THE BEST SCHOOL DISTRICTS IN TEXAS

FOR AFRICAN AMERICAN STUDENTS 1996-1999

A REPORT OF THE

TEXAS EDUCATIONAL EXCELLENCE PROJECT

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The Texas Educational Excellence Project (TEEP) is a joint program of the George Bush School of Public Service and the Department of Political Science at Texas A&M University. It also has research associates at the University of Texas-Pan American and Oakland University. 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 1996-99

The large gains for all students on the TAAS exam over the past five years slowed dramatically in 1999. African American students continued to close the gap with Anglo students--64 percent passed in 1999 vs. 87.9 percent–-but the gap still remains substantial. Statewide averages, however, mask some impressive gains 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 Linden-Kildare Independent School District provides one such example. TAAS pass rates for black students in Linden-Kildare have improved from 54.3 percent in 1996 to 95.2 percent in 1999. This dramatic improvement has resulted from a variety of early intervention techniques at lower grade levels to make sure students acquire necessary skills. Small class sizes along with the use of Title I teachers to address reading and similar problems form part of the Linden-Kildare integrated program. While their program does not target black students per se, by focusing on the educational needs of all students, they get excellent results.

Linden-Kildare is a relatively small school, and their approach might not be directly transferable to large urban school districts. Many urban schools, however, also get dramatic improvements. Waco ISD adopted a program that eliminated social promotions, instituted individual diagnostics, year round tutorials, and mandatory summer school for students who fail the TAAS. The Waco pass rate for black students has increased from 33.6 in 1996 to 67.2 in 1999.

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 all of the overall learning experience of black students. Student performance is a multi-dimensional concept that can be measured in variety of different 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 educational 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 basic 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 the 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 outcomes.

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 task that they perform, we have restricted our analysis to school districts with a least 1000 students and at least 10 percent black students. These restrictions resulted in a total of 170 districts in the study.

The data analysis is a pooled time series with data from the years 1995 through 1998. 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.

The basic production function is shown in table 1. Several variables are powerful predictors of black student pass rate. These include expenditure, background, and policy variables. Teacher salaries are strongly and positively related to the black student pass rate, as is the percentage of black adults age 25 and older with at least a high school education. Attendance also is 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 Houston Independent School District would have an average black pass rate of 53.48% from 1996-99. Houston's actual pass rate of 59.83 represents a 6.35 percentage point improvement over this standard. Based on this method, the top ranked school district for black students in Texas was Pittsburg with a rating of +22.0% followed closely by Linden-Kildare with a +21.41 score and Ferris with a +20.60 score.

The top 35 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 1996 to 1999 and the third column is the ranking score for 1999 only. These thirty-five 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 1999. A comparison of this table with Table 2 gives some indication of relative movement among the rankings of school districts. Linden-Kildare's performance in 1999 is striking in magnitude. 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 35 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). Aldine, Goose Greek, Galena Park and Garland 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 pass rate for black students. These districts should 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. 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 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 develope over a period of decades; solutions require both time and hard work.

Table 1. The Education Production Function

Dependent Variable = % of black students passing the TAAS 1996-99

Independent Variable	Coefficient	Standard Error
Low Income Students	-.0639	.0325
Gifted Classes	.1535	.1041
Attendance	3.2679	.4979
Teacher Salaries (000)	0.7800	.3093
Class Size	-.1927	.3814
NonCertified Teachers	.0438	.1251
Teacher Experience	.0190	.2924
State Funding Percent	.0206	.0205
Instructional Funding Per Student	.0012	.0017
Black Education (25+)	.2058	.0656
Black Poverty	-.0504	.0431

R-Square .52

Omitted are coefficients for individual year dummy variables.

