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ABSTRACT

A variety of methods are used by the Austin (Texas) Independent School District to report the results of student achievement testing. These techniques were developed to alleviate some of the problems that occurred previously: (1) a school's average score represents very few of its students because large numbers of students score very high or very low; (2) a median score masks achievement gains; or (3) a total group's average declines while all subgroups' averages rise. Case studies illustrate these problems. Numerous ways to report achievement data have been found: (1) means and medians; (2) number of students scoring above and below certain percentiles; (3) analysis of items correct (related to specific skills) by individuals, classes, schools, and district; and (4) results for subgroups of sex, ethnicity, classroom, school, grade, special education students, and limited English speakers. Scores may be compared to the national norm, the state, other similar districts, surrounding suburban districts, or the same district in previous years. Data of interest to the public include National Merit Scholarship winners, honor roll members, high school graduates meeting minimum competency requirements, and students who will attend college. Results may also be used to illustrate further educational needs. (GDC)

The Average Achievement Test Score: A Demagogue Statistic

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Austin, Texas

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The Average Achievement Test Score:
A Demagogue Statistic

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Austin (TX) Independent School District

INTRODUCTION

Average achievement test scores have become the ultimate touchstone for measuring success in public schools. Be it a mean or a median, this overpublicized statistic is a demagogue that tells us much less about student achievement than the public believes. This paper focuses on other statistics that together with achievement test averages often better describe the state of learning in our schools.

Our school system in Austin, Texas is remarkably average compared to national norms. However, our individual schools are a study in contrasts. Moreover, the student populations within each of our schools are quite diverse as a consequence of cross-town bussing for desegregation. An excellent example of the misrepresentation of an average comes from one of our elementary schools that has few average students--about half are high achievers from one part of the city and about half are low achievers from another part of the city. An average represents few of the students in this school.

Those of us who report achievement test results have begun to expand the statistics we provide to the public and to educational decision makers. Most test scoring services also report information beyond measures of central tendency; however, in the quest to draw the bottom line for judging school effectiveness, the mean and median have almost exclusive reign. As we have compiled an array of alternatives for describing student outcomes in ways that better target strengths and weaknesses, the importance of using several types of information has also become evident.

Our urban school system, the Austin Independent School District (AISD), and its community attend closely to achievement test scores. However, the community is so diverse in its citizens that few are satisfied with knowing an average score for 58,000 students. Questions constantly are raised as to whether the schools are doing a good job with high-achieving students. When the progress of the academically able is touted by the Superintendent, low-income parents demand to know how their children are faring. Recently, we have come full cycle and are hearing questions of whether we are ignoring the average students and catering to special populations too much.

In response to this situation, AISD's Office of Research and Evaluation (ORE) published a report that attempted to describe the achievement of several identifiable groups of students. In

addition, summary statistics were reported in our more technical volumes to aid in responding to further inquiries about specific groups of students.

Our method was simple: compile a list of all the ways achievement test results have been requested and all the statistics necessary to respond to these information needs. This paper presents a collection of options for describing achievement test results and other student outcomes in ways that better aid decision makers and the public. The data source for this paper is the institutional wisdom of educators and researchers who have worked in our Office of Research and Evaluation for the past five years and who have come to realize that means and medians on our standardized, norm-referenced achievement tests are merely the first step in describing achievement and other outcomes.

An example of reporting that draws upon multiple instruments and multiple statistics to describe achievement comes from a recent ORE publication--1984 at a Glance.

- College-bound seniors who take the Scholastic Aptitude Test (SAT) in AISD outperform both the state and national averages. The number of our students recognized in the National Merit Scholarship competition is three times the average number for a school system the size of AISD.

- Graduates from AISD high schools are required to demonstrate at least ninth-grade level skills in both reading and mathematics on one of several achievement tests (Austin's BEST, ITBS, TAP, or TABS). In 1983-84, only 6% of the graduates (other than untestable special education students) failed to do so. Nationally, about 20% of the seniors score below this level on achievement tests.

- High-achieving students, those who score above the 90th percentile on the Iowa Tests of Basic Skills (ITBS), represent three to four times the percentage of AISD students compared to high achievers in other urban districts.

- Average students in AISD are above national averages on the ITBS and TAP in grades 1-11. Nationally, the achievement of average students has risen over the past few years. The average student in AISD has not only kept pace with this improvement, but has moved up faster in most areas.

