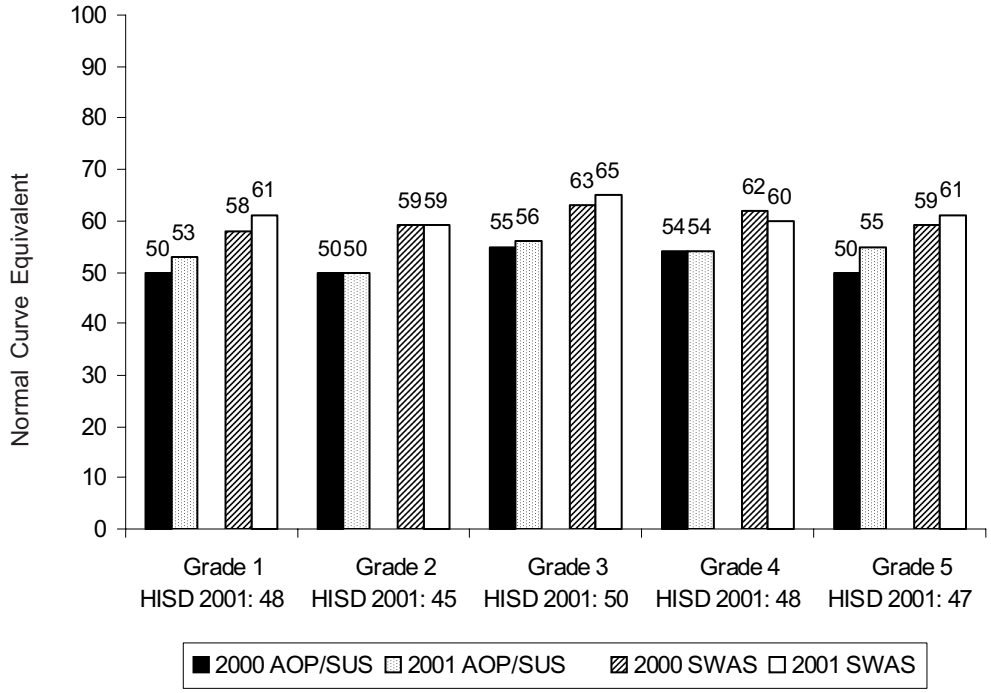

Figure 13: The normal curve equivalent of students in grades 1–5 from AOP/SUS and SWAS magnet programs on the Stanford 9 science subtest, Spring 2000 and Spring 2001.

- With the exception of the fourth grade SWAS magnet program, students in grades 1–5 from AOP/SUS and SWAS Magnet programs had 2001 Stanford science subtest normal curve equivalents equal to or greater than the 2000 results.

- All elementary students from the AOP/SUS and SWAS programs surpassed the district's normal curve equivalents in 2000.

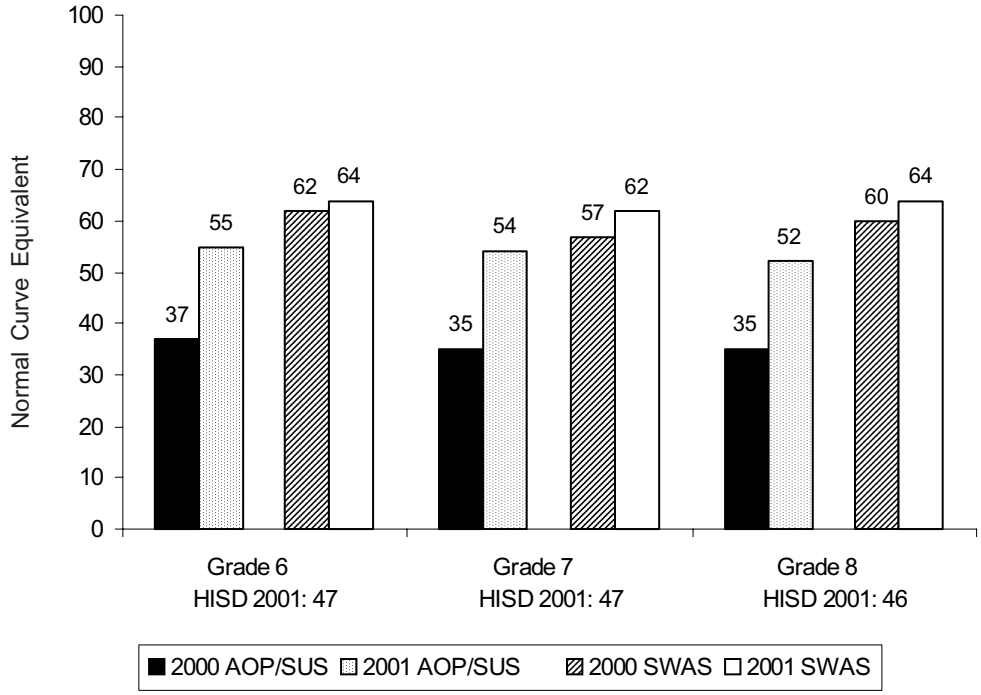

Figure 14: The normal curve equivalent of students in grades 6–8 from AOP/SUS and SWAS magnet programs on the Stanford 9 science subtest, Spring 2000 and Spring 2001.