Table 2. Top Ranked Districts for Educating Black Students 1996-99

Rank	District	Score	TAAS	99 Score
1	Pittsburg	22.01	76.30	22.11
2	Linden-Kildare	21.41	79.82	29.62
3	Ferris	20.60	74.90	19.35
4	Hooks	17.38	72.22	22.56
5	Atlanta	16.15	74.98	22.36
6	Sweeny	15.60	75.50	18.01
7	Del Valle	15.54	66.07	15.83
8	Connally	13.94	73.23	10.54
9	Texas City	12.34	66.85	9.44
10	McGregor	12.33	73.85	7.85
11	Kountze	10.73	63.33	5.56
12	Tatum	10.64	66.82	13.97
13	Angleton	10.62	72.20	17.93
14	Liberty-Eylau	10.31	66.75	13.02
15	Sulpher Springs	9.62	68.82	4.80
16	Stafford MSD	9.50	74.28	7.63
17	Aldine	9.14	66.78	6.32
18	La Grange	8.89	63.75	2.37
19	Goose Creek	8.58	62.63	6.89
20	Wilmer-Hutchins	8.36	57.75	-3.17
21	Terrell	8.27	66.22	9.80
22	New Boston	8.00	69.30	5.09
23	El Campo	7.61	63.55	17.21
24	Newton	7.46	58.95	12.99
25	Columbia-Brazoria	7.28	64.05	11.82
26	Galena Park	7.19	66.15	8.66
27	Vernon	7.17	61.67	11.29
28	Daingerfield-Lone St	7.10	64.72	2.34
29	Sabine	7.08	66.28	6.52
30	Garland	6.96	67.88	6.29
31	Bay City	6.94	59.63	3.25
32	Grand Prairie	6.45	67.97	1.88
33	Houston	6.35	59.83	-2.16
34	Lamar Consolidated	6.33	61.60	10.12
35	Denison	5.87	63.80	11.96

Table 3. The Best Districts in 1999

Rank	District	1999 Score
1	Linden-Kildare	29.62
2	Hooks	22.56
3	Atlanta	22.36
4	Pittsburg	22.11
5	Ferris	19.35
6	Sweeny	18.01
7	Angleton	17.93
8	El Campo	17.21
9	Del Valle	15.83
10	Tatum	13.97
11	Rice Consolidated	13.29
12	Liberty-Eylau	13.02
13	Newton	12.99
14	Hillsboro	12.16
15	Denison	11.96
16	Columbia-Brazoria	11.82
17	Vernon	11.29
18	Connally	10.54
19	Lamar Consolidated	10.12
20	Rockdale	10.03
21	Terrell	9.80
22	Taylor	9.76
23	Texas City	9.44
24	Waco	9.26
25	Galena Park	8.66

Table 4. The Best Large School Districts

Enrollment 15,000+

		Score	TAAS	99 Score
1	Aldine	9.14	66.78	6.32
2	Goose Creek	8.58	62.63	6.89
3	Galena Park	7.19	66.15	8.66
4	Garland	6.96	67.88	6.29
5	Grand Prairie	6.45	67.97	1.88
6	Houston	6.35	59.83	-2.16
7	Wichita Falls	5.28	63.28	-0.90
8	Amarillo	4.18	57.13	4.52
9	Beaumont	3.90	57.88	2.16
10	Abilene	3.81	62.30	4.27

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Appendix. Scores for All Districts