- Low-achieving students in AISD perform at about the average for low achievers around the State. On the statewide Texas Assessment of Basic Skills (TABS), AISD has a smaller percentage of low achievers in reading than most other Texas urban districts; however,

at the elementary level, AISD has a higher percentage of low achievers in mathematics than most others.

In the short time since 1984 at a Glance has been published, there have been many encouraging indications that this reporting approach is more effective than averages alone.

- Results are more frequently quoted.
- Results are more often cited in connection with goals and action plans.
- The good news has been more convincingly communicated to realtors and the community.
- The bad news has been quickly delegated to appropriate staff for action.

CASE STUDIES

As mentioned above, we did not begin with this reporting approach: rather, it evolved as we encountered cases in which reporting only averages left something to be desired. The following case studies are offered as examples.

CASE STUDY #1: A SCHOOL'S AVERAGE SCORE MAY REPRESENT VERY FEW OF ITS STUDENTS.

In 1983-84, the median percentile for this school at grade 1 on the ITBS Composite was the 41st percentile. Based on this statistic alone, a common and reasonable conclusion would be that the achievement of these students was below average. Yet, a closer look at the entire range of achievement reveals a somewhat different picture. As seen below, achievement at this grade was distinctly bimodal. Thirty-one percent (31%) of the students scored in the top quartile (Q4), while 30% of the students scored in the bottom quartile (Q1). Only 39% of the students scored in the midrange of achievement--between the 25th percentile and the 75th percentile--compared with 50% of the students at this grade in the national norming sample. In other words, reporting the median alone misrepresents the achievement picture at this school where approximately two thirds of the students scored at either the top or the bottom of the achievement distribution.

YEAR: 1983-84
TEST: ITBS Composite

RANGE	% SCORING IN THIS RANGE
75 - 99 %ile	31
1 - 25 %ile	30

CASE STUDY #2: A MEDIAN SCORE MAY MASK THE SCHOOL'S ACHIEVEMENT GAINS.

Below is a comparison of a school's median percentile at grade 5 on the ITBS Capitalization test for the two most recent years during which it was administered, 1982-83 and 1983-84. A decline of one percentile point apparently indicates that achievement on this test at this grade declined slightly from one year to the next. In fact, this was not the case for low achievers, as demonstrated by the percentage of students scoring in the bottom quartile (Q1) in these two years. In 1982-83, 38% of the students scored in the bottom quartile, while in 1983-84, 6 percentage points fewer of the students scored in that range. See below.

YEARS: 1982-83 AND 1983-84
TEST: ITBS Capitalization

	1982-83	1983-84
MEDIAN	47 %ile	46 %ile
STUDENTS SCORING IN Q1	38%	32%

This illustrates that with a median, the only thing that matters is the number of students who gain from below to above the original midpoint. As illustrated in this case, when the low achievers make gains, the median may not reflect this positive change in achievement. Indeed, as occurred here, a median may even go down. When this happens, the school is not "getting credit" for the students' achievement gains.

CASE STUDY #3: A TOTAL GROUP'S AVERAGE MAY DECLINE WHILE ALL SUBGROUPS' AVERAGES RISE.

In the results of our April, 1981, ITBS elementary school testing, we encountered a case where the total median percentile and grade-equivalent scores at grade 3 on the ITBS Reading Total* dropped, apparently indicating a decline in achievement at that grade from 1980 to 1981. At the same time, however, the three ethnic subgroups' median percentiles and mean grade equivalent scores rose. What happened?

As seen in the figure on the next page, there was a shift in the school system's ethnic distribution from 1980 to 1981. In 1981,

* AISD/ORE has a locally calculated Reading Total based upon the ITBS Vocabulary and Reading Comprehension tests.

ETHNIC GROUP	1980 MEAN G.E.	N	1981 MEAN G.E.	N	CHANGE MEAN G.E.	N
BLACK	3.19	760	3.30	757	+.11	-3
HISPANIC	3.33	1078	3.37	1108	+.04	+30
ANGLO/OTHER	4.46	2443	4.50	1917	+.04	-526
TOTAL	3.95	4281	3.93	3782	-.02	-499

Case Study #3: Comparison of changes in mean grade equivalent scores from 1980 to 1981 . . . . ITBS, Reading Total, Grade 3, AISD.

there was a lower overall proportion of Anglo students in the District. This higher achieving group exerted less upward influence on the 1981 District total score. Even though every ethnic group's mean grade equivalent score rose, the total was influenced less by the highest achieving group.

