THE BEST SCHOOL DISTRICTS IN TEXAS

FOR AFRICAN AMERICAN STUDENTS 1999-2002

A REPORT OF THE

TEXAS EDUCATIONAL EXCELLENCE PROJECT

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The Texas Educational Excellence Project (TEEP) is a joint program of the Departments of Political Science at Texas A&M University and the University of Texas-Pan American. TEEP seeks to apply scholarly research to educational policy issues in order to make recommendations for greater quality and equity in Texas school systems.

The Best School Districts in Texas for

African American Students 1998-2002

Texas minority students continue to make impressive gains on the statewide TAAS exam. The results of the 2002 TAAS exam indicate that scores for African American students continue to close the gap with Anglo students. In 1996, only 46.9 percent of African American students passed the TAAS compared to 79.8 percent of Anglo students. In 2002, 77.2 percent of African American students passed all tests compared to 92.5 percent of Anglo students. However, while African American students have made impressive gains over the past five years, the gap still remains substantial. Statewide averages, however, mask some impressive performance by individual school districts. The Texas Educational Excellence Project believes the first step in improving black tests scores is to identify school districts that do a better job of educating black students. Programs and policies in these districts can then be used by other districts to improve performance.

The Atlanta Independent School District provides one such example. TAAS pass rates for black students in Atlanta have improved from 54.8 percent in 1996 to 92.7 percent in 2002. This dramatic improvement has resulted from a variety of efforts by school district leaders and teachers to identify effective programs and ensure district-wide implementation. Programs include early intervention programs implemented at lower grade levels to ensure students acquire fundamental skills. Atlanta has also instituted multiple programs aimed at providing additional help to low-performing students, through general after school programs and specialized TAAS workshops.

The Atlanta district is a relatively small district, and their approach might not be directly transferable to large urban school districts. Many large districts, such as Waco ISD, also get dramatic improvements. Six years ago Waco ISD implemented a controversial no pass no promotion rule for 3rd and 8th graders. The debate was recently revisited with the implementation of the tougher TAKS test. Since Waco ISD has steadily improved their ranking for educating African Americans since implementing this policy, moving up to 3rd for large districts this year, the school board's decision to continue with their tough standards seems well placed (Culp, 2003).

The Texas Educational Excellence Project uses a technique of analysis known as multiple regression to identify school

districts that do a better job of educating black students. This analytical tool makes it possible to develop generalizations about the overall performance of Texas school districts in how well they educate black students, while also providing information that can be used to make comparisons across individual school districts.

Our model is based on what is generally know as an education "production function" where student performance (defined as black pass rates on the TAAS) is a function of inputs into the educational process, such as operating expenditures, student-teacher ratios, and various educational policies. Estimation of this production function results in predictions about how well districts are expected to do, given the level of inputs available to them. Based on the results of the production function model, we compare how well districts *actually* perform to how well the statistical model *predicts* they should perform based on their inputs. The difference, if any, between the actual results and the predictions indicates how well districts are doing in educating black students.

An Education Production Function

School districts are organizations; they receive inputs (resources and students) from their environment and produce outputs (educated students among others). A vast literature has designated a variety of education production functions whereby the outputs of school systems can be evaluated relative to their inputs (Burtless 1996; Smith 1995; Hanushek 1986; 1989; 1996).

Our dependent variable is the school district's pass rate for black students on the TAAS exam. Texas requires all school districts to administer exams to students in several grades on an annual basis. We make no claim that results on TAAS exams account for the overall learning experience of black students. Student performance is a multi-dimensional concept that can be measured in a variety of ways. However, pass rates on TAAS exams **do** measure whether students are picking up basic academic skills from grade to grade. Our dependent variable, therefore, focuses primarily on how well districts perform in teaching black students basic skills, and should not be construed as an overall measure of black student learning.

The independent variables fall into four general types--environmental constraints, financial resources, teacher qualifications, and district policies. Environmental constraints are factors that restrict agency performance; in the case of education the key constraint is how difficult/easy it is

to educate students. In the context of education policy, poverty is a serious constraint on student performance.

The measures of constraint are the percent of poor students (defined as those eligible for free school lunches) and the percentage of black families that live in poverty. We also measure the educational level of blacks in the school district using the percentage of blacks in the school district over age 25 with at least a high-school diploma. The education variable should be positively related to student performance and the other two measures should be negatively related to black pass rates.

