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IDENTIFIERS \*Michigan Assessment Program

## ABSTRACT

The Michigan Assessment Program was initiated by the State Board of Education in an effort to provide educators with information which would facilitate the decision-making process in relation to educational change and improvement. The program was designed to gather data on the levels and geographic distribution of performance factors and to provide local school district officials with information regarding schools within their districts. Implementation of this assessment procedure would enable local school district officials to construct educational profiles, providing a basis for comparison with other state districts while emphasizing levels of educational performance and performance factors. An explanatory booklet describes precautions which must be taken in utilizing and interpreting the Assessment data, explains the format of the data presented in the local districts computer printout, defines the Assessment measures, and describes the norm tables and education profiles. A hypothetical district is employed in the presentation, but the techniques can be adapted to assess an actual district. Eighteen factors, which may be grouped broadly under Socioeconomic Background (1 factor), Attitudes and Aspirations (3), Human Resources (4), Financial Resources (6), and Basic Skills (4), were measured. (Author/PR)

SCHOOL DISTRICT:

*Dyer*

Enclosed are materials with which you can construct education profiles for your district. These profiles will permit you to compare your district and schools with other districts and schools in Michigan on those variables reported in the Michigan Assessment Program.

## MICHIGAN ASSESSMENT PROGRAM 1969-70

ASSESSMENT REPORT NO. 6

### THERE ARE THREE SETS OF MATERIALS:

#### 1. EXPLANATORY BOOKLET

In the *left-hand side of the enclosed folder* is a booklet that explains: (a) the precautions to be heeded in the use of Assessment data; (b) how to interpret the local district computer printout; and (c) how to construct education profiles. It is important to read this booklet carefully before attempting to utilize the other materials.

#### 2. NORM TABLES

In the *right-hand side of the enclosed folder* are norm tables. There are separate tables for *district* and *school* data. There are tables for *Michigan* as a whole, for your *region*, for your *community type*, and—in some cases—for your *combination* community type and region.

#### 3. LOCAL COMPUTER PRINTOUTS

In the *mailing envelope with this folder* is a local computer printout. This printout contains data on your district and its schools. The explanatory booklet will show you how to portray this data graphically and effectively in education profiles.

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#### IMPORTANT:

The enclosed materials are, of necessity, complicated. It is of utmost importance, therefore, that you read—and thoroughly understand—the explanatory booklet *before* attempting to employ the data from your computer printout.

If there are questions still unanswered after study of these materials they may be directed to the Bureau of Research, Evaluation and Assessment, Michigan Department of Education, Lansing, 48902 (Tel.: 517-373-1830).

MICHIGAN DEPARTMENT OF EDUCATION

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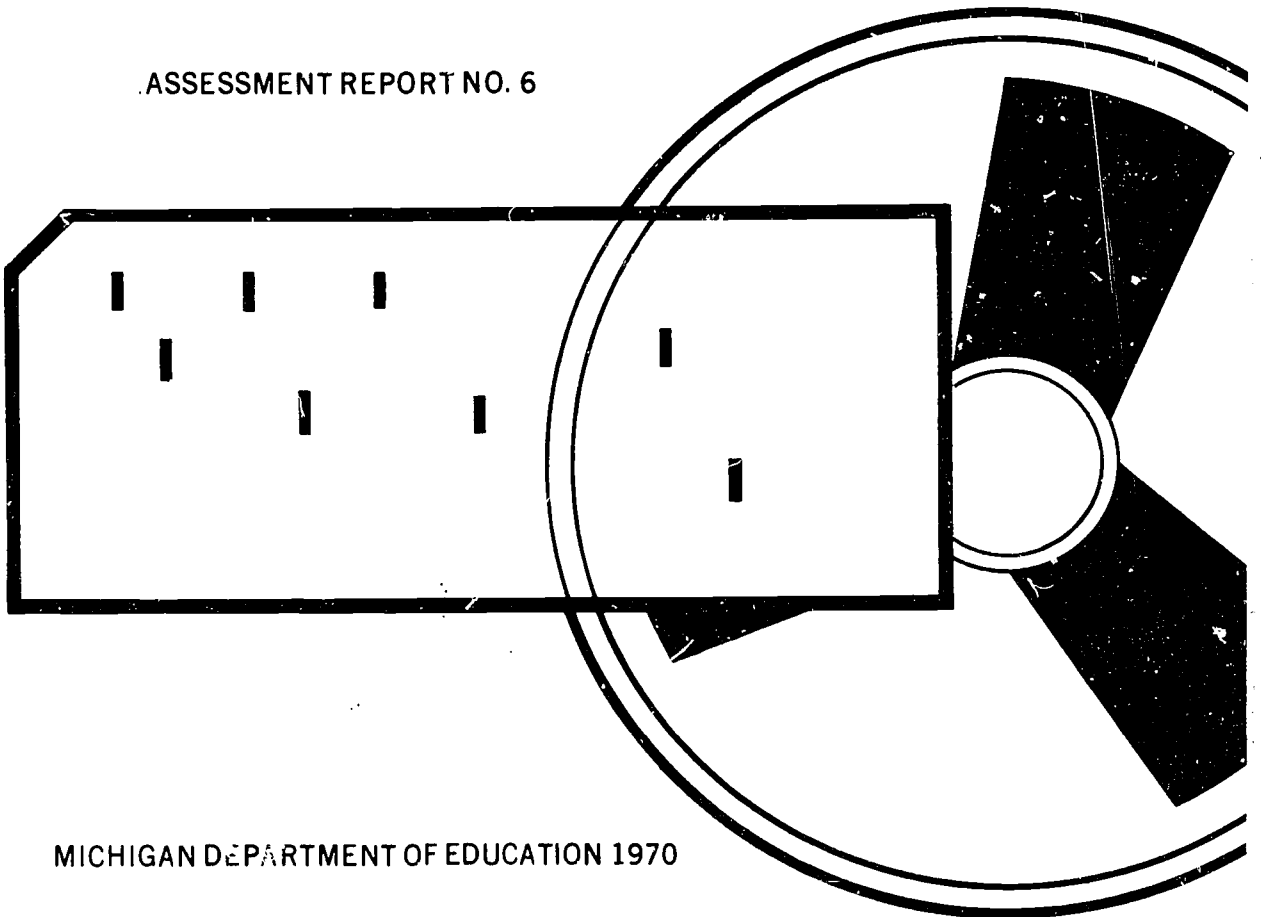
Local District  
Report

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EDO 45733

# LOCAL DISTRICT REPORT: EXPLANATORY MATERIALS

ASSESSMENT REPORT NO. 6



MICHIGAN DEPARTMENT OF EDUCATION 1970

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## FOREWORD

The Michigan Assessment Program was initiated by the State Board of Education, supported by the Governor, and funded by the Legislature through enactment of Public Law 307 in August, 1969. The goal of the Program is to provide educators and citizens with information regarding the status and progress of Michigan's educational system so that they may make more informed decisions about education in the State.

Three major purposes guided the design and operation of the 1969-70 Michigan Assessment Program. The three purposes were:

1. to gather data which would show the levels of educational performance and the levels of certain factors related to performance within Michigan's geographic regions and community types;
2. to gather data which would indicate the ways in which educational performance and certain factors related to performance are distributed in Michigan; and
3. to provide local school district officials and citizens with information regarding their own school district and its schools.

Data gathered regarding the third purpose is presented in these materials: Local District Report, Lansing, Michigan: Michigan Department of Education, Assessment Report No. 6, 1970.

Thanks are due to a large number of individuals and groups for making the Michigan Assessment Program a reality: the State Board of Education for proposing it, the Governor and Legislature for actively supporting it, and Michigan educators for assisting with it. The Program was designed and administered by the Bureau of Research, Evaluation, and Assessment, Michigan Department of Education, with the counsel of several ad hoc advisory groups.

John W. Porter  
Acting Superintendent of  
Public Instruction

## INTRODUCTION

By following the procedures described in this booklet, local school officials will be able to construct education profiles which will enable them to relate their district and schools with other districts and schools in Michigan, in their geographic region, in their community type,<sup>1</sup> and in their combination region-community type. The relating may be made on the levels of educational performance and the levels of certain factors related to performance. The education profiles will enable local school officials and citizens to better understand their district and its schools.