A second factor entering into the picture was a change in the percentage of students taking the test in 1980 and in 1981, by ethnicity. An increase in the percentage of eligible Black and Hispanic students tested in 1981 over 1980 also raised the proportion of lower achieving minority students represented in the districtwide mean grade equivalent score.

With this case, the explanations of the test results are logical, and even obvious when one concentrates on the phenomena involved. But if one looks only at the overall average, the achievement picture is puzzling.

Our response to this anomaly, a decrease in total group score while the subgroups all increased, focused on estimating the impact of shifts in the ethnic percentages of the three groups in AISD and the total number of students tested. We calculated an estimate of the 1981 grade-equivalent scores, based upon the 1980 scores. Achievement was held constant, but we took into account the change in the percentage of students tested by ethnicity. These estimated 1981 grade-equivalent scores were compared to the actual 1981 scores to determine the expected change in achievement which could be attributed to this shift in ethnic composition and number of students tested.

Through the use of these projected scores, AISD scores in reading would be expected to be lower in 1981 in grades 1-7 and higher in grade 8 if there were no actual change in achievement. A comparison of these projected scores with actual 1981 achievement indicated that:

- Achievement was actually higher rather than lower in grades 1, 2, and 5-7 compared to the expected levels.
- Achievement in grades 3 and 4 declined no more than expected.
- Achievement in grade 8 improved more than expected.

Since that time, we have been reporting longitudinal data for students who have been tested every year, thus making our year-to-year comparisons on the same students in addition to comparisons on grade levels whose make-up might shift annually.

Summary of Case Studies

The cases just presented serve to illustrate three major points:

1. The average score is inadequate for representing the often complex elements which make up the complete achievement picture.

2. Besides being inadequate, it is frequently misleading.

3. Where achievement test results are involved, caution and extra attention to the phenomena involved are necessary to avoid coming to the wrong conclusion.

What is needed, therefore, to present the whole story is a more extensive list of statistics from which to select alternatives as needed. The following "menu" was developed based on our years of experience in responding to questions from our community and the decision makers in our District. It is termed a menu to emphasize the point that the user may select from the list those statistics which best fit the user's information needs at a given time.

MENU OF ALTERNATIVES FOR REPORTING ACHIEVEMENT

I. Averages

A. Means

B. Medians

II. Students scoring in certain ranges

A. Low-achieving students in the district

1. Below the 25th percentile

2. Below the 30th percentile

3. Below the 40th percentile

B. High-achieving students in the district

1. Above the 75th percentile

2. Above the 90th percentile

3. Above the 95th percentile

C. Students scoring above and below the national average (50th percentile)

III. Skills analyses (items answered correctly in skill areas within each standardized test)

A. By individual student

B. By groups

1. Classroom

2. School

3. District

IV. Test results by subgroup (using statistics as in I, II, and III)

A. By ethnicity

B. By sex

C. By classroom

D. By school

E. By grade

F. For special education students

G. For limited-English-proficient (LEP) students

V. Comparison with reference groups (using statistics as in I, II, and III, and groups as in IV)

A. With a national norming sample

B. With the state

C. With other similar districts

D. With surrounding suburban districts

E. With the district in previous years

Standardized norm-referenced or criterion-referenced test scores do not represent the full range of options available for describing student academic progress or for identifying needs within a school or school system.

VI. Signs of Success

A. College-bound seniors

B. High school graduates attending college

C. National Merit Scholarship winners

1. Semifinalists

2. Finalists

3. Scholarship recipients

D. Students scoring at or above grade level

E. Students on the honor roll

F. Students not failing any courses

G. High school graduates meeting minimum competency requirements

H. Students promoted

I. Students meeting or exceeding their predicted achievement levels

J. Students gaining one or more years in a year

K. Gifted and talented students

L. Students receiving awards

M. Average daily attendance rates

VII. Needs assessment

A. Special education students

B. Students in bilingual education

C. Students in compensatory education programs

D. High school dropouts

E. Students failing at least one course

F. Students eligible for free or reduced-price meals

G. Students disciplined

H. Limited-English-proficient (LEP) students

I. Minority students

J. Students below grade level

K. Students not meeting minimum competency requirements

L. Students not meeting their predicted achievement

M. Students not making a year's gain in a year

N. Students not promoted

EXAMPLE OF ACHIEVEMENT REPORTED FOR A SCHOOL

Attachment 1 contains samples of some of the achievement [illegible] provides to campuses. A page is included from each [illegible]

- A longitudinal presentation of a limited set of school characteristics,
- Median scores for the school, reported longitudinally by ethnic group,
- Percentages of students scoring in selected percentile ranges
- Current achievement and other performance data for the school, and
- A comparison of the school's actual and predicted achievement (accompanied by a description of the report).

