



Accelerating Student Progress  
Increasing Results & Expectations

Houston Independent School District

Joint Select Committee on School Accountability

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### **When did HISD begin implementing a student growth model?**

HISD launched a new, comprehensive school improvement framework, called ASPIRE (*Accelerating Student Progress. Increasing Results and Expectations*) during the 2006-2007 school year. ASPIRE components include: Recognizing Excellence, Informing Practice, Improving Teaching and Learning, and Developing Human Capital. HISD has aggressively been implementing this improvement model using student growth-based measures, SAS EVAAS (Educational Value-Added Analysis System).

### **Why did HISD adopt the SAS EVAAS methodology?**

#### **I. Reliability of the analysis**

- i. Proven methodology. SAS EVAAS has been adopted by the statewide by Tennessee, Ohio, North Carolina and Pennsylvania.
- ii. National validation. The US Department of Education has approved accountability systems for these states as a means to augment Adequate Yearly Progress federal requirements under No Child Left Behind Act.
- iii. Valid and Reliable. While the SAS EVAAS methodology has been scrutinized for its lack of transparency and complexity, research conducted by Rand comparing several growth models, including SAS EVAAS, concluded that simple gain models produce significant bias toward low-achieving student populations. In another study conducted by Wright, simulations demonstrated that the mean square error (i.e. variance plus bias) of simple models is up to 100% greater than more sophisticated models.
- iv. Increased Accountability for Schools, Teachers and Students. One of the biggest benefits of using SAS EVAAS data is that the district is able to increase accountability by setting high expectations and measuring impact of instruction on all students longitudinally. Furthermore, value-added goes well beyond simply counting the percent of students passing state achievement tests. Rather, it focuses on student academic growth over time and makes visible just how well, or not so well, teachers and schools are doing with students. In addition, value-added enables the district to set high expectations and levels the playing field for all students by benchmarking students to their prior performance and comparing their growth to similar students. In essence, the district will no longer determine effectiveness and success by achievement scores, but will determine effectiveness and success by measuring optimal performance of every student.

#### **II. Comprehensiveness of SAS EVAAS Reports**

- i. SAS EVAAS provides value-added reports at the district, region, campus and teacher levels.
- ii. SAS EVAAS reports include diagnostic reports at all levels to enable educators and administrators to use the data to identify areas of growth at various levels of student

achievement to better understand the impact of teaching on student learning. An example of how Value-Added Diagnostic Reports is the ability to examine growth across the population of students and within targeted groups (e.g. achievement levels, NCLB subgroups).

- iii. SAS EVAAS also provides student projections which are beneficial in identifying at-risk students and targeting interventions. In addition, projections can be used project student performance on a variety of college readiness standards. Search parameters can be customized.
- iv. SAS EVAAS enables custom reports of students to be generated based on program participation (e.g. program evaluation).
- v. Reports are easy to interpret by staff and the public due to the simplistic color-coding (i.e. red, yellow and green).

#### **How is HISD using SAS EVAAS data?**

- I. Recognizing Excellence. HISD uses value-added data in a pay for performance system, called ASPIRE Awards program. The ASPIRE Awards are primarily calculated based on campus- and teacher-level value-added data. In addition, the district selected eleven of its campus demonstrating high growth with their students and created video vignettes as one way to recognize best practices and to foster dialog and replication across the district.
- II. Informing Practice. HISD is using value-added data, particularly Value-Added Diagnostic Reports, for school improvement purposes. Also, the district is using value-added information to differentiate professional development for teachers and administrators. HISD is planning to expand use of value-added data for action research purposes to better identify programs that are successful or unsuccessful in improving student learning.
- III. Improving Teaching and Learning. HISD is using student projections to identify at-risk students and target interventions. Also, value-added information is helping the district to identify best practices and to determine effectiveness of the curriculum and teaching practices.
- IV. Developing Human Capital. HISD is beginning to use value-added data to make staffing decisions and plans to use the data for career ladders to promote and support staff.