This explanatory booklet has three sections. The first section describes precautions which must be taken in utilizing and interpreting the Assessment data. The second section explains the format of the data presented in the local district's computer printout. This is done by referring the reader to a fictitious computer printout for the hypothetical "Michville" school district. This fictitious printout is presented as FIGURE 1. The third section defines the Assessment measures. The fourth section describes the norm tables that are provided with this booklet. It also explains how the data presented in the local district's computer printout may be plotted onto the norm tables to create district-level and school-level education

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<sup>1</sup>The geographic regions and community types employed in the Michigan Assessment Program are described in Appendix A of this booklet.

profiles for the hypothetical Michville district and its schools. An actual State-wide, fourth grade, district-level norm table is shown with Michville's district scores plotted on it (FIGURE 2). An actual State-wide, fourth grade, school-level norm table is shown with Michville's schools' scores plotted on it also (FIGURE 3). Careful reading of these four sections will prepare local school officials to construct and interpret education profiles for their own districts and schools.

## I. PRECAUTIONS IN THE UTILIZATION OF ASSESSMENT DATA

Proper utilization of the data presented in the local district printout will help to pinpoint educational needs and therefore can lead to improved decision-making at the local level regarding the allocation of resources and the design of curricula. This first section of the booklet outlines several precautions which must be exercised in the construction and interpretation of the education profiles.

### A. Relationships among Assessment Variables

The Michigan Assessment Program is built on the assumption that there is a relationship between student performance and certain other factors. Recent research indicates that certain characteristics of students' background--including their socioeconomic status and their attitudes and aspirations--bear a strong relationship to performance. Research also indicates a moderate relationship between qualities of the instructional staff and performance. Finally, the amount of financial resources spent by a district bears an indirect relationship to performance because schools with more financial resources are able, among other things, to acquire and retain higher paid certificated staff and provide a greater variety of instructional programs.<sup>2</sup>

It must be understood, however, that previous research has been conducted on large samples of schools and school districts.

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<sup>2</sup>For a report and discussion of research which deals with the influence of non-school factors, e.g., socioeconomic status and attitudes and aspirations, refer to Research into the Correlates of School Performance: A Review and Summary of Literature. (Lansing, Michigan: Michigan Department of Education, Assessment Report No. 3, 1970).



Additionally, it must be understood that previous research has not established causal relationships. Therefore it must not be assumed that there will be a relationship between achievement and the other variables in all individual district reports.

#### B. Assessment Data Represents a Sample

Much of the data gathered for the Michigan Assessment Program must be considered a sample. Thus, for example, a school's score on composite achievement is assumed to reflect the knowledge of fourth graders on a sample of Basic Skills items as measured at a particular time. If a different sample of items had been administered to the same group of children under similar conditions, at a different time, it is probable that they would have obtained similar scores. A further consideration is the number of pupils who took the battery within each school and district. In schools where a large number of children responded to the Assessment Battery, the score for the school is expected to be fairly stable. However, where there are fewer than five children in the school responding to the Assessment Battery, the score for that school may not be reliable. Therefore, caution must be exercised when interpreting scores based on fewer than five children.

#### C. Validity and Reliability of Socioeconomic Data

The Michigan Assessment Program measured the socioeconomic status of groups of youngsters because it has been shown to be related to achievement in past research. However, it should be recognized that socioeconomic status is extremely difficult to index and measure accurately. It is likely that in some schools--especially those in which very few youngsters responded to the SES items of the Assessment

Battery--the socioeconomic score may not accurately reflect the socioeconomic background of a given school as measured by the students' responses.

D. District and School-Level Data

In constructing the education profiles, the local school official should be careful to use his school means only with the school tables and his district means only with district tables.

## II. THE COMPUTER PRINTOUT

The 1969-70 Assessment Program measured eighteen factors grouped into six categories. These categories were: (1) socioeconomic background, (2) attitudes and aspirations, (3) 1968-69 district human resources, (4) 1968-69 district financial resources, (5) vocabulary, and (6) basic skills achievement. This ordering was used in constructing the district and school-level norm tables. The computer printout attached to these materials contains the local scores on these factors. The measures of human and financial resources were gathered from district records. The other factors were measured by the Assessment Battery at the fourth and seventh grade levels. This section of the explanatory booklet describes this computer printout.

### The Computer Printout

As mentioned, the local district printout is included with the norm tables as part of these materials. A sample printout for the hypothetical "Michville" school district is included in this booklet as FIGURE 1.

In the Michville computer printout, at the top of the first page under the district number and name and under the heading "1968-69 DISTRICT HUMAN RESOURCES," measures are given which describe certain characteristics of the instructional staff of the district in terms of pupil load, education, experience, and compensation. At the right of the DISTRICT HUMAN RESOURCES, under the heading "1968-69 DISTRICT FINANCIAL RESOURCES," are per pupil measures of district wealth, revenue, and expenditure.

MICHIGAN ASSESSMENT OF BASIC SKILLS  
LOCAL DISTRICT REPORT

86-010 MICHVILLE SCHOOL DISTRICT  
REGION 2 COMMUNITY TYPE III

1968-69 DISTRICT HUMAN RESOURCES:	1968-69 DISTRICT FINANCIAL RESOURCES:			
PUPIL/TEACHER RATIO	19.7	STATE EQUALIZED VALUATION PER PUPIL	15590	
AVERAGE YEARS TEACHING EXPERIENCE	4	LOCAL REVENUE PER PUPIL	346	
PERCENT OF TEACHERS WITH MASTERS DEGREES	23	STATE SCHOOL AID PER PUPIL	273	
AVERAGE TEACHER SALARY	7082	K-12 INSTRUCTIONAL EXPENSE PER PUPIL	373	
		TOTAL CURRENT OPERATING EXPENDITURE PERPUPIL	575	

ASSESSMENT BATTERY RESULTS JANUARY 1970

SES	ATTITUDES & ASPIRATIONS	VOCAB.	BASIC SKILLS ACHIEVEMENT	COMPOSITE		
A	B	C	READING	ENG.EXPR.	MATH	ACHIEVEMENT

4TH GRADE BUILDING SCORES

3487 ABLE ELEM. SCHOOL	52.4	49.3	51.4	54.3	51.5	50.3	49.9	51.3	50.8
SCHOOL MEAN									
STANDARD DEVIATION	10.6	8.7	9.8	7.1	8.2	9.9	10.1	8.7	9.4
NUMBER OF PUPILS	38	38	38	38	42	42	41	41	41
5379 BUSH ELEM. SCHOOL	48.5	45.6	46.5	48.4	47.3	46.8	48.9	50.2	47.3
SCHOOL MEAN									
STANDARD DEVIATION	8.4	9.3	9.4	8.8	9.8	6.3	8.7	8.1	9.2
NUMBER OF PUPILS	48	48	48	48	47	47	46	46	46

4TH GRADE DISTRICT SUMMARY

DISTRICT MEAN	50.2	47.2	48.7	51.0	49.3	48.5	49.4	50.7	48.9
STANDARD DEVIATION	9.9	9.1	9.7	8.5	9.4	8.5	9.4	8.5	9.3
NUMBER OF PUPILS	86	86	86	86	89	89	87	87	87

DISTRICT MEAN BASED UPON ALL 4TH GRADE STUDENTS TESTED IN DISTRICT

FIGURE 1

MICHIGAN ASSESSMENT OF BASIC SKILLS  
LOCAL DISTRICT REPORT

86-010 MICHVILLE SCHOOL DISTRICT  
REGION 2 COMMUNITY TYPE III

1968-69 DISTRICT HUMAN RESOURCES:

PUPIL/TEACHER RATIO	19.7	STATE EQUALIZED VALUATION PER PUPIL	15590
AVERAGE YEARS TEACHING EXPERIENCE	4	LOCAL REVENUE PER PUPIL	346
PER CENT OF TEACHERS WITH MASTERS DEGREES	23	STATE SCHOOL AID PER PUPIL	273
AVERAGE TEACHER SALARY	7802	K-12 INSTRUCTIONAL EXPENSE PER PUPIL	373

1968-69 DISTRICT FINANCIAL RESOURCES:

ASSESSMENT BATTERY RESULTS JANUARY 1970

SES	ATTITUDES & ASPIRATIONS	VOCAB.	BASIC SKILLS ACHIEVEMENT	COMPOSITE
	A	B	C	READING
				ENG. EXPR.
				MATH
				ACHIEVEMENT

7TH GRADE BUILDING SCORES

4628 JONES MIDDLE SCHOOL

SCHOOL MEAN	50.1	47.1	48.3	51.8	50.1	48.6	47.4	48.6	47.7
STANDARD DEVIATION	9.1	9.6	10.4	8.5	9.7	8.5	8.3	7.5	8.8
NUMBER OF PUPILS	81	81	81	81	85	85	85	85	85

7TH GRADE DISTRICT SUMMARY

DISTRICT MEAN	50.1	47.1	48.3	51.8	50.1	48.6	47.4	48.6	47.7
STANDARD DEVIATION	9.1	9.6	10.4	8.5	9.7	8.5	8.3	7.5	8.8
NUMBER OF PUPILS	81	81	81	81	85	85	85	85	85

FIGURE I (CONTINUED)

Below these measures of district human and financial resources will be found the results of the January, 1970 Assessment Battery. The results are shown by building for schools testing 4th graders, and then for all 4th graders in the district (4th GRADE DISTRICT SUMMARY); a similar report has been prepared for the 7th grade, where results are shown by building for schools testing 7th graders and, finally, for all 7th graders in the district (7th GRADE DISTRICT SUMMARY).