CONCLUSION

Our reporting options are limited more by time than by lack of creativity or shortages of other resources. Our hope is that this list of potential statistics can serve as a quick reference for us and others as we decide which one or ones of these we will report whenever student progress is being described.

Bibliography

Ligon, G. 1984--At a Glance. Austin, Tx.: Office of Research and Evaluation (ORE Publication No. 84.10), Austin Independent School District, June 1984.

Ligon, G. & Matter, K. Anomalies in achievement analyses. Paper presented at the annual meeting of the American Educational Research Association, New York, March 1982. (ORE Publication No. 81.60)

SCHOOL CHARACTERISTICS

(Grades K-3)

	1980-81 K	1980-81 1-3	1981-82 K	1981-82 1-3	1982-83 K	1982-83 1-3	1983-84 K	1983-84 1-3	1984-85 K	1984-85 1-3
[illegible]	51	219	48	175	48	159	66	209		
[illegible]	90	95	94	95	92	96	92	95		
[illegible] TEACHER [illegible]	25.5	22.1	25.0	25.0	25.0	20.0	20.3	25.1		
[illegible] INCOME STUDENTS	88	66	82	64	100	71	88	63		
ETHNIC DISTRIBUTION H :	6	10	12	15	19	18	10	16		
B :	94	58	88	56	81	59	87	53		
A :	0	32	0	29	0	23	3	31		
[illegible] SPECIAL PROGRAMS	. Title I . SCE Counselor		. Title I . SCE Counselor . Early Childhood		. Chapter 1 . Chapter 2 C.L. . SCE Counselor . Early Childhood . Project PASS		.Chapter 1 .Chapter 2CL .SCE Counselor .Early Childhood .Project PASS			

BRIEF DEFINITION

[illegible] The number of students on the current roll of the school (including [illegible] special education students) averaged for the entire year.

[illegible] ATTENDANCE: The percentage of students on the current roll who actually are present (including regular and special education students) averaged for the entire year.

[illegible] TEACHER RATIO: The average number of students (regular and resource) per regular classroom teacher in the school.

[illegible] INCOME STUDENTS: The percent of students at the school who qualify for free and reduced lunch, based upon the third six-weeks membership.

ETHNIC DISTRIBUTION: The percent of enrolled students on October 1st who are Hispanic (H), Black (B), and Anglo/Other (A).

MAJOR SPECIAL PROGRAMS: Programs bringing additional resources to a number of schools in the District, having a direct effect on achievement, and operating in this school.