Rank	District	Score	TAAS	1999 Score
48	Abilene	3.81	62.30	4.27
17	Aldine	9.14	66.78	6.32
100	Alief	-2.77	61.10	-3.46
45	Amarillo	4.18	57.13	4.52
40	Anahuac	5.33	60.28	6.48
13	Angleton	10.62	72.20	17.93
137	Arlington	-7.56	56.45	-7.08
152	Athens	-11.25	43.78	-9.58
5	Atlanta	16.15	74.98	22.36
139	Austin	-7.98	44.83	-12.31
66	Bastrop	1.33	53.92	5.10
31	Bay City	6.94	59.63	3.25
47	Beaumont	3.90	57.88	2.16
148	Bellville	-10.15	45.38	-7.90
151	Brenham	-11.23	44.00	-11.06
114	Bryan	-4.40	49.92	0.07
62	Caldwell	1.88	58.03	-6.58
112	Cameron	-4.24	50.40	2.64
155	Carthage	-12.26	45.38	-9.10
127	Cedar Hill	-5.70	60.80	-14.34
58	Center	2.53	54.22	0.13
52	Channelview	3.41	64.45	3.01
158	Chapel Hill	-15.04	39.03	-12.05
138	Clarksville	-7.87	48.78	-10.96
149	Cleveland	-10.56	37.47	-11.08
153	Cold Spring-Oakhurst	-11.32	35.78	-10.99
146	College Station	-10.00	52.20	-12.03
25	Columbia-Brazoria	7.28	64.05	11.82
105	Columbus	-3.34	55.70	-7.23
69	Commerce	1.19	57.38	8.13
8	Connally	13.94	73.23	10.54
57	Copperas Cove	2.99	63.85	5.29
63	Corrigan-Camden	1.87	54.72	-0.85
122	Corsicana	-5.55	47.05	-5.58
145	Crockett	-9.82	40.60	-15.63
82	Crosby	-0.14	61.10	-3.64
37	Crowley	5.69	72.60	3.53
97	Cureo	-2.27	52.60	-6.03
28	Daingerfield-Lone St	7.10	64.72	2.34
109	Dallas	-3.88	51.03	-6.47
7	Del Valle	15.54	66.07	15.83
35	Denison	5.87	63.80	11.96
89	Denton	-0.86	57.20	-5.84
94	DeSoto	-1.62	64.88	-0.14
61	Diboll	2.08	55.13	8.55
131	Dickinson	-6.67	44.35	-9.81
96	Duncanville	-1.93	60.58	-0.54
79	East Central	0.14	62.13	1.86

51	Edna	3.43	58.67	-4.67
23	El Campo	7.61	63.55	17.21
103	Elgin	-3.23	50.45	-2.97
120	Ennis	-5.48	51.80	-8.45
81	Everman	0.04	59.00	3.87
121	Fairfield	-5.52	53.20	-7.80
3	Ferris	20.60	74.90	19.35
116	Fort Worth	-5.18	47.60	-4.73
73	Fort Bend	0.52	63.95	-2.34
124	Ft Sam Houston	-5.62	68.02	-2.64
26	Galena Park	7.19	66.15	8.66
59	Galveston	2.22	50.08	3.05
30	Garland	6.96	67.88	6.29
104	Giddings	-3.31	54.42	-3.62
130	Gilmer	-6.57	49.72	-2.91
87	Gladewater	-0.61	55.00	-5.37
143	Gonzales	-8.60	43.97	-8.02
19	Goose Creek	8.58	62.63	6.89
32	Grand Prairie	6.45	67.97	1.88
144	Greenville	-9.71	42.60	-6.85
134	Groesbeck	-7.31	49.10	3.13
46	Hallettsville	4.05	63.47	2.84
76	Hardin-Jefferson	0.26	56.53	-1.13
74	Hearne	0.47	49.75	-1.63
161	Hempstead	-18.76	37.65	-26.28
117	Henderson	-5.21	50.28	-2.64
56	Hillsboro	3.03	55.80	12.16
159	Hitchcock	-15.80	40.17	-19.89
4	Hooks	17.38	72.22	22.56
33	Houston	6.35	59.83	-2.16
133	Huntsville	-7.25	49.22	-4.33
54	Irving	3.18	66.38	4.50
125	Jacksonville	-5.64	45.42	-3.27
55	Jasper	3.12	57.33	0.01
49	Jefferson	3.78	57.92	5.63
75	Judson	0.26	65.07	-2.60
85	Kilgore	-0.43	53.65	1.45
78	Killeen	0.15	62.90	0.24
39	Kirbyville	5.41	59.25	2.30
92	Klein	-1.35	64.55	-7.64
11	Kountze	10.73	63.33	5.56
84	La Vega	-0.35	55.00	2.84
72	La Marque	0.73	55.65	7.11
18	La Grange	8.89	63.75	2.37
34	Lamar Consolidated	6.33	61.60	10.12
126	Lancaster	-5.69	53.53	-4.52
99	Liberty	-2.63	54.53	-3.52
14	Liberty-Eylau	10.31	66.75	13.02
2	Linden-Kildare	21.41	79.82	29.62
106	Livingston	-3.42	48.72	-5.19
36	Longview	5.70	60.55	7.95