The mean pupil score within a school on each measure is shown in the row labelled "SCHOOL MEAN," and the spread or dispersion of pupil scores is shown in the row labelled "STANDARD DEVIATION"--about two-thirds of the pupils' scores would be found within one standard deviation above and below the school mean.<sup>3</sup> Finally, the number of pupils who responded to each measure is shown in the row labelled "NUMBER OF PUPILS." The district summaries, which appear after the last set of building scores at each grade level, follow the same pattern as the school scores, except that the mean, standard deviation, and number of pupils are district-wide figures referring to all pupils tested at the grade level indicated.

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<sup>3</sup>Brief definitions of statistical terms used in these materials are provided in Appendix B.

### III. DEFINITION OF THE ASSESSMENT MEASURES

For the reader's convenience, the 18 factors measured in the Michigan Assessment Program are listed below with brief comments where appropriate.

#### SOCIOECONOMIC BACKGROUND:

1. Socioeconomic Status. The Assessment Battery which was given to students included several questions which were designed to gather information regarding students' socioeconomic background. These responses were not analyzed on an individual student basis; rather, scores were compiled for each school and district which participated in the Assessment Program. The SES measure is assumed to be indicative of students' perceptions of such things as the educational level of parents and their general economic level.

#### ATTITUDES AND ASPIRATIONS:

2. Attitude A: Importance of School Achievement. The Assessment Battery also included twelve questions which were designed to gather information regarding students' attitudes and aspirations. Several of these questions dealt with students' perceptions of the importance of doing well in school. These responses were not analyzed on an individual student basis; rather, scores were compiled for each school and district which participated in the Assessment Program.
3. Attitude B: Self Perception. Several of the 12 attitude and aspiration questions dealt with students' perceptions

about their own worth. Again, these responses were not analyzed on an individual basis.

4. Attitude C: Attitude Toward School. Several of the 12 attitude and aspiration questions dealt with students' attitudes towards their school. These responses were not analyzed on an individual basis.

#### 1968-69 DISTRICT HUMAN RESOURCE FACTORS:

5. Pupil/Teacher Ratio. The pupil/teacher ratio for each district was computed from records held in the Department of Education. It was computed by dividing the number of students in the district (as of the fourth Friday of the school year) by the number of teachers (as listed on the Department's Register of Professional Personnel).
6. Average Years Teaching Experience. The average number of years of experience for teachers in each district was computed from records held in the Michigan Department of Education.
7. Percentage of Teachers with Masters or Above. The per cent of teachers in each district who had completed at least a masters degree was computed from records held in the Michigan Department of Education.
8. Average Teacher Salary. The average teacher's salary for each district was computed from records held in the Michigan Department of Education.

#### 1968-69 DISTRICT FINANCIAL RESOURCE FACTORS:

9. State Equalized Valuation Per Pupil. This measure was obtained from school district financial records held in the



Department of Education. It was calculated by dividing the district's SEV by its number of pupils (as of the fourth Friday of the school year).

10. Local Revenue Per Pupil. This measure was obtained from Department of Education records. It was computed by dividing the amount of money raised locally for public education (less money for community colleges) by the number of pupils in the district (as of the fourth Friday of the school year).
11. State Aid Per Pupil. This measure was obtained from Department of Education records. It was computed by dividing the amount of money received from the State for public education (less money for community colleges) by the number of pupils in the district (as of the fourth Friday of the school year).
12. K-12 Instructional Expense Per Pupil. The K-12 instructional expense per pupil was also computed for each district from records held in the Department of Education. It was computed by dividing the district's total instructional expense (less community college instructional expense) by the number of pupils in the district (as of the fourth Friday of the school year).
13. Total Current Operating Expenditure Per Pupil. This measure was obtained from records held in the Department of Education. It was computed by dividing the district's total current operating expenditure (less community college expenditure) by the number of pupils in the district (as of the fourth Friday of the school year).

## VOCABULARY

14. Vocabulary. The Assessment Battery included fifty verbal analogy problems which measured students' knowledge of the meaning of words and their relationships. The vocabulary score was obtained from the number of correct responses to these problems.

## BASIC SKILLS ACHIEVEMENT

15. Reading. The Assessment Battery included forty questions which tested students' reading achievement, vocabulary, and paragraph comprehension. The reading score was obtained from the number of correct responses to these questions.
16. English Expression. The Assessment Battery included forty-five questions at the fourth grade level and fifty-five questions at the seventh grade level which tested students' ability to recognize errors in spelling, use effective expression, identify correct word choices, and apply rules of grammar, punctuation, and capitalization. The English expression score was obtained from the number of correct responses to these questions.
17. Mathematics. The Assessment Battery included thirty questions which tested pupils' achievement in reasoning and problem solving, geometry and measurement, numbers and operations, relations, functions and graphs, and mathematical sentences and systems. The mathematics score was obtained from the number of correct responses to these questions.
18. Composite Achievement. The composite achievement score was built by averaging the scores of the reading, English

expression, and mathematics sections of the Assessment Battery. The vocabulary score was not averaged into the composite achievement score.

#### IV. NORM TABLES AND EDUCATION PROFILES

This section of the booklet describes the norm tables which are included in the right-hand pocket of the folder. It also explains how the data presented in the local district's computer printout may be plotted onto the norm tables to create district-level and school-level education profiles.

##### A. Explanation of the Norm Tables

Separate norm tables have been prepared from the fourth and seventh grade Assessment data. There are tables based on district scores and tables based on school scores. The tables have been prepared using State data, region data, community type data, and data within regions according to community type.

Local school officials will receive a total of fourteen norm tables: four tables based on State-wide data (one fourth grade district table, one fourth grade school table, one seventh grade district table, and one seventh grade school table); four tables based on data from the district's region; four tables based on data from the district's community type; and two tables based on data from schools of the same community type within the schools' region. Note: Some districts will only receive thirteen norm tables because, when districts were grouped by region according to community type, certain of these groupings contained insufficient data to construct seventh grade norm tables.<sup>5</sup>

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<sup>5</sup>Seventh grade school tables according to community type within region were not constructed for the following: Region 1/Cities, Region 1/Rural, Region 3/Cities, Region 3/Towns, and Region 4/Cities. A complete listing of Michigan's school districts organized by community type within geographic regions is included as Appendix C of this booklet.

The norm tables were constructed by computing percentile distributions for each Assessment variable. Each percentile distribution is a ranking of district scores which is divided into one hundred equal parts. Each part has an equal number--one per cent--of the total number of district scores. Percentile distributions are useful in showing where a percentile score lies in relation to other scores. A score which is at the fiftieth percentile is at the median (middle) of the distribution; a score at the seventy-fifth percentile is above seventy-five per cent--or three-quarters--of the scores in the distribution.

The norm tables also present the mean, standard deviation, and number of cases used in computing the distribution for each variable. FIGURE 2 provides an example of a norm table constructed with State-wide, district-level fourth grade data. This table indicates that the State-wide median--50th percentile--district score on socioeconomic status (SES) was 48.03. The 75th percentile score was 49.87 and the 25th percentile score was 46.53. In the bottom three rows of the table are the mean score, standard deviation, and number of districts used in the calculations for each variable. That is, the mean district score on socioeconomic status was 48.47; the standard deviation was 3.21; and 579 districts were used in calculating these values.

FIGURE 3 provides an example of a norm table constructed with State-wide, school-level, fourth grade data. The tables in FIGURES 2 and 3 are identical to the State-wide fourth grade tables included for the local district's use.