AUSTIN INDEPENDENT SCHOOL DISTRICT

ACHIEVEMENT PROFILE/MEDIANS
IOWA TESTS OF BASIC SKILLS

SCHOOL: [redacted]
GRADE: 03
DATE OF REPORT: JUNE, 1984

		ALL STUDENTS TESTED IN THIS SCHOOL GR 3 79-80	GR 3 80-81	GR 3 81-82	GR 3 82-83	GR 3 83-84	STUDENTS TESTED THE LAST 2 YEARS AND IN THIS SCHOOL THE LAST YEAR GR 2 82-83	GR 3 83-84	STUDENTS TESTED THE LAST 3 YEARS AND IN THIS SCHOOL GR 1 81-82	GR 2 82-83	GR 3 83-84
MATH TOTAL											
ALL STUDENTS	GE	3 68	3.74	4 08	4 18	4.00	2 83	3 70	1 83	2 73	4.30
	%ILE	46	48	59	63	58	42	47	51	46	68
	NUMBER TESTED	69	73	43	45	51	41	41	25	25	25
BLACK	GE	3.78	3.25	3 00	3 68	3 50	2 30	3 50	1.83•	2 63•	3 80•
	%ILE	49	29	20	46	39	27	39	40•	42•	51•
	NUMBER TESTED	62	36	21	27	22	22	22	13	13	13
HISPANIC	GE	3.30•		3 75•	.	3 20•	2 45•	3 00•	1 60•	2 40•	3.00•
	%ILE	31•		47•		27•	33•	19•	38•	31•	21•
	NUMBER TESTED	5		4		8	6	6	4	4	4
ANGLO/OTHER	GE		4 51	4 75•	5 10•	4 73	3 60•	4 81•	3 08•	4 35•	5 15•
	%ILE		75	81•	90•	80	81•	82•	95•	95•	90•
	NUMBER TESTED		35	18	15	21	13	13	8	8	8
MATH CONCEPTS											
ALL STUDENTS	GE	3.55	3 78	4 10	4 46	3 85	2 54	3 63	1.64	2 68	3 98
	%ILE	41	49	59	88	51	39	44	42	44	55
	NUMBER TESTED	69	73	43	45	51	41	41	25	25	25
BLACK	GE	3 60	3 00	2 98	3 41	3 15	2 45	3 15	1.56•	2 50•	3 63•
	%ILE	43	23	22	36	27	36	27	38•	38•	45•
	NUMBER TESTED	62	36	21	27	22	22	22	13	13	13
HISPANIC	GE	2 88•		4 30•		3 30•	2 20•	3 08•	1 30•	2 35•	2 85•
	%ILE	19•		63•		32•	26•	26•	24•	32•	19•
	NUMBER TESTED	5		4		8	6	6	4	4	4
ANGLO/OTHER	GE		4 63	5 19•	5 40•	4 74	3 73•	5 08•	3 10•	4 75•	5 25•
	%ILE		73	85•	89•	75	79•	83•	90•	94•	86•
	NUMBER TESTED		35	18	15	21	13	13	8	8	8
MATH PROBLEMS											
ALL STUDENTS	GE	3 85	3 98	4 00	4 10	3.98	2 63	3 80	2 07	3 01	4 10
	%ILE	51	55	58	59	55	43	49	80	57	59
	NUMBER TESTED	69	73	43	45	51	41	41	25	25	25
BLACK	GE	3 98	3.57	2 75	3 80	3 40	2 51	3 40	1.93•	2 78•	3 76•
	%ILE	55	42	20	43	37	40	37	55•	48•	48•
	NUMBER TESTED	62	36	21	27	22	22	22	13	13	13
HISPANIC	GE	3.40•		3.80•		2.75•	2 15•	2 35•	1.65•	2 20•	2.75•
	%ILE	37•		43•		22•	28•	14•	44•	32•	22•
	NUMBER TESTED	5		4		8	6	6	4	4	4
ANGLO/OTHER	GE		4.48	4 50•	4 81•	4 76	3 75•	4 90•	3.00•	4.15•	4.85•
	%ILE		70	71•	82•	78	79•	81•	87•	90•	80•
	NUMBER TESTED		35	18	15	21	13	13	8	8	8
MATH COMPUTATION											
ALL STUDENTS	GE	3.81	3 87	3.78	4 13	4 31	2 73	4 16	2.10	2 80	4.55
	%ILE	50	41	48	67	75	45	69	78	50	83
	NUMBER TESTED	89	73	43	45	51	41	41	25•	25	25
BLACK	GE	3.95	3 30	3.04	3 80	4.05	2 35	4.05	1.93•	2 70•	4.35•
	%ILE	59	22	14	50	64	20	64	64•	44•	76•
	NUMBER TESTED	82	36	21	27	22	22	22	13	13	13
HISPANIC	GE	3 43•		3 70•		3.70•	2.40•	3.65•	1.95•	2.15•	3.45•
	%ILE	28•		47•		43•	26•	40•	65•	18•	31•
	NUMBER TESTED	5		4		8	8	6	4	4	4
ANGLO/OTHER	GE		4.13	4 45•	4.80•	4.79	3.40•	4 83•	2.50•	4.00•	5.25•
	%ILE		67	80•	89•	87	83•	89•	90•	95•	86•
	NUMBER TESTED		35	18	15	21	13	13	8	8	8

• A MEDIAN CALCULATED FOR A SMALL NUMBER OF STUDENTS SHOULD NOT BE CONSIDERED AS A RELIABLE MEASURE OF A GROUP'S ACHIEVEMENT.