Financial resources are the raw materials of any organization's attempt to meet its goals. Three measures of financial resources are included--per student instructional funds, average teacher's salary, and percent of funds received via state aid. These represent total resources devoted to education, the attractiveness of teaching positions in a competitive marketplace, and state efforts to overcome the unequal distribution of local financial resources. The relationship between expenditures and educational outcomes is one of the most contested questions in all of educational policy. Hanushek (1986; 1989; 1996) contends that there is no consistent relationship between money and student outcomes. Although this finding has been challenged by others (Hedges and Greenwald 1996), it remains conventional wisdom. In recent longitudinal studies, however, Murray (1995), Evans, Murray and Schwab (1997), and Murray, Evans and Schwab (1995) found that districts that increased expenditures had improved performance afterward. Bohte (1999) found that expenditures were correlated with higher test scores even when controlling for the previous year's test scores. We consider expenditures a critical variable for inclusion in the model. All relationships should be positive.

The two teacher qualification measures (or lack thereof) are the percent of teachers who hold a temporary certification in a subject specialty (as opposed to a permanent certification) and the average number of years of teacher experience. The relationship for non-certification should be negative, while the expectation is that more experienced teachers will lead to higher student performance.

Finally, the education production function contains three policy measures--the percentage of students taking gifted classes, class size, and student attendance (percent attending on an average day). Performance should be positively related to

gifted classes and attendance and negatively related to class size.

Texas has a large number of school districts; many are very small or deal with a homogeneous student body. In an effort to use a set of organizations relatively similar in the tasks they perform, we have restricted our analysis to school districts with at least 1000 students and at least 10 percent black students. These restrictions resulted in a total of 159 districts in the study.

The data analysis is a pooled time series with data from the years 1999 through 2002. In any pooled time series one needs to control for serial correlation resulting from any trend in the variables over time. A series of dummy variables are introduced to achieve this control.

The basic production function is shown in table 1. Several variables are powerful predictors of the black student pass rate. These include background and policy variables. The black student pass rate is strongly influenced by the percentage of black adults age 25 and older with at least a high school education. Attendance is also strongly and positively related to the black student pass rate. The greater the percentage of low-income students in the district, the lower the black student pass rate. No other variable achieved statistical significance.

The results of this model allow us to compare school districts as to how well they do above (or below) expectations. As an illustration, the model predicted that the New Boston Independent School District would have an average black pass rate of 72.83% from 1999-2002. New Boston's actual pass rate of 88.05% represents a 15.22 percentage point improvement over this standard. Based on this method, the top ranked school district for black students in Texas was Atlanta with a rating of +22.23% followed closely by Ferris with a +18.23 score and Hooks with a +18.22 score.

The top forty districts are shown in table 2. The first column is the numerical score on which the districts are ranked. The second column is the average pass rate for black students from 1999 to 2002 and the third column is the ranking score for 2002 only. These forty districts represent a variety of different types of school districts located throughout the state.

Table 3 reports the 25 best districts for black students in 2002 only. Tatum ISD and Kountze ISD lead the districts with high pass rates for 2002. Likewise, the Cuero Independent School

District's performance in 2001 is striking in magnitude, moving from a 1999-2002 average of 5.52 to 16.43 for 2002 only, a gain of over 10 percentage points on our score ranking. Recent gains are likely the result of the benefits of policies adopted earlier so these are the districts that are likely to continue to be rated highly in future studies.

Although our top 25 includes districts of all sizes, large districts often cannot change as rapidly as small districts simply because so many students are involved. Table 4 presents the top ten large districts (those with 15,000 or more students). Galena Park, Aldine, and Waco top this list of large districts.

The table in the Appendix gives an alphabetical listing of all of the school districts examined in this study, along with their scores. Any person interested in a specific school district can examine the Appendix to locate that district and identify the score and rank.

Conclusion

This study has identified those school districts in Texas that performed better than expected on the TAAS pass rate for black students. These districts can serve as role models for other districts in Texas. The districts have a wide variety of programs for early diagnosis, coordination of curriculum, and parental involvement. Not all of the districts use the same approach, indicating that success can be attained in a multiplicity of ways. If effective programs and performances from these districts are identified, then they can be transferred to other districts with an overall benefit to black students.

Although this study only examines exemplary districts, that should not detract from the relatively low over-all TAAS pass rate for black students in Texas. A great deal of additional improvement is needed in these districts as well as other districts to close the test gap between black and Anglo students. Substantial progress has been made in the last few years; a great distance remains to be covered. Improving educational opportunities for all Texas children requires a long-term commitment to education. Problems develop over a period of decades; solutions require both time and hard work.