#### B. Explanation of the Michville District-Level Education Profile

The line on the State-wide table in FIGURE 2 is the fourth grade Michville education profile. The scores that have been plotted

MICHVILLE GRADE 4 DISTRICT PROFILE

DISTRICT NORMS

GRADE 4

MICHIGAN

SES	ATTITUDES AND ASPIRATIONS			SCHOOL HUMAN RESOURCES				SCHOOL FINANCIAL RESOURCES					ACHIEVEMENT ("OUTPUTS")				
	A SOCIO-ECONOMIC STATUS	B IMPORTANCE OF SCHOOL ACHIEVEMENT	C SELF PERCEPTION TOWARD SCHOOL	AVERAGE YEARS TEACHING EXPERIENCE	PERCENTAGE OF TEACHERS WITH MASTERS OR ABOVE	AVERAGE TEACHER SALARY	STATE EQUALIZED VALUATION PER PUPIL	LOCAL REVENUE PER PUPIL	STATE SCHOOL AID PER PUPIL	INSTRUCTIONAL EXPENSE PER PUPIL	K-12 INSTRUCTIONAL EXPENSE PER PUPIL	TOTAL CURRENT OPERATING EXPENSE PER PUPIL	VOCABULARY	READING	ENGLISH EXPRESSION	MATHEMATICS	BASIC SKILLS COMPOSITE ACHIEVEMENT
95	54.00	52.06	54.47	29.45	14.67	37.46	9864	27783	668	402	595	795	54.99	55.24	55.78	55.69	55.21
90	52.18	51.49	51.84	28.09	13.58	33.16	9478	21962	517	384	539	733	53.85	54.24	54.50	54.35	54.20
85	51.26	51.11	52.97	27.01	12.81	29.25	9173	19441	450	369	508	679	53.22	53.62	53.71	53.58	53.53
80	50.45	50.75	50.88	26.56	12.19	25.94	8949	17679	409	357	486	651	52.72	53.09	53.25	52.97	52.99
75	49.87	50.42	50.60	26.11	11.66	24.01	8761	16305	380	346	468	629	52.24	52.57	52.70	52.50	52.57
70	49.16	50.13	50.37	25.66	11.24	22.86	8646	15124	356	336	452	608	51.90	52.21	52.29	52.10	52.16
65	48.99	49.89	50.16	25.22	10.86	22.32	8530	14217	335	325	438	596	51.57	51.93	51.90	51.73	51.81
60	48.59	49.66	49.97	24.83	10.49	18.74	8415	13310	315	315	429	583	51.25	51.67	51.55	51.46	51.53
55	48.30	49.45	49.78	24.49	10.10	17.62	8311	12444	299	306	419	571	50.90	51.44	51.21	51.20	51.27
50	48.03	49.25	49.55	24.16	9.71	16.48	8209	11925	283	298	410	560	50.60	51.20	50.83	50.93	50.95
45	47.76	49.00	49.30	23.82	9.33	15.38	8106	11406	269	289	400	549	50.34	50.89	50.51	51.00	50.64
40	47.46	48.76	49.08	23.48	8.98	14.29	8000	10887	255	281	393	538	50.05	50.54	50.20	50.18	50.36
35	47.16	48.44	48.80	23.15	8.62	13.15	7900	10367	241	274	385	528	49.75	50.17	49.92	49.83	50.07
30	46.87	48.14	48.60	22.72	8.25	11.92	7776	9848	227	267	371	518	49.37	49.84	49.83	49.44	49.77
25	46.53	47.86	48.32	22.23	7.88	10.68	7662	9277	212	260	370	507	48.90	49.48	49.31	48.96	49.39
20	46.14	47.49	48.02	21.74	7.50	8.67	7503	8900	197	251	362	497	48.47	49.09	48.92	48.39	48.94
15	45.70	47.00	47.72	21.25	6.99	6.30	7291	7923	182	237	341	482	48.01	48.46	48.45	47.82	48.40
10	45.25	46.25	47.25	20.38	6.16	2.46	6896	7246	160	219	311	454	47.37	47.59	47.59	47.09	47.62
5	44.41	45.28	46.24	19.24	5.83	0.13	5957	6568	133	186	260	364	46.38	46.18	45.98	46.10	46.44
MEAN	48.47	48.99	49.47	24.26	10.04	17.60	8146.80	13947.28	320.98	300.16	419.84	575.52	50.66	51.01	50.95	50.81	50.94
STANDARD DEVIATION	3.21	2.23	2.17	3.66	3.50	11.07	1167.30	7882.42	165.03	72.20	96.53	134.03	2.73	2.68	2.79	2.97	2.66
NUMBER OF DISTRICTS	579	579	579	585	585	585	583	623	623	620	623	623	585	585	585	585	585

— MICHVILLE SCHOOL DISTRICT  
 ..... STATE MEDIAN

FIGURE 2



are the Michville district-level average scores on the Assessment measures. This district-level education profile for Michville (FIGURE 2) was constructed as follows:

Step One. Michville's fourth grade score on socioeconomic status, 50.2, was located on the line of figures opposite DISTRICT MEAN under 4th GRADE DISTRICT SUMMARY of the Michville printout (see FIGURE 1).

Step Two. The point in the socioeconomic status column of the district-level norm table corresponding to 50.2 was marked (see FIGURE 2). Michville's socioeconomic status was found to fall between 49.87 and 50.45, or at about the seventy-eighth percentile on the State-wide distribution of fourth grade district scores.

Step Three. Steps one and two were repeated for each variable listed in the Michville printout. For example (see FIGURE 2), Michville's fourth graders scored 47.2 (about the seventeenth percentile) on Attitude A: Importance of School Achievement and 48.7 (about the thirty-second percentile) on Attitude B: Self Perception.

Step Four. A line was drawn connecting the points plotted on the norm table (see FIGURE 2). Thus it can be seen how Michville's scores compare with the State-wide percentile distribution for each variable.

### C. Explanation of the Michville School-Level Education Profiles

Michville's school-level education profiles were prepared only with Assessment data gathered at the school building level; that is, since human and financial resource data were available only at the district level, they were not included in the school norm tables. The procedure used was as follows (see FIGURE 3):

Step One. Able Elementary School's fourth grade score on socio-economic status, 52.4, was located in the row of figures opposite SCHOOL MEAN on the Michville computer printout (see FIGURE 1). The Bush Elementary School mean on SES was found to be 48.5.

Step Two. The appropriate points in the socioeconomic status column of the school-level norm table were found and marked (see FIGURE 3). Able's SES score of 52.4 was found to fall between 51.60 and 52.46, or near the eightieth percentile. Bush's score of 48.5 was found to fall between 48.32 and 48.68 or at about the forty-seventh percentile on the State-wide distribution of fourth grade school scores.

# MICHVILLE GRADE 4 SCHOOL PROFILES

## SCHOOL NORMS

GRADE 4

MICHIGAN

		VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")				ACHIEVEMENT ("OUTPUTS")				
		SES	ATTITUDES AND ASPIRATIONS			VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
		SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION	C ATTITUDE TOWARD SCHOOL		READING	ENGLISH EXPRESSION	MATHEMATICS	
PERCENTILE DISTRIBUTION	95	58.99	53.32	54.03	54.80	57.24	56.46	56.45	56.73	56.37
	90	55.31	52.68	53.03	53.90	55.16	55.14	55.23	55.30	55.03
	85	53.46	52.25	52.31	53.23	54.09	54.30	54.28	54.46	54.22
	80	52.46	51.84	51.84	52.82	53.35	53.58	53.63	53.68	53.54
	75	51.90	51.49	51.42	52.42	52.78	53.00	53.02	53.03	52.96
	70	50.83	51.16	51.04	52.03	52.20	52.48	52.51	52.44	52.41
	65	50.22	50.84	50.69	51.66	51.69	51.99	52.02	51.96	51.93
	60	49.66	50.53	50.40	51.32	51.25	51.54	51.54	51.51	51.50
	55	49.17	50.23	50.11	50.97	50.80	51.13	51.08	51.06	51.09
	50	48.68	49.95	49.83	50.61	50.36	50.77	50.64	50.63	50.69
	45	48.72	49.66	49.56	50.25	49.97	50.22	50.22	50.20	50.30
	40	47.9	49.34	49.28	49.87	49.55	49.87	49.80	49.7	49.86
	35	47.57	48.97	48.97	49.43	49.05	49.36	49.36	49.21	49.41
	30	47.13	48.59	48.65	48.94	48.49	48.72	48.81	48.55	48.91
	25	46.75	48.18	48.33	48.59	47.91	48.11	48.14	47.91	48.24
	20	46.31	47.73	47.95	47.81	47.16	47.32	47.30	47.10	47.39
	15	45.84	47.24	47.50	47.00	46.28	46.28	46.20	46.14	46.32
10	45.25	46.53	46.70	46.00	44.78	44.64	44.72	44.71	44.88	
5	44.40	45.43	46.04	44.63	42.86	42.35	42.26	42.40	42.40	
<b>MEAN</b>		49.72	49.73	49.93	50.26	50.27	50.32	50.31	50.33	50.34
<b>STANDARD DEVIATION</b>		4.47	2.48	2.50	3.13	4.07	4.06	4.10	4.14	3.98
<b>NUMBER OF SCHOOLS</b>		2433	2433	2433	2433	2492	2492	2492	2492	2492

- ■ ■ ■ ABL E EL EM.
- BUSH EL EM.
- ..... STATE MEDIAN

FIGURE 3



Step Three. Steps one and two were repeated for the scores on each variable listed for the Able and Bush Elementary Schools' fourth grades (see FIGURE 3). Able's fourth graders scored 49.3 (about the fortieth percentile) and Bush's fourth graders scored 45.6 (about the sixth percentile) on Attitude A: Importance of School Achievement.