AUSTIN INDEPENDENT SCHOOL DISTRICT

PROFILE OF HIGH AND LOW ACHIEVERS
IOWA TESTS OF BASIC SKILLS

SCHOOL: [redacted]
GRADE: 03
DATE OF REPORT: JUNE, 1984

		ALL STUDENTS TESTED IN THIS SCHOOL					STUDENTS TESTED THE LAST 2 YEARS AND IN THIS SCHOOL THE LAST YEAR		STUDENTS TESTED THE LAST 3 YEARS AND IN THIS SCHOOL THE LAST 2 YEARS		
		GR 3 79-80	GR 3 80-81	GR 3 81-82	GR 3 82-83	GR 3 83-84	GR 2 82-83	GR 3 83-84	GR 1 81-82	GR 2 82-83	GR 3 83-84
MATH TOTAL											
% OF STUDENTS	90-99	7%	14%	12%	24%	14%	12%	15%	36%	20%	20%
SCORING IN	75-99	20%	30%	42%	40%	37%	24%	34%	36%	36%	44%
THESE %ILE	1-25	25%	25%	30%	20%	22%	34%	24%	8%	24%	16%
RANGES	1-10	7%	10%	19%	4%	12%	7%	15%	0%	4%	12%
% AT LEAST THIS	+1 GE	16%	19%	26%	16%	25%	15%	22%	36%	20%	32%
FAR FROM GRADE LEVEL	-1 GE	14%	16%	23%	9%	16%	7%	20%	0%	4%	16%
NUMBER TESTED		69	73	43	45	51	41	41	25	25	25
MATH CONCEPTS											
% OF STUDENTS	90-99	6%	14%	14%	22%	4%	12%	2%	28%	20%	4%
SCORING IN	75-99	17%	27%	42%	40%	27%	24%	27%	36%	36%	36%
THESE %ILE	1-25	22%	29%	28%	20%	22%	29%	24%	24%	20%	16%
RANGES	1-10	10%	10%	9%	9%	16%	17%	20%	4%	12%	12%
% AT LEAST THIS	+1 GE	17%	27%	42%	40%	27%	15%	27%	36%	24%	36%
FAR FROM GRADE LEVEL	-1 GE	17%	19%	19%	18%	20%	17%	24%	4%	12%	16%
NUMBER TESTED		69	73	43	45	51	41	41	25	25	25
MATH PROBLEMS											
% OF STUDENTS	90-99	4%	10%	12%	16%	14%	10%	12%	20%	16%	16%
SCORING IN	75-99	12%	23%	21%	33%	27%	27%	24%	36%	40%	28%
THESE %ILE	1-25	23%	22%	33%	13%	27%	37%	32%	4%	32%	20%
RANGES	1-10	7%	10%	19%	4%	18%	12%	22%	0%	8%	16%
% AT LEAST THIS	+1 GE	12%	23%	21%	33%	27%	24%	24%	36%	36%	28%
FAR FROM GRADE LEVEL	-1 GE	20%	18%	28%	9%	25%	17%	29%	0%	12%	16%
NUMBER TESTED		69	73	43	45	51	41	41	25	25	25
MATH COMPUTATION											
% OF STUDENTS	90-99	6%	12%	5%	16%	22%	15%	20%	20%	20%	28%
SCORING IN	75-99	29%	32%	37%	47%	53%	24%	49%	52%	28%	64%
THESE %ILE	1-25	29%	37%	35%	22%	20%	37%	20%	4%	24%	16%
RANGES	1-10	12%	14%	19%	16%	6%	17%	7%	0%	12%	4%
% AT LEAST THIS	+1 GE	14%	16%	5%	22%	29%	15%	29%	12%	20%	40%
FAR FROM GRADE LEVEL	-1 GE	10%	11%	14%	16%	2%	15%	2%	0%	12%	0%
NUMBER TESTED		69	73	43	45	51	41	41	25	25	25

AUSTIN INDEPENDENT SCHOOL DISTRICT MANAGEMENT INFORMATION SYSTEM

ACHIEVEMENT/PERFORMANCE/CONTEXT DATA: [redacted] (139)	RANK OUT OF 60	SCHOOL %	AISD PL
STUDENTS AT OR ABOVE GRADE LEVEL, SPRING 1984	52	47.4	57.0
STUDENTS GAINING ONE OR MORE YEARS IN 1983-84	25	63.8	52.3
STUDENTS MEETING/EXCEEDING REST PREDICTION IN 1983-84:			
MATH	35	47.1	49.2
READING	54	44.0	48.7
STUDENTS MASTERING TABS OBJECTIVES, SPRING 1984			
MATH	28	80.0	80.7
READING	33	82.8	84.8