#### **What impact has HISD had in using SAS EVAAS data?**

- I. In 2005, HISD had 36 Recognized and Exemplary schools. In 2008, HISD is proud to announce that it has 157 Recognized and Exemplary schools.
- II. In 2008, across the entire state of Texas, 50 percent of schools are Recognized or Exemplary. In HISD, we exceed the state average with more than 57 percent of schools rated Recognized or Exemplary.
- III. In 1996, HISD had more than 70 percent of its schools deemed below state standards. Now the district has less than 5 percent not meeting state standards for acceptable.



EVAAS® is SAS Institute's trademarked name for value-added analysis.

**Data Sources:** EVAAS® uses both TAKS and Stanford/Aprena test results displayed in NCEs and includes student-demographic information for diagnostic purposes.

SUBJECTS	GRADES									
	2	3	4	5	6	7	8	9	10	11
Language	Stanford	Stanford	Stanford	Stanford	Stanford	Stanford	Stanford	Stanford	Stanford	Stanford
Math	Stanford	TAKS	TAKS	TAKS	TAKS	TAKS	TAKS	TAKS	TAKS	TAKS
Reading	Stanford	TAKS	TAKS	TAKS	TAKS	TAKS	TAKS	TAKS	TAKS	TAKS
Science	None	Stanford	Stanford	TAKS	Stanford	Stanford	TAKS	Stanford	TAKS	TAKS
Social Studies	None	Stanford	Stanford	Stanford	Stanford	Stanford	TAKS	Stanford	TAKS	TAKS

**The Metric:** EVAAS® compares the average student growth in your school in grades 3–11 to the typical growth of similar students in Texas during the baseline year or 2005–2006. Your school's student academic growth is represented in mean NCE gains. Campus, region, and district gains are the difference between the current year's and previous year's estimated means. Both means and gains are reported in NCEs. To produce these means, each student's available test data from all subjects in the testing matrix is simultaneously analyzed.

The state population distribution from 2006 was used to calculate estimated mean NCEs for students in the current year, along with estimated mean NCEs for these same students from the prior year. The estimates for the prior year are a composite from students' prior schools. These estimated means are utilized in an effort to include as many students in the analysis as possible and to avoid the potential bias of using only those students with complete testing histories. All the available test data in the testing matrix for each student is utilized to produce these estimated means.

### Spanish-to-English Testers

Students transitioning from the Spanish TAKS to the English TAKS score measurably lower on the English TAKS in their first year. To ensure that no classrooms, campuses, or regions were advantaged or disadvantaged by the number of these students in this transition, the scales for the "Spanish-to-English" students were adjusted so that their progress in the first year was equivalent to that of the "English-to-English" students.

**Key Information:** Estimates the educators' influence on the academic growth rates of the students in your school.

### Key Terms

**Mean Gains:** The difference between the current year's and previous year's estimated student mean NCEs.

**Cumulative Gain Index:** Sometimes called the Gain Score, a way of standardizing school effects across subjects, grades, and schools. The index is calculated by dividing the school effect by its associated standard error.

**NCE (Normal Curve Equivalent):** A unit of achievement measurement often used when there is a need to compare achievement across time for groups of students. The mean of this scale is 50, and its standard deviation is 20.06. The NCE scale is similar to percentile ranks in that the range of possible scores is from 1 to 99. The key difference between percentile ranks and NCE units is that the NCE scale is an equal-interval scale. This means that a five NCE unit change anywhere on that scale is an equivalent amount, which is not the case with percentile ranks. This property of the NCE scale makes it suitable for comparing achievement levels across time for groups of students.

**Standard Error:** A measure of the uncertainty in the estimate of a school. A school effect with a relatively small standard error is more precise than one with a larger standard error.