Step Four. Lines were drawn on the norm table connecting the points for each school (see FIGURE 3). It is possible to compare the two elementary schools' fourth grades with each other and to relate their scores to the average scores of all fourth grades, as a group, in the State.

#### D. Uses of the Education Profiles

The introduction to this booklet stated that construction of education profiles would enable school officials and citizens to understand the levels of educational performance and the levels of factors related to performance in their district and schools. FIGURES 2 and 3 make this possible for Michville.

FIGURE 2, for example, indicates the following about Michville: its fourth grade students scored low on composite achievement and reading and below the median on vocabulary. Its fourth grade students also scored low on Attitude A: Importance of School Achievement, below the median on Attitude B: Self Perception, and high on socio-economic status. Michville has a low pupil/teacher ratio relative to the State median. It is above the median in percentage of teachers with masters or above and below the median on average teachers' salary.

FIGURE 3 also provides Michville's citizens and educators with interesting information about its two elementary schools. It clearly shows that the fourth grade children of Able Elementary School scored consistently higher on the Assessment variables than did the fourth grade children of Bush Elementary. This might imply that the children of Bush Elementary have a need for compensatory education assistance.

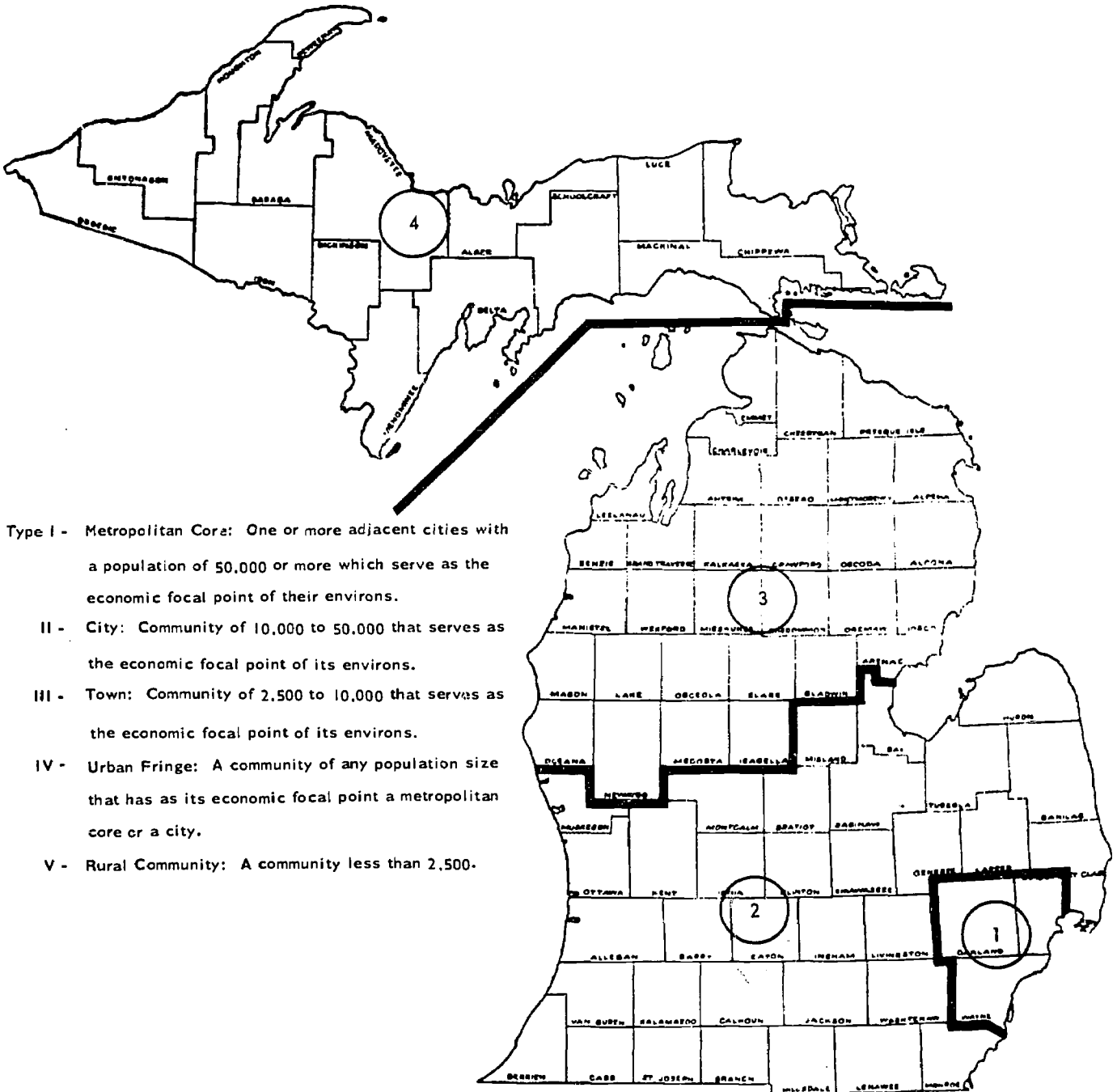
It is hoped that construction of educational profiles similar to these constructed for Michville will enable school officials and citizens throughout Michigan to gain greater understanding about the relative standing of their district and its schools and therefore be helpful to them as they make decisions about the allocation of educational resources and the design of curricula.

APPENDIX A

REGION AND COMMUNITY TYPE CATEGORIES

Region I - Wayne, Oakland and Macomb Counties.

- 2 - All counties in Southern Michigan that are south of and including Muskegon, Kent, Montcalm, Gratiot, Midland and Bay counties. This excludes Region I.
- 3 - All counties that are north of the above mentioned line and that are in the Lower Peninsula.
- 4 - All counties that are in the Upper Peninsula.



- Type I - Metropolitan Core: One or more adjacent cities with a population of 50,000 or more which serve as the economic focal point of their environs.
- II - City: Community of 10,000 to 50,000 that serves as the economic focal point of its environs.
- III - Town: Community of 2,500 to 10,000 that serves as the economic focal point of its environs.
- IV - Urban Fringe: A community of any population size that has as its economic focal point a metropolitan core or a city.
- V - Rural Community: A community less than 2,500.

## APPENDIX B

### DEFINITIONS

**MEAN** - an average score found by adding the score of each individual in a group to obtain a group score, then dividing the group score by the number of individuals in the group.

**MEDIAN** - the mid-point of a group of scores. The median is chosen so that there will be an equal number of scores above and below the chosen point.

**PERCENTILE** - a value, at or below which falls a given per cent of the scores obtained by measuring all individuals in a given comparison group. If, for example, the 25th percentile is a school mean of 48.00, then 25 per cent of the school means fall at or below 48.00.

**STANDARD DEVIATION** - a measure of spread or dispersion among a group of scores. Typically about two-thirds of the scores will be found within one standard deviation above and below the mean, and over 99 per cent within three standard deviations above and below the mean.

**VARIABLE** - a quantity which may have any one of a set of possible values.

A P P E N D I X C.