Table 1. Education Production Function

Dependent Variable = African American Pass Rate On the TAAS exam	
Percent Low Income	-0.116 (3.82)**
Percent Gifted	0.083 (0.82)
Attendance	1.920 (3.59)**
Average Teacher Salary K	0.285 (1.18)
Class Size	-0.052 (0.13)
Non-Certified Teachers	-0.003 (0.03)
Teacher Experience	0.348 (1.55)
State Aid	-0.009 (0.45)
Instructional Expenditures	0.001 (0.94)
High School Education	14.754 (2.37)*
% Poverty Background	-7.898 (1.79)
Constant	-133.160 (2.48)*
Observations 636	
R-squared 0.33	

Absolute value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Table 2. Top 40 districts

Rank	District	Score	TAAS	2002 Score
1	Atlanta	20.23	91.05	16.45
2	Ferris	18.23	84.10	10.86
3	Hooks	18.22	87.62	15.99
4	Angleton	16.03	92.00	13.95
5	Pittsburg	15.63	83.60	4.73
6	New Boston	15.22	88.05	15.42
7	Sweeny	13.81	89.18	8.41
8	El Campo	13.47	82.78	14.94
9	Newton	12.88	78.70	11.90
10	Galena Park	12.33	82.97	11.70
11	Hillsboro	11.98	77.38	8.00
12	Del Valle	11.43	77.10	12.88
13	Tatum	11.42	80.57	17.39
14	Columbia-Brazoria	11.30	82.88	10.12
15	Denison	10.88	82.40	10.87
16	Sulphur Springs	10.73	83.30	14.30
17	Kountze	10.46	77.80	16.76
18	McGregor	9.61	82.32	6.45
19	Rice Cons	9.41	74.55	6.48
20	Aldine	9.23	78.20	8.68
21	Woodville	7.44	74.35	9.51
22	Queen City	7.03	74.07	13.09
23	Waco	6.81	70.90	5.37
24	Groesbeck	6.71	76.30	7.95
25	Bay City	6.71	72.97	10.68
26	La Marque	6.59	75.93	9.12
27	Mansfield	6.49	84.20	2.27
28	Lamar Cons	6.26	75.97	3.90
29	Longview	6.19	74.65	5.60
30	Abilene	6.04	77.97	7.87
31	Commerce	5.91	73.97	8.46
32	Goose Creek Cons	5.69	75.45	3.36
33	Shepherd	5.53	70.20	7.10
34	Cuero	5.52	74.43	16.43
35	Wharton	5.50	73.78	3.98
36	Texas City	5.49	76.23	2.64
37	Daingerfield-Lone Star	5.46	75.72	7.15
38	Terrell	5.11	73.32	3.72
39	Everman	4.98	76.15	4.91
40	Mexia	4.95	73.28	6.76

Table 3. Top 25 for 2002

Rank	District	Score	TAAS	2002 Score
1	Tatum	11.42	80.57	17.39
2	Kountze	10.46	77.80	16.76
3	Atlanta	20.23	91.05	16.45
4	Cuero	5.52	74.43	16.43
5	Hooks	18.22	87.62	15.99
6	New Boston	15.22	88.05	15.42
7	El Campo	13.47	82.78	14.94
8	Sulphur Springs	10.73	83.30	14.30
9	Angleton	16.03	92.00	13.95
10	Queen City	7.03	74.07	13.09
11	Del Valle	11.43	77.10	12.88
12	Newton	12.88	78.70	11.90
13	Galena Park	12.33	82.97	11.70
14	Denison	10.88	82.40	10.87
15	Ferris	18.23	84.10	10.86
16	Bay City	6.71	72.97	10.68
17	Columbia-Brazoria	11.30	82.88	10.12
18	Woodville	7.44	74.35	9.51
19	La Marque	6.59	75.93	9.12
20	Aldine	9.23	78.20	8.68
21	Commerce	5.91	73.97	8.46
22	Sweeny	13.81	89.18	8.41
23	Hillsboro	11.98	77.38	8.00
24	Groesbeck	6.71	76.30	7.95
25	Abilene	6.04	77.97	7.87

Table 4. Top 10 Large Districts (15,000 + Students)