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AUSTIN INDEPENDENT SCHOOL DISTRICT MANAGEMENT INFORMATION SYSTEM

ACHIEVEMENT/PERFORMANCE/CONTEXT DATA: [redacted] (139)	RANK OUT OF 60	SCHOOL %	AISD PL
NON-MINORITY STUDENTS, OCTOBER 1984	52	25.5	49.3
AVERAGE DAILY ATTENDANCE IN 1983-84	21	94.3	94.0
STUDENTS NOT DISCIPLINED IN 1983-84	32	98.3	97.7
STUDENTS NOT ELIG. FOR FREE/REDUCED-PRICE MEAL 1983-84	52	31.0	55.0
STUDENTS NOT LEP, OCTOBER 1984	15	98.1	93.5
STUDENTS NOT IN SPECIAL EDUCATION IN 1983-84	34	92.7	90.4
STUDENTS NOT IN A COMPENSATORY ED. PROGRAM IN 1983-84	48	55.9	75.2
STUDENTS NOT REASSIGNED IN 1983-84	23	82.5	84.1
STUDENTS ENROLLED FOR THE ENTIRE SCHOOL YEAR IN 1983-84	27	81.5	80.7
PUPILS PER TEACHER IN 1983-84	33	23.8	23.6
STUDENTS PROMOTED, 1983-84	44	96.5	96.6

AUSTIN INDEPENDENT SCHOOL DISTRICT
OFFICE OF RESEARCH AND EVALUATION

REPORT ON SCHOOL EFFECTIVENESS (ROSE) FOR 1983-84

SCHOOL: [redacted]

	PERFORMANCE IN...	
GRADE	READING	MATH
K	BELOW PREDICTED GAIN (-0.27, N= 58)	BELOW PREDICTED GAIN (-0.23, N= 58)
1	ACHIEVED PREDICTED GAIN (-0.17, N= 59)	ACHIEVED PREDICTED GAIN (-0.06, N= 58)
2	EXCEEDED PREDICTED GAIN (+0.36, N= 50)	EXCEEDED PREDICTED GAIN (+0.20, N= 50)
3	BELOW PREDICTED GAIN (-0.13, N= 40)	ACHIEVED PREDICTED GAIN (+0.13, N= 40)

SCHOOL CHARACTERISTIC	VALUE
SEX	
MALE	47%
FEMALES	53%
ETHNICITY	
BLACK	65%
HISPANIC	14%
OTHER	21%
WAS SCHOOL IMPACTED BY DESEGREGATION?	YES
PERCENT REASSIGNED STUDENTS	17%
PERCENT TRANSFER STUDENTS	24%
PERCENT LOW-INCOME STUDENTS	71%
AVERAGE PUPIL/TEACHER RATIO	24-TO-1

AUSTIN INDEPENDENT SCHOOL DISTRICT
Office of Research and Evaluation

THE ROSE--THE REPORT ON SCHOOL EFFECTIVENESS

1983-84

What is ROSE?

ROSE, the Report on School Effectiveness, provides information about AISD schools that is more than just descriptive. It is the result of a series of statistical analyses which answer the question, "How do the achievement gains of a school's students compare with those of other AISD students of the same previous achievement levels and background characteristics?" Regression analysis is used to produce predicted achievement levels in reading and math for each student based on the following characteristics:

- Previous achievement level,
- Sex,
- Ethnicity,
- Family income (whether or not the student or a sibling received a free or reduced-price lunch),
- Whether or not the student's school was impacted by desegregation,
- Whether or not the student was reassigned by the desegregation plan,
- Whether or not the student was a transfer student, and
- The average pupil/teacher ratio for the student's grade at his/her school (elementary only).

The predicted scores are then compared with the students' actual scores. On the elementary and junior high printouts, the numbers in parentheses give the average difference between the predicted and actual scores in grade equivalents. For example, a value of +.10 would mean that the students at that grade scored one month higher on the average than similar students districtwide. The verbal descriptors, "Exceeded Predicted Gain," "Achieved Predicted Gain," and "Below Predicted Gain" are assigned according to the statistical significance of the results. If the obtained average is far enough above or below the expected value of zero so that it would have occurred only 5% of the time or less by chance, then the "Exceeded" or "Below" label is assigned.

In producing the high school printouts, the comparison of actual and predicted scores is used to classify students as being either above or below their expected level of achievement. Again a statistical test is used to assign the verbal descriptors using the same decision rule, $p \leq .05$.

What is the purpose of ROSE?

The purpose of ROSE is to improve student achievement in reading and math through the identification of groups of students who are experiencing exceptional success or failure. The identification of these students creates an opportunity for improvement in the overall program if practices or conditions associated with the success or failure of these students can be identified.