Listing of Michigan School Districts  
by Region and Community Type

**MICHIGAN SCHOOL DISTRICTS  
GROUPED BY REGION AND COMMUNITY TYPE**

**Region 1**

**I METROPOLITAN CORE CITIES**

82-010 Detroit City Sch Dist  
82-060 Hamtramck City Schs  
82-070 Highland Park City Schs  
63-030 Pontiac City Sch Dist

**II CITIES**

50-160 Mt Clemens Comm Sch Dist  
63-100 Novi Comm Sch Dist  
82-100 Plymouth Comm Sch Dist

**III TOWNS**

50-040 Anchor Bay Sch Dist  
63-210 Holly Area Sch Dist  
63-220 Huron Valley Schs  
82-340 Huron Sch Dist  
63-230 Lake Orion Comm Sch Dist  
82-390 Northville Pub Schs  
63-110 Oxford Area Comm Sch Dist  
50-180 Richmond Comm Schs  
63-260 Rochester Comm Sch Dist  
50-190 Romeo Comm Schs  
82-130 Romulus Comm Schs  
82-430 Van Buren Pub Schs  
63-290 Walled Lake Cons Sch Dist

**IV URBAN FRINGE**

82-020 Allen Park Pub Schs  
63-070 Avondale Sch Dist  
63-050 Berkley City Sch Dist  
63-010 Birmingham City Sch Dist  
63-080 Bloomfield Hills Sch Dist  
50-010 Center Line Pub Schs  
82-025 Cherry Hill Sch Dist  
50-080 Chippewa Valley Schs  
63-150 City of Troy Sch Dist  
63-090 Clarenceville Sch Dist  
63-270 Clawson City Sch Dist  
50-070 Clintondale Pub Schs  
82-230 Crestwood Sch Dist  
82-030 Dearborn City Sch Dist  
82-040 Dearborn Heights Sch Dist 7

50-020 East Detroit City Sch Dist  
82-250 Ecorse Pub Sch Dist  
82-210 Fairlane Sch Dist  
63-200 Farmington Pub Sch Dist  
63-020 Ferndale City Sch Dist  
50-090 Fitzgerald Pub Schs  
82-180 Flat Rock Comm Schs  
50-100 Fraser Pub Schs  
82-050 Garden City Sch Dist  
82-290 Gibraltar Sch Dist  
82-055 Grosse Pte Pub Schs  
82-300 Grosse Ile Twp Schs  
82-320 Harper Woods City Sch Dist  
63-130 Hazel Park City Sch Dist  
82-330 Heintzen Pub Sch Dist  
82-080 Inkster City Sch Dist  
50-140 L'Anse Creuse Pub Schs  
50-120 Lake Shore Pub Schs  
50-130 Lakeview Pub Schs  
63-280 Lamphere Pub Schs  
82-090 Lincoln Park City Schs  
82-095 Livonia Pub Schs  
63-140 Madison Hgts Sch Dist  
82-045 Melvindale N Allen Pk S D  
82-220 North Dearborn Hgts Sch Dist  
63-250 Oak Park City Sch Dist  
82-110 Redford Union Sch Dist  
82-120 River Rouge City Schs  
82-400 Riverview Comm Sch Dist  
50-030 Roseville City Sch Dist  
63-040 Royal Oak City Sch Dist  
50-200 South Lake Schs  
82-140 South Redford Sch Dist  
63-060 Southfield Pub Sch Dist  
82-405 Southgate Comm Sch Dist  
82-150 Taylor Sch Dist  
82-155 Trenton Pub Schs  
50-210 Utica Comm Schs  
50-220 Van Dyke Comm Schs  
50-230 Warren Cons Schs  
50-240 Warren Woods Pub Schs  
82-160 Wayne Comm Schs  
63-160 West Bloomfield Twp Sch Dist  
82-240 Westwood Comm Schs  
82-365 Woodhaven Sch Dist  
82-170 Wyandotte City Sch Dist

Region 1, continued

V. RURAL

50-050 Armada Area Schs  
63-180 Brandon Twp Sch Dist  
63-190 Clarkston Comm Sch Dist  
50-170 New Haven Comm Schs  
63-240 So Lyon Comm Schs  
63-300 Waterford Twp Sch Dist

47-010 Brighton Area Schs  
11-310 Buchanan Pub Sch Dist  
79-020 Caro Comm Schs  
14-010 Cassopolis Pub Schs  
23-030 Charlotte Pub Schs  
81-040 Chelsea Sch Dist  
73-110 Chesaning Union Schs  
25-150 Clio Area Sch Dist  
12-010 Coldwater Comm Schs  
78-100 Corunna Pub Sch Dist  
76-080 Crosswell Lexington Comm S D  
14-020 Dowagiac Union Schs  
58-050 Dundee Comm Sch Dist  
78-030 Durand Area Schs  
74-050 East China Twp Sch Dist  
23-050 Eaton Rapids Pub Schs  
39-050 Galesburg Augusta Comm S D  
59-070 Greenville Pub Schs  
32-060 Harbor Beach Comm Sch  
80-120 Hartford Pub Sch Dist  
08-030 Hastings Pub Sch Dist  
30-020 Hillsdale Comm Schs  
47-070 Howell Pub Schs  
70-190 Hudsonville Pub Sch Dist  
34-010 Ionia City Sch Dist  
29-060 Ithaca Pub Schs  
44-010 Lapeer Pub Schs  
41-170 Lowell Area Schs  
13-110 Marshall Pub Schs  
81-100 Milan Area Schs  
61-180 Montague Pub Schs  
11-200 New Buffalo Area Sch Dist  
03-020 Otsego Pub Schs  
80-160 Paw Paw Pub Sch Dist  
78-080 Perry Pub Sch Dist  
03-010 Plainwell Comm Schs  
34-110 Portland Pub Sch Dist  
41-210 Rockford Pub Schs  
29-100 Saint Louis Pub Schs  
81-120 Saline Area Sch Dist  
79-145 Sebawaing Unionville Schs  
80-010 South Haven Pub Schs  
41-240 Sparta Area Schs  
19-140 St Johns Pub Schs  
75-010 Sturgis City Sch Dist  
25-180 Swartz Creek Comm Sch Dist  
46-140 Tecumseh Pub Schs  
75-080 Three Rivers Pub Sch Dist  
79-150 Vassar Pub Schs  
39-170 Vicksburg Comm Schs

Region 2

I METROPOLITAN CORE CITIES

81-010 Ann Arbor City Sch Dist  
13-020 Battle Creek City Schs  
09-010 Bay City Sch Dist  
25-010 Flint City Sch Dist  
41-010 Grand Rapids City Sch Dist  
38-170 Jackson Union Sch Dist  
39-010 Kalamazoo City Sch Dist  
33-020 Lansing Pub Sch Dist  
61-010 Muskegon City Sch Dist  
61-020 Muskegon Hgts City Sch Dist  
73-010 Saginaw City Sch Dist

II CITIES

46-010 Adrian City Sch Dist  
13-010 Albion City Schs  
11-010 Benton Harbor City Sch Dist  
70-010 Grand Haven City Sch Dist  
70-020 Holland City Sch Dist  
56-010 Midland City Sch Dist  
58-010 Monroe City Pub Schs  
11-300 Niles Comm Sch Dist  
78-110 Owosso Pub Sch Dist  
74-010 Port Huron City Sch Dist  
11-020 St Joseph City Sch Dist  
81-020 Ypsilanti City Sch Dist

III TOWNS

74-030 Algonac Comm Sch Dist  
03-030 Allegan Pub Schs  
29-010 Alma Pub Schs  
32-010 Bad Axe Pub Schs  
58-030 Bedford Pub Sch Dist  
34-080 Belding Area Sch Dist  
46-040 Blissfield Comm Schs

Region 2, continued

III TOWNS, continued

61-240 White Hall Dist Schs  
33-230 Williamston Comm Schs  
70-350 Zeeland Pub Sch Dist

IV URBAN FRINGE

25-130 Atherton Comm Sch Dist  
09-030 Bangor Twp Schs  
19-100 Bath Comm Schs  
25-240 Beecher Sch Dist  
25-060 Bendle Pub Sch Dist  
25-230 Bentley Comm Sch Dist  
73-180 Bridgeport Comm Sch Dist  
73-080 Buena Vista Sch Dist  
25-080 Carman Sch Dist  
73-030 Carrollton Sch Dist  
39-030 Comstock Pub Schs  
41-080 Comstock Park Sch Dist  
25-140 Davison Comm Schs  
19-010 DeWitt Pub Schs  
41-090 E Gr Rapids Pub Schs  
38-090 E Jackson Pub Schs  
33-010 East Lansing Sch Dist  
09-050 Essexville Hampton Sch Dist  
25-120 Flushing Comm Schs  
41-110 Forest Hills Pub Schs  
61-420 Fruitland Twp Sch Dist 1F  
61-080 Fruitport Comm Schs  
25-070 Genesee Sch Dist  
41-120 Godfrey Lee Pub Sch Dist  
41-020 Godwin Hgts Pub Schs  
23-060 Grand Ledge Pub Schs  
25-030 Grand Blanc Comm Schs  
41-130 Grandville Pub Schs  
11-670 Hagar Twp Sch Dist 6  
13-070 Harper Creek Comm Schs  
33-060 Haslett Pub Schs  
33-070 Holt Pub Schs  
25-110 Kearsley Comm Schs  
41-140 Kelloggsville Pub Schs  
41-145 Kenowa Hills Pub Schs  
41-160 Kentwood Pub Schs  
11-030 Lakeshore Sch Dist  
13-090 Lakeview Cons Sch Dist  
46-090 Madison Sch  
74-100 Marysville Pub Sch Dist  
33-130 Mason Pub Schs  
38-120 Michigan Center Sch Dist  
61-060 Mona Shores Sch Dist  
25-040 Mt Morris Cons Schs