## 2008 Houston Region Value Added TAKS/Stanford M

## Region X

For the 2008 analyses, prior Stanford results were adjusted to allow a fair comparison to current year Stanford scales. Thus previous year gains may differ from reporting in 2007.

performance on current year

Estimated Region Mean NCE Scores										
Grade:	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
State Base Year (2006):	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
2005 Mean:	41.6	41.6	41.4	41.0	36.4	39.8	41.0	45.5	42.2	44.1
2006 Mean:	42.9	43.1	43.4	43.8	40.5	43.0	45.6	45.8	42.9	45.4
2007 Mean:	42.8	46.2	43.4	46.6	41.8	45.2	46.5	48.8	44.5	45.4
2008 Mean:	43.1	48.8	49.4	47.6	45.8	48.7	49.3	50.6	46.7	48.1

Estimated Region Mean NCE Gain										
Grade:	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
Growth Standard:		0.0	0.0	0.0	0.0	0.0				
2006 Mean NCE Gain:		1.5 G	1.8 G	2.5 G	-0.4 R*	6.6 G				
Std Error:		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3
2007 Mean NCE Gain:		3.3 G	0.3 Y	3.2 G	-2.1 R*	4.7 G	3.5 G	3.2 G	-1.3 R*	2.4 G
Std Error:		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3
2008 Mean NCE Gain:		6.0 G	3.2 G	4.2 G	-0.8 R*	6.9 G	4.1 G	4.1 G	-2.1 R*	3.7 G
Std Error:		0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3
3-Yr-Avg NCE Gain:		3.6 G	1.8 G	3.3 G	-1.1 R*	6.1 G	4.5 G	4.1 G	-2.0 R*	3.1 G
Std Error:		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2

- School Search
- Student Search
- Custom Student Reports
- District Value Added
- Region Value Added
- Region Diagnostic
- Region Perf Diagnostic
- Value Added Summary
- Diagnostic Summary
- Perf Diagnostic Summary
- School Value Added
- School Diagnostic
- School Perf Diagnostic
- Student Pattern List
- Feeder Pattern Report

### Mean NCE Gain over Grades Relative to Growth Standard

2.6

0.1

1.9

0.1

3.3

0.1

2.6

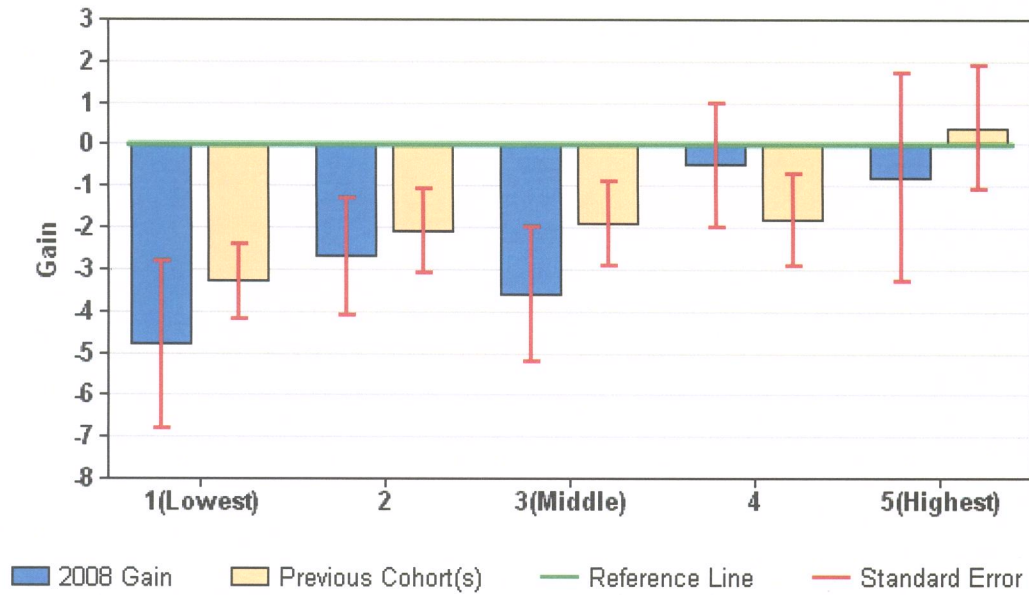
0.0

- G - Estimated mean NCE gain is above the Growth Standard by at least 1 Standard Error.
- Y - Estimated mean NCE gain is within 1 Standard Error of the Growth Standard.
- R\* - Estimated mean NCE gain is below the Growth Standard by at least 1 Standard Error.