Rank	District	Score	TAAS	2002 Score
1	Galena Park	12.33	82.97	11.70
2	Aldine	9.23	78.20	8.68
3	Waco	6.81	70.90	5.37
4	Mansfield	6.49	84.20	2.27
5	Lamar Cons	6.26	75.97	3.90
6	Abilene	6.04	77.97	7.87
7	Goose Creek Cons	5.69	75.45	3.36
8	Garland	4.21	77.85	1.42
9	Houston	3.42	70.43	7.28
10	Irving	3.05	77.45	1.25

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Appendix. Scores for All Scools

Rank	District	Score	TAAS	2002 Score
30	Abilene	6.04	77.97	7.87
20	Aldine	9.23	78.20	8.68
99	Alief	-2.49	70.88	-4.10
53	Amarillo	2.15	69.40	0.97
80	Anahuac	-0.48	69.40	-5.54
4	Angleton	16.03	92.00	13.95
113	Arlington	-4.26	71.12	-3.14
147	Athens	-9.33	61.12	-5.67
1	Atlanta	20.23	91.05	16.45
68	Bastrop	0.79	67.97	-6.45
25	Bay City	6.71	72.97	10.68
60	Beaumont	1.63	70.47	-0.67
144	Bellville	-8.63	62.40	-11.82
142	Brenham	-8.36	60.83	-2.58
66	Bryan	1.06	66.70	-2.10
105	Caldwell	-3.34	65.57	5.87
92	Cameron	-1.58	66.82	-8.15
154	Carthage	-11.58	60.15	-8.67
140	Cedar Hill	-8.11	70.82	-5.88
90	Center	-1.37	65.10	-5.34
47	Channelview	3.00	76.18	3.86
155	Chapel Hill	-12.07	57.58	-11.21
110	Clarksville	-3.81	63.12	0.64
143	Cleveland	-8.53	54.92	-6.46
121	Coldspring-Oakhurst Cons	-5.41	55.73	-0.68
150	College Station	-10.36	66.20	-9.62
14	Columbia-Brazoria	11.30	82.88	10.12
148	Columbus	-9.55	63.77	-12.08
31	Commerce	5.91	73.97	8.46
52	Connally	2.18	75.15	-4.32
48	Copperas Cove	2.66	77.45	-0.52
116	Corrigan-Camden	-4.54	58.97	2.59
102	Corsicana	-3.19	63.60	4.87
153	Crockett	-11.21	53.25	-7.19
87	Crosby	-0.93	72.80	0.81
58	Crowley	1.75	82.55	-3.11
34	Cuero	5.52	74.43	16.43
37	Daingerfield-Lone Star	5.46	75.72	7.15
129	Dallas	-6.20	63.42	-4.27
61	Dayton	1.45	68.10	0.32
12	Del Valle	11.43	77.10	12.88
15	Denison	10.88	82.40	10.87
91	Denton	-1.51	70.00	2.00
83	Desoto	-0.65	76.65	-5.02

43	Diboll	4.42	67.95	-0.28
130	Dickinson	-6.21	61.38	-3.02
85	Duncanville	-0.90	74.60	0.02
77	East Central	-0.11	72.97	1.00
120	East Chambers	-5.40	62.35	-12.07
107	Edna	-3.43	64.88	-2.48
8	El Campo	13.47	82.78	14.94
141	Elgin	-8.32	58.65	-11.69
84	Ennis	-0.86	69.68	4.86
39	Everman	4.98	76.15	4.91
132	Fairfield	-6.58	65.58	-7.73
2	Ferris	18.23	84.10	10.86
95	Fort Bend	-2.25	76.28	-2.80
103	Fort Worth	-3.27	63.10	-0.70
10	Galena Park	12.33	82.97	11.70
55	Galveston	1.91	66.88	1.79
44	Garland	4.21	77.85	1.42
101	Giddings	-2.99	66.97	-5.26
100	Gilmer	-2.74	66.43	-2.47
119	Gladewater	-5.29	63.57	-1.64
118	Gonzales	-4.69	60.50	2.52
32	Goose Creek Cons	5.69	75.45	3.36
62	Grand Prairie	1.36	74.12	-1.55
135	Greenville	-6.97	59.22	-5.62
24	Groesbeck	6.71	76.30	7.95
71	Hallettsville	0.56	74.43	-2.30
75	Hardin-Jefferson	0.21	71.68	0.94
152	Hearne	-11.03	52.72	-20.81
159	Hempstead	-17.43	52.35	-16.46
111	Henderson	-4.11	64.43	1.47
11	Hillsboro	11.98	77.38	8.00
157	Hitchcock	-14.44	54.62	-17.86
3	Hooks	18.22	87.62	15.99
45	Houston	3.42	70.43	7.28
82	Huntsville	-0.59	69.47	1.93
46	Irving	3.05	77.45	1.25
131	Jacksonville	-6.55	58.62	-2.88
76	Jasper	-0.08	67.88	-0.92
56	Jefferson	1.86	69.90	-1.74
97	Judson	-2.38	72.55	-4.62
93	Kilgore	-1.87	65.93	-3.14
88	Killeen	-0.94	73.10	-3.65
124	Klein	-5.52	73.88	-3.11
17	Kountze	10.46	77.80	16.76
54	La Grange	1.95	71.90	-3.80
26	La Marque	6.59	75.93	9.12
65	La Vega	1.28	69.03	-5.25
28	Lamar Cons	6.26	75.97	3.90