61-230 North Muskegon City Sch Dist  
41-025 Northview Pub Sch  
33-170 Okemos Pub Schs  
23-490 Oneida Twp Sch Dist 3  
61-190 Orchard View Schs  
39-130 Parchment Sch Dist  
13-120 Pennfield Sch Dist  
39-140 Portage Pub Schs  
23-090 Pottsville Pub Schs  
61-220 Reeths Puffer Schs  
73-040 Saginaw Twp Comm Schs  
11-830 Sodus Twp Sch Dist 5  
13-030 Springfield City Sch Dist  
70-300 Spring Lake Pub Sch Dist  
73-255 Swan Valley Sch Dist  
38-020 Vandercook Lake Pub Sch Dist  
33-215 Waverly Schs  
25-210 Westwood Hgts Sch Dist  
81-150 Willow Run Pub Schs  
41-026 Wyoming Pub Schs

V RURAL

46-020 Addison Comm Schs  
58-020 Airport Comm Sch Dist  
79-010 Akron Fairgrove Schs  
03-140 Allegan Co Sch Dist 17  
70-040 Allendale Pub Sch Dist  
44-020 Almont Comm Schs  
29-130 Arcada Twp Sch Dist 1F  
29-170 Arcada Twp Sch Dist 6  
29-020 Ashley Comm Schs  
13-050 Athens Area Schs  
80-020 Bangor Pub Schs  
80-240 Bangor Twp Sch Dist 8  
23-010 Bellevue Comm Schs  
34-140 Berlin Twp Sch Dist 3F  
34-150 Berlin Twp Sch Dist 5F  
11-240 Berrien Springs Pub Sch Dist  
73-170 Birch Run Area Sch Dist  
32-220 Bloomfield Twp Sch Dist 4  
32-230 Bloomfield Twp Sch Dist 5  
32-250 Bloomfield Twp Sch Dist 7F  
80-090 Bloomingdale Pub Sch Dist  
11-210 Brandywine Pub Sch Dist  
29-040 Breckenridge Comm Schs  
11-340 Bridgman Pub Sch  
46-050 Britton Macon Area Sch  
12-020 Bronson Comm Sch Dist  
76-060 Brown City Comm Sch Dist



Region 2, continued

V RURAL, continued

56-020	Bullock Creek Sch Dist	13-340	Fredonia Twp Sch Dist 2F
44-190	Burnside Twp Sch Dist 10F	73-200	Freeland Comm Sch Dist
75-020	Burr Oak Comm Sch Dist	29-050	Fulton Schs
41-040	Byron Center Pub Schs	11-160	Galien Twp Sch
78-020	Byron Area Schs	03-440	Ganges Twp Sch Dist 4
41-050	Caledonia Comm Schs	80-110	Gobles Pub Sch Dist
30-010	Camden Frontier Sch	44-240	Goodland Twp Sch Dist 1
34-250	Campbell Twp Sch Dist 4	44-260	Goodland Twp Sch Dist 2
74-040	Capac Comm Sch Dist	44-270	Goodland Twp Sch Dist 3
59-020	Carson City Crystal Area S D	25-050	Goodrich Area Sch Dist
76-070	Carsonville Comm Sch Dist	38-050	Grass Lake Comm Schs
03-250	Casco Twp Sch Dist 4	39-065	Gull Lake Comm Schs
32-030	Caseville Pub Sch	03-100	Hamilton Comm Schs
79-030	Cass City Pub Schs	80-390	Hamilton Twp Sch Dist 6
41-070	Cedar Springs Pub Schs	38-100	Hanover Horton Schs
59-125	Central Montcalm Pub Schs	47-060	Hartland Cons Sch
75-030	Centreville Pub Sch Dist	73-210	Hemlock Pub Sch Dist
23-280	Chester Twp Sch Dist 3F	61-120	Holton Pub Schs
32-040	Church Sch	13-080	Homer Comm Schs
39-020	Climax Scotts Comm Schs	03-070	Hopkins Pub Sch
46-060	Clinton Comm Schs	46-080	Hudson Area Schs
56-030	Coleman Comm Sch Dist	58-070	Ida Pub Sch Dist
32-260	Colfax Twp Sch Dist 1F	44-060	Imlay City Comm Schs
32-270	Colfax Twp Sch Dist 2	34-360	Ionia Twp Sch Dist 2F
32-290	Colfax Twp Sch Dist 6	34-380	Ionia Twp Sch Dist 5
32-300	Colfax Twp Sch Dist 7	34-390	Ionia Twp Sch Dist 6
11-330	Coloma Comm Schs	58-080	Jefferson Cons Sch Dist
75-040	Colon Comm Sch Dist	70-175	Jenison Pub Schs
38-040	Columbia Sch Dist	30-030	Jonesville Comm Schs
38-080	Concord Comm Schs	41-150	Kent City Comm Schs
75-050	Constantine Pub Sch Dist	79-080	Kingston Comm Sch
75-130	Constantine Twp Sch Dist 5F	78-040	Laingsburg Comm Sch Dist
70-120	Coopersville Pub Sch Dist	25-200	Lake Fenton Sch
80-040	Covert Pub Schs	25-280	Lakeville Comm Sch Dist
33-040	Dansville Ag Sch	59-090	Lakeview Comm Schs
80-050	Decatur Pub Schs	34-090	Lakewood Pub Schs
76-090	Deckerville Comm Sch Dist	80-130	Lawrence Pub Sch Dist
46-070	Deerfield Pub Schs	80-140	Lawton Comm Sch Dist
08-010	Delton Kellogg Sch Dist	33-100	Leslie Pub Schs
81-050	Dexter Comm Sch Dist	32-390	Lincoln Twp Sch Dist 1
44-050	Dryden Comm Schs	81-070	Lincoln Cons Sch Dist
34-340	Easton Twp Sch Dist 6F	25-250	Linden Comm Sch Dist
11-250	Eau Claire Pub Sch Dist	30-040	Litchfield Comm Schs
13-060	Eckford Comm Schs	81-080	Manchester Pub Sch Dist
14-030	Edwardsburg Pub Schs	23-065	Maple Valley Sch Dist
32-050	Elkton Pigeon Bayport S D	14-050	Marcellus Comm Schs
03-050	Fennville Pub Schs	13-095	Mar Lee Cons Sch Dist
25-100	Fenton Area Pub Schs	76-140	Marlette Comm Sch Dist
19-070	Fowler Pub Schs	03-060	Martin Pub Schs
47-030	Fowlerville Comm Schs	58-090	Mason Cons Sch Dist
73-190	Frankenmuth Sch Dist	80-150	Mattawan Cons Sch Dist

Region 2, continued

V RURAL, continued

79-090	Mayville Comm Schs	32-450	Rubicon Twp Sch Dist 4
32-410	Meade Twp Sch Dist 3	46-130	Sand Creek Comm Schs
74-120	Memphis Comm Schs	76-210	Sandusky Comm Sch Dist
75-060	Mendon Comm Sch Dist	76-710	Sanilac Twp Sch Dist 1
56-050	Meridian Pub Sch Dist	34-120	Saranac Comm Sch Dist
73-230	Merrill Comm Sch Dist	03-080	Saugatuck Pub Schs
79-100	Millington Comm Schs	39-160	Schoolcraft Comm Schs
59-045	Montabella Comm S D	34-760	Sebewa Twp Sch Dist 1F
25-260	Montrose Twp Schs	34-800	Sebewa Twp Sch Dist 8
46-100	Morenci Area Schs	29-790	Seville Twp Sch Dist 4F
78-060	Morrice Area Schs	32-530	Sheridan Twp Sch Dist 4
75-300	Mottville Twp Sch Dist 3F	32-540	Sheridan Twp Sch Dist 5
38-130	Napoleon Sch Dist	32-510	Sheridan Twp Sch Dist 2F
78-070	New Lothrop Area Pub S D	32-610	Sigel Twp Sch Dist 3
13-580	Newton Twp Sch Dist 10F	32-620	Sigel Twp Sch Dist 4
30-050	North Adams Pub Schs	32-630	Sigel Twp Sch Dist 6
32-080	North Huron Schs	32-600	Sigel Twp Sch Dist 1F
34-480	North Plains Twp Sch Dist 1F	38-150	Springport Pub Sch
44-090	North Branch Area Schs	73-240	St Charles Comm Sch Dist
38-140	Northwest Sch Dist	33-200	Stockbridge Comm Schs
75-100	Nottawa Comm Sch	58-100	Summerfield Sch Dist
61-065	Oakridge Sch Dist	29-110	Sumner Elem Sch
23-080	Olivet Comm Schs	13-130	Tekonsha Comm Sch
46-110	Onsted Comm Schs	08-050	Thornapple Kellogg Sch Dist
34-510	Orange Twp Sch Dist 1F	59-080	Tri Co Area Schs
34-520	Orange Twp Sch Dist 3	32-170	Ubly Comm Schs
34-530	Orange Twp Sch Dist 5	13-135	Union City Comm Sch Dist
34-540	Orange Twp Sch Dist 7	32-650	Verona Twp Sch Dist 1F
34-600	Orleans Twp Sch Dist 9	32-680	Verona Twp Sch Dist 5
34-610	Orleans Twp Sch Dist 10	59-150	Vestaburg Comm Schs
19-120	Ovid Elsie Area Schs	30-080	Waldron Area Schs
32-090	Owendale Gagetown Area S D	11-320	Watervliet Sch Dist
34-040	Palo Comm Sch Dist	03-040	Wayland Union Schs
76-180	Peck Comm Sch	33-220	Webberville Pub Schs
19-125	Pewamo-Westphalia Comm S D	70-070	West Ottawa Pub Sch Dist
47-080	Pinckney Comm Schs	38-010	Western Sch Dist
09-090	Pinconning Area Schs	75-070	White Pigeon Comm Sch Dist
30-060	Pittsford Rural Ag Schs	58-110	Whiteford Agri Sch Dist
32-120	Port Austin Pub Schs	81-140	Whitmore Lake Pub Sch Dist
32-130	Port Hope Comm Schs	74-130	Yale Pub Sch Dist
34-700	Portland Twp Sch Dist 4F		
34-710	Portland Twp Sch Dist 5F		
12-040	Quincy Comm Sch Dist		
61-210	Ravenna Pub Schs		
30-070	Reading Comm Schs		
32-140	Red School		
79-110	Reese Pub Schs		
11-033	River Valley Sch Dist		
29-090	Riverdale Elem Sch		
34-750	Ronald Twp Sch Dist 8		
23-590	Roxand Twp Sch Dist 12		