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To view additional reports, click on the underlined numbers or words.

### 2008 Disaggregated Diagnostic Report for Region 0 6th Grade TAKS/Stanford Mathematics by African American, Male



2008 Disaggregated Diagnostic Report for Region 0 6th Grade TAKS/Stanford Mathematics by African American, Male							
		Prior-Achievement Subgroups					
		1 (Lowest)	2	3 (Middle)	4	5 (Highest)	
Mathematics	Reference Line		0.0	0.0	0.0	0.0	0.0
	2008	Gain	-4.8	-2.7	-3.6	-0.5	-0.8
		Std Err	2.0	1.4	1.6	1.5	2.5
		Nr of Students	62	87	77	83	65
		% of Students	16.6	23.3	20.6	22.2	17.4
	Previous Cohort(s)	Gain	-3.3	-2.1	-1.9	-1.8	0.4
		Std Err	0.9	1.0	1.0	1.1	1.5
		Nr of Students	226	185	183	165	109
		% of Students	26.0	21.3	21.1	19.0	12.6

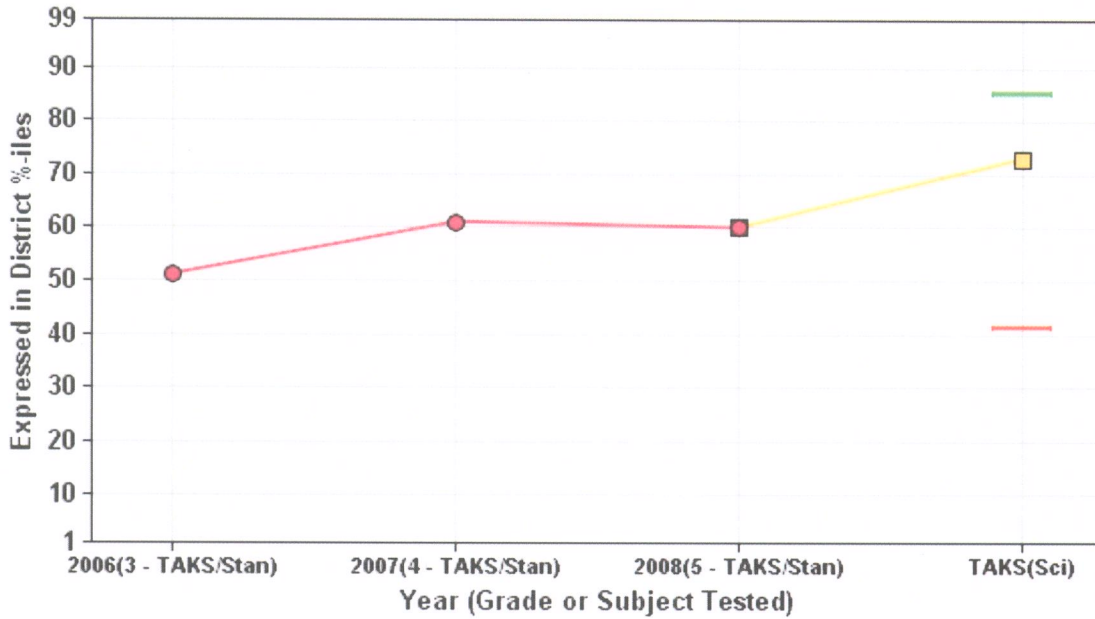


## 2008 Performance Diagnostic Summary Report for Region 0 4th Grade TAKS/Stanford Mathematics

Gain (Nr of Students) For each subgroup, you will see the Gain, followed by the Number of Students in parentheses.