- The normal curve equivalents on the Stanford science subtest for students in middle school improved for AOP/SUS magnet program posting increases over 2000 scores in 2001 of 18, 19, and 17 points for grades 6, 7, and 8, respectively.

- Middle school SWAS programs increased their stanford science NCE's by two to five points in each grade level.

- With the dramatic increase in NCE's on the science subtest by AOP/SUS magnet students, both magnet programs outperformed the districtwide results.

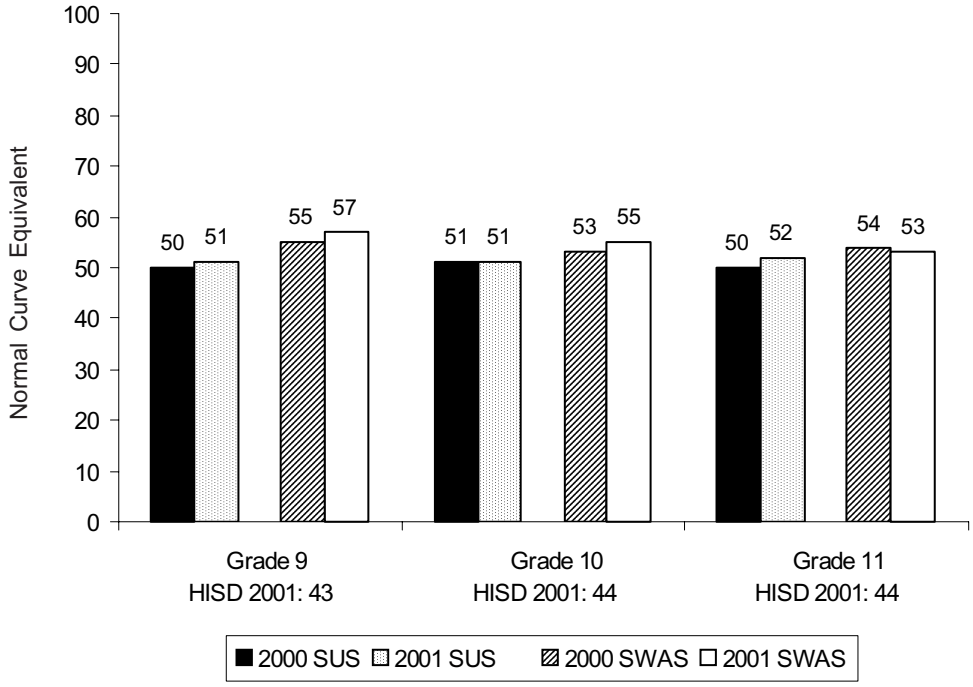

Figure 15: The normal curve equivalent of students in grades 9–11 from SUS and SWAS magnet programs on the Stanford 9 science subtest, Spring 2000 and Spring 2001.

- Students in grades 9–11 from SUS and SWAS Magnet programs had Stanford science subtest normal curve equivalents virtually identical from 2000 to 2001. The SUS and SWAS programs each outperformed the district at their respective grade levels.

Discussion

The most evident theme to emerge from the magnet school report results centers around the dramatic increases made by the AOP/SUS middle school students on the TAAS and the Stanford. In keeping with the previous trend, students in SWAS magnet programs exceeded the results posted by the district and students in AOP/SUS magnet programs at every grade level on both the TAAS and the Stanford. However, the progress made by AOP/SUS magnet program students should not be overlooked.

Prior to 2001, the district, especially in the middle school grades outperformed AOP/SUS students but the tides have turned with the 2001 results. In looking at the passing rates of the 2001 TAAS compared to 2000 results, it is quite evident that AOP/SUS students made significant improvement. This is exemplified through the results of the reading section of the TAAS where AOP/SUS students went from 72% passing in 2000 to 88% passing in 2001 in the sixth grade and 70% passing in 2000 to 93% passing in 2001 at the seventh grade. Further evidence of the middle school improvement in reading is provided by the 2001 Stanford results. AOP/SUS students in grades 6, 7, and 8 posted increases in the normal curve equivalents of 21, 21, and 18 points, respectively. These results, together, indicate that AOP/SUS students are closing the performance gap with SWAS program students.

The results are similar for middle school students when looking at the mathematics sections of the TAAS and Stanford. Sixth and seventh grade AOP/SUS students once again posted large increases in TAAS passing rates with 20% and 15% gains, respectively. These gains were also substantiated by the results of the mathematics section of the Stanford. The normal curve equivalents increased by 17, 12, and 12 points at grades 6, 7, and 8, respectively. Again, this demonstrates that students in AOP/SUS programs are closing the gap between their SWAS program counterparts.

Being that the SWAS and AOP/SUS are both magnet programs, the assumption is that their results should be higher than the results of the district. In the past this was not always the case. While SWAS results were and continue to be higher than districtwide results, AOP/SUS results were below these results in 2000. This trend however appears to be diminishing after comparing the 2001 TAAS and Stanford magnet results with the 2000 results. Not only are AOP/SUS results almost all completely above the district averages, but they are coming more into line with SWAS results. Although test results have increased, this may also be due in part to two of the AOP middle school programs changing into SWAS programs for the 2000–2001 school year.