108	Lubbock	-3.82	52.72	-2.37
95	Lufkin	-1.76	54.17	2.17
141	Madisonville	-8.34	43.95	-8.86
88	Manor	-0.79	53.17	-9.93
140	Marlin	-8.08	43.85	-8.80
98	Marshall	-2.56	51.85	-1.37
10	McGregor	12.33	73.85	7.85
70	Mesquite	0.96	60.72	3.40
43	Mexia	4.89	61.58	4.32
113	Midland	-4.36	49.10	-6.35
160	Mineola	-18.62	42.42	-14.49
77	Mount Pleasant	0.25	56.45	-3.03
115	Nacognoches	-4.73	51.95	-1.80
110	Navasota	-3.91	47.25	2.04
22	New Boston	8.00	69.30	5.09
24	Newton	7.46	58.95	12.99
50	North Forest	3.67	58.15	-12.29
132	Palestine	-6.98	48.03	-6.95
68	Paris	1.21	58.20	-2.74
67	Pflugerville	1.28	66.18	-0.80
1	Pittsburg	22.01	76.30	22.11
80	Port Arthur	0.08	47.58	3.19
42	Queen City	5.26	59.88	-0.09
83	Randolph Field	-0.31	75.05	-9.23
38	Rice Consolidated	5.50	55.90	13.29
135	Richardson	-7.51	57.83	-9.63
53	Rockdale	3.36	60.65	10.03
147	Royal	-10.14	40.92	-4.72
123	Rusk	-5.62	48.33	-5.68
29	Sabine	7.08	66.28	6.52
154	San Augustine	-11.80	45.05	-12.04
156	San Antonio	-12.84	43.00	-13.83
136	Sealy	-7.54	51.55	-8.92
101	Sheldon	-2.84	58.38	-1.95
65	Shepherd	1.81	54.90	7.17
107	Sherman	-3.78	53.70	-4.50
93	Silsbee	-1.56	52.55	5.14
157	Smithville	-13.77	43.08	1.82
118	Spring	-5.35	60.88	-4.50
16	Stafford MSD	9.50	74.28	7.63
15	Sulpher Springs	9.62	68.82	4.80
6	Sweeny	15.60	75.50	18.01
12	Tatum	10.64	66.82	13.97
71	Taylor	0.88	55.78	9.76
111	Teague	-4.14	58.08	-4.70
142	Temple	-8.50	48.88	-5.26
21	Terrell	8.27	66.22	9.80
128	Texarkana	-5.75	47.88	-5.82
9	Texas City	12.34	66.85	9.44
129	Tyler	-5.90	52.90	-4.52
90	Van Vleck	-1.18	58.55	5.38

27	Vernon	7.17	61.67	11.29
64	Waco	1.87	49.90	9.26
150	Waller	-10.97	47.97	-14.04
119	Waxahachie	-5.45	53.20	-6.45
60	West Oso	2.13	52.03	0.49
86	West Orange-Cove	-0.44	52.85	2.50
91	Westwood	-1.29	56.10	-5.39
44	Whorton	4.60	57.92	-0.63
41	Wichita Falls	5.28	63.28	-0.90
20	Wilmer-Hutchins	8.36	57.75	-3.17
102	Yoakum	-3.02	51.22	-1.79