School Name	Predicted Proficiency Group		
	Did Not Meet Standard	Met Standard	Commended Perf
Reference Line	0.0	0.0	0.0
<b>School 0</b>			
2008 Gain	14.4 (6)	5.0 (45)	1.9 (18)
Previous Cohort(s)	8.0 (7)	1.6 (95)	5.1 (20)
<b>School 1</b>			
2008 Gain	14.2 (5)	-1.6 (21)	-0.1 (10)
Previous Cohort(s)	0.6 (7)	-2.6 (44)	-6.1 (18)
<b>School 2</b>			
2008 Gain	13.1 (7)	10.1 (52)	5.4 (41)
Previous Cohort(s)	(3)	4.5 (111)	-0.1 (78)
<b>School 3</b>			
2008 Gain	12.8 (13)	14.2 (34)	
Previous Cohort(s)	-5.2 (28)	1.6 (52)	-16.7 (5)
<b>School 4</b>			
2008 Gain	12.4 (6)	12.4 (27)	2.1 (7)
Previous Cohort(s)	3.3 (22)	6.9 (76)	-6.2 (13)
<b>School 5</b>			
2008 Gain	12.1 (7)	0.1 (14)	(2)
Previous Cohort(s)	8.8 (14)	-1.6 (30)	-7.7 (5)
<b>School 6</b>			
2008 Gain	8.4 (5)	-1.8 (48)	-1.0 (7)
Previous Cohort(s)	6.3 (22)	7.5 (65)	1.1 (14)
<b>School 7</b>			

## 8th TAKS Science Projection Report for Student



- Student's Observed %-ile
- Student's Projected TAKS(Science) %-ile
- 8th TAKS Science (Met Standard)
- 8th TAKS Science (Commended Perf)

Projection: 8th TAKS Science		
Projected District Percentile	Probability of Success	
	Met Standard	Commended Perf
73	87.9%	21.5%

Student's Testing History			
	Year (Grade or Subject Tested)		
	TAKS/Stanford ( Science)		
	2006(3)	2007(4)	2008(5)
TAKS/Stan NCE	44	52	60
%-ile	51	61	60

**Students who last tested in the 9th grade at School Y with a 50% to 100% achievement probability for 10th TAKS Mathematics**  
(Commended Perf)

Search Results: 1 - 100 out of 196															
Student	Region	School	Sex	Race	Grade	Gif	Immng	ELL	FRPL	SpE D	Bingl	ESL	T1	Mgmt	PA1
Student 1	Region	School	F	A	9	Y	N	N	Y	N	N	N	N	N	78.1
Student 2	Region	School	F	B	9	N	N	N	N	N	N	N	N	N	69.6
Student 3	Region	School	M	A	9	N	N	N	N	N	N	N	N	Y	79.6
Student 4	Region	School	F	A	9	Y	N	N	N	N	N	N	N	N	78.2
Student 5	Region	School	M	H	9	Y	N	N	N	N	N	N	N	N	56.2
Student 6	Region	School	F	H	9	N	N	N	N	N	N	N	N	Y	65.3
Student 7	Region	School	F	W	9	N	N	N	N	N	N	N	N	N	87.1
Student 8	Region	School	M	W	9	Y	N	N	N	N	N	N	N	Y	91.1
Student 9	Region	School	F	W	9	Y	N	N	N	N	N	N	N	N	95.4
Student 10	Region	School	F	W	9	Y	N	N	N	N	N	N	N	N	95.7
Student 11	Region	School	F	A	9	Y	N	N	N	N	N	N	N	N	99.8
Student 12	Region	School	M	W	9	Y	N	N	N	N	N	N	N	Y	82.3
Student 13	Region	School	M	W	9	Y	N	N	N	N	N	N	N	N	76.3
Student 14	Region	School	F	W	9	N	N	N	N	N	N	N	N	N	79.7
Student 15	Region	School	M	W	9	Y	N	N	N	N	N	N	N	N	60.5
Student 16	Region	School	F	W	9	Y	N	N	Y	N	N	N	N	Y	70.2