If a school has students who are scoring above the predicted levels in reading and math, an examination of the practices of their teachers may reveal information which will be useful in improving performance for students in other groups or subject areas. Cases where the students are scoring below the predicted level also require close attention so that practices or conditions which are retarding student growth can be identified and altered.

Some Cautions!

In using ROSE, keep the following points in mind:

a. ROSE has its greatest value when the results do not entirely match your informal assessment; i.e., when it is providing you with new information. If the results are the complete opposite of your experience, however, then the analyses should be viewed with caution.

b. Test results have been considered only for reading and math. Exemplary or poor performance in other areas has not been examined.

c. ROSE attempts to adjust for as many factors outside the school's control as possible. When above- or below-average performance is found, additional factors outside the school's control may still be operating. Knowledge of the situation at the school is important to a full understanding of the report.

d. ROSE should be used constructively. The emphasis should be on initiating and reinforcing good practices and identifying problems. Remember, the purpose is to improve the education of our students.

e. Given that ROSE controls for certain background characteristics, some schools with high concentrations of low-income, low-achieving students will be found to exceed predicted achievement at some grades, even though their average achievement level is low. It is a strength of ROSE that it recognizes the effectiveness of the teachers of these students; however, nothing in the ROSE report should be taken as an indication that the District is satisfied with the achievement of our low-achieving students. Indeed, it is a priority goal of the District that low student achievement be improved at all grade levels. We expect over time that the effect of certain factors now explaining low achievement will have less effect on predicted achievement. ROSE may contribute to the success of that goal by reinforcing the efforts of effective teachers and by highlighting effective practices for others to follow.

f. The statistical significance of the results are influenced by the number of students tested; i.e., any given value is more likely to represent a real difference from the expected value if it is obtained from 100 students rather than 50. Therefore, in some cases elementary and junior high results that are significant may appear to be less extreme than other results that are nonsignificant if the sizes of the groups differ greatly.

School Characteristics Information

The values for the school characteristics listed on the ROSE may differ from those listed in individual school achievement profiles or elsewhere. The ROSE values are based on the population used in doing the analyses and therefore may not exactly reflect the total school population.

Menu du fin

A fine Selection of Alternatives for Reporting Achievement and Other Student Outcomes~

The Average Achievement Test Score:
A Demagogue Statistic

Glynn Ligon, Ph.D.
David Wilkinson

Handout accompanying a paper presentation at the Annual Meeting of the American Educational Research Association, Chicago, Illinois, March, 1985

Publication Number 84.42

~Traditional Fare

1. Average Achievement Test Scores -
   - Means
   - Medians

~Entrées

2. Students Scoring in Certain Ranges -
   - Low-achieving students in the district
     - Below the 25th percentile
     - Below the 30th percentile
     - Below the 40th percentile
   - High-achieving students in the district
     - Above the 75th percentile
     - Above the 90th percentile
     - Above the 95th percentile
   - Students scoring above and below the national average (50th percentile)
3. Skills Analyses -
   - By individual student
   - By groups
     - Classroom
     - School
     - District

~Especial du jour~

- Average Daily Attendance Rates

~Hors d'oeuvres

4. Test Results by Subgroup -

- By ethnicity
- By sex
- By classroom
- By school
- By grade
- For special education students
- For limited-English proficient (LEP) students

5. Comparison with reference groups -

- With a national norming sample
- With the state
- With other similar districts
- With surrounding suburban districts
- With the district in previous years

~Desserts

6. Signs of Success -

* College-bound seniors
* High school graduates attending college
* National Merit Scholarship winners
  - Semifinalists
  - Finalists
  - Scholarship recipients
* Students scoring at or above grade level
* Students on the honor roll
* Students not failing any courses
* High school graduates meeting minimum competency requirements
* Students promoted
* Students meeting or exceeding their predicted achievement levels

~Plus des desserts

* Students gaining one or more years in a year
* Gifted and talented students
* Students receiving awards

~Entremets

7. Needs Assessment

- Special education students
- Students in bilingual education
- Students in compensatory education
- High school dropouts
- Students failing at least one course
- Students eligible for free or reduced-price meals
- Students disciplined
- Limited-English proficient (LEP) students
- Minority students
- Students scoring below grade level
- Students not meeting minimum competency requirements for graduation
- Students not meeting their predicted achievement levels
- Students not making a year's gain in a year
- Students not promoted

Prices Vary by Season and Serving Size

* Menu Design by Elaine E. Jackson *