125	Lancaster	-5.57	65.40	-7.91
86	Liberty	-0.91	71.00	0.53
41	Liberty-Eylau	4.77	73.60	3.65
98	Livingston	-2.45	64.33	-0.56
29	Longview	6.19	74.65	5.60
79	Lubbock	-0.26	68.85	-0.94
42	Lufkin	4.69	74.20	7.70
123	Madisonville Cons	-5.49	61.25	-0.98
106	Malakoff	-3.42	64.45	-0.11
146	Manor	-9.26	58.55	-13.51
27	Mansfield	6.49	84.20	2.27
156	Marlin	-12.90	51.68	-15.08
64	Marshall	1.29	70.35	4.12
18	McGregor	9.61	82.32	6.45
49	Mesquite	2.53	76.80	-0.43
40	Mexia	4.95	73.28	6.76
127	Midland	-5.63	63.58	-1.48
158	Mineola	-17.22	56.00	-5.51
73	Mount Pleasant	0.42	67.93	-0.45
112	Nacogdoches	-4.24	64.07	-9.71
108	Navasota	-3.62	61.92	-4.23
6	New Boston	15.22	88.05	15.42
9	Newton	12.88	78.70	11.90
115	North Forest	-4.43	61.17	-3.34
133	Palestine	-6.89	61.75	-5.97
74	Paris	0.21	69.45	-0.43
72	Pflugerville	0.50	77.43	0.30
5	Pittsburg	15.63	83.60	4.73
70	Port Arthur	0.69	64.22	-0.53
22	Queen City	7.03	74.07	13.09
19	Rice Cons	9.41	74.55	6.48
137	Richardson	-7.13	70.68	-5.26
63	Rockdale	1.33	72.07	2.22
96	Royal	-2.35	65.80	-0.29
139	Rusk	-7.96	59.80	-11.01
51	Sabine	2.33	74.43	-1.34
151	San Antonio	-10.50	56.55	-10.68
149	San Augustine	-9.77	59.28	-4.27
126	Sealy	-5.59	66.50	-11.97
104	Sheldon	-3.31	71.03	-2.05
33	Shepherd	5.53	70.20	7.10
114	Sherman	-4.42	66.35	-1.47
50	Silsbee	2.34	71.82	2.68
117	Smithville	-4.60	64.38	-9.49
94	Spring	-2.19	74.30	0.39
57	Stafford MSD	1.82	79.97	0.34
16	Sulphur Springs	10.73	83.30	14.30
7	Sweeny	13.81	89.18	8.41

13	Tatum	11.42	80.57	17.39
69	Taylor	0.79	67.88	-4.95
134	Teague	-6.96	70.08	-18.77
109	Temple	-3.78	65.62	-2.94
38	Terrell	5.11	73.32	3.72
81	Texarkana	-0.58	66.50	5.57
36	Texas City	5.49	76.23	2.64
128	Trinity	-5.96	55.50	-8.93
89	Tyler	-1.36	70.50	2.11
23	Waco	6.81	70.90	5.37
145	Waller	-8.95	63.10	-4.27
136	Waxahachie	-7.02	65.70	-2.02
59	West Orange-Cove Cons	1.70	68.32	3.26
78	West Oso	-0.12	64.45	-3.99
138	Westwood	-7.40	65.55	-2.38
35	Wharton	5.50	73.78	3.98
67	Wichita Falls	0.97	71.68	0.53
122	Wilmer-Hutchins	-5.46	57.30	-0.28
21	Woodville	7.44	74.35	9.51