Region 3

I METROPOLITAN CORE CITIES

(none)

Region 3, continued

II CITIES

04-010 Alpena City Sch Dist  
83-010 Cadillac Area Pub Schs  
37-010 Mt Pleasant City Sch Dist  
28-010 Traverse City Pub Sch Dist

III TOWNS

54-010 Big Rapids Pub Schs  
15-050 Charlevoix Pub Sch Dist  
16-015 Cheboygan Area Schs  
18-010 Clare Pub Schs  
62-040 Fremont Pub Sch Dist  
69-020 Gavlord Comm Schs  
26-040 Gladwin Comm Schs  
53-040 Ludington Area Sch Dist  
51-070 Manistee City Schs  
24-070 Petoskey Sch Dist  
71-080 Rogers Union Sch Dist  
35-030 Tawas Area Schs  
15-025 Twin Valley Pub Sch Dist

IV URBAN FRINGE

(none)

V RURAL

05-010 Alba Pub Sch  
01-010 Alcona Comm Schs  
06-010 Arenac Eastern Sch Dist  
60-010 Atlanta Comm Schs  
06-020 Au Gres Sims Sch Dist  
43-040 Baldwin Pub Sch Dist  
37-040 Beal City Sch  
51-020 Bear Lake Sch  
15-010 Reaver Island Comm Schs  
26-010 Beaverton Rural Schs  
05-040 Bellaire Pub Sch  
64-010 Benona Comm Sch Dist  
10-015 Benzie Co Central Schs  
62-470 Big Jackson Sch Dist  
15-030 Boyne Falls Pub Sch Dist  
28-035 Buckley Comm Sch Dist  
15-035 Central Lake Pub Sch  
69-070 Chester Twp Sch Dist 1  
54-025 Chippewa Hills Sch Dist  
57-100 Clam Union Twp Sch Dist 2  
54-100 Colfax Twp Sch Dist 3F  
68-030 Comins Twp Sch Dist  
20-015 Crawford AuSable Schs  
24-010 Cross Village Sch Dist  
64-020 Elbridge Comm Sch Dist  
05-060 Elk Rapids Schs  
15-065 Ellsworth Comm Sch  
67-020 Ewart Pub Sch  
40-060 Excelsior Twp Sch Dist 1  
57-010 Falmouth Elem Sch Dist  
18-020 Farwell Area Schs  
64-030 Ferry Comm Sch Dist  
28-060 Fife Lake Comm Sch Dist  
10-025 Frankfort Area Schs  
53-030 Freesoil Comm Sch Dist  
40-110 Garfield Twp Sch Dist 3F  
72-010 Gerrish Higgins Sch Dist  
45-010 Glen Lake Comm Sch Dist  
64-050 Golden Comm Sch Dist  
54-140 Grant Twp Sch Dist 2  
62-050 Grant Pub Sch Dist  
28-220 Green Lake Twp Sch Dist 1F  
35-020 Hale Area Schs  
24-020 Harbor Springs Sch Dist  
18-060 Harrison Comm Schs  
64-040 Hart Pub Sch Dist  
62-060 Hesperia Comm Sch Dist  
60-020 Hillman Comm Schs  
72-020 Houghton Lake Comm Schs  
16-050 Inland Lakes Sch Dist  
69-030 Johannesburg-Central Sch  
51-045 Kaleva Norman Dickson Schs  
40-040 Kalkaska Pub Schs  
28-090 Kingsley Area Sch Dist  
57-020 Lake City Area Sch Dist  
45-020 Leland Pub Sch Dist  
24-030 Littlefield Pub Sch Dist  
16-070 Mackinaw City Pub Schs  
05-070 Mancelona Pub Sch  
83-060 Manton Cons Sch Dist  
67-050 Marion Pub Sch  
53-010 Mason Co Central Sch Dist  
53-020 Mason Co Eastern Sch Dist  
57-030 McBain Rural Ag Sch Dist  
83-070 Mesick Cons Sch Dist  
68-010 Mio Au Sable Sch  
54-040 Morley Stanwood Comm Schs  
62-070 Newaygo Pub Sch Dist  
45-040 Northport Pub Sch Dist  
40-140 Oliver Twp Sch Dist 2  
71-050 Onaway Area Comm Sch Dist  
51-060 Onkema Cons Sch

Region 3, continued

V RURAL, continued

35-010 Oscoda Area Schs  
24-040 Pellston Pub Sch Dist  
64-070 Pentwater Pub Sch Dist  
67-055 Pine River Area Schs  
62-080 Pineview Sch Dist  
71-060 Posen Cons Sch Dist  
67-060 Reed City Pub Schs  
40-020 S Boardman Area Sch  
64-080 Shelby Pub Sch Dist  
37-060 Shepherd Pub Sch Dist  
72-040 St Helen Sch Dist  
06-050 Standish Sterl Comm Sch Dist  
45-050 Suttons Bay Pub Sch Dist  
69-040 Vanderbilt-Area Sch  
65-045 W Branch Rose City Area Schs  
64-090 Walkerville Rural Comm S D  
64-095 Weare Crystal Comm Sch Dist  
62-090 White Cloud Pub Schs  
35-040 Whittenmore Prescott Area S D  
16-100 Wolverine Comm Sch Dist

Region 4

I METROPOLITAN CORE CITIES

(none)

II CITIES

21-010 Escanaba Area Pub Schs  
27-020 Ironwood Area Schs  
52-170 Marquette City Sch Dist  
55-100 Menominee Area Pub Sch  
17-010 Sault Ste Marie Area Schs

III TOWNS

27-010 Bessemer City Sch Dist  
22-030 Breitung Township Sch Dist  
36-015 Forest Park Sch Dist  
21-020 Gladstone Pub Sch Dist  
31-010 Hancock City Sch Dist  
22-010 Iron Mountain City Sch Dist  
52-180 Ishpeming Pub Sch Dist  
07-040 L'anse Twp Sch Dist  
31-130 Lake Linden Hubbell Sch Dist  
77-010 Manistique Area Schs  
02-070 Munising Pub Schs  
52-090 Negaunee Sch Dist

22-025 Norway Vulcan Area Schs  
66-050 Ontonagon Area Schools  
31-110 Portage Twp Sch Dist  
49-010 St Ignace City Sch Dist  
48-040 Tahquamenon Area Schs  
27-070 Wakefield Twp Sch Dist  
36-025 West Iron County Sch Dist

IV URBAN FRINGE

(none)

V RURAL

31-020 Adams Twp Sch Dist  
42-010 Allouez Twp Schs  
07-010 Arvon Twp Sch Dist  
02-010 Autrain Twp Sch  
07-020 Baraga Twp Sch Dist  
21-090 Bark River Harris Sch Dist  
66-010 Bergland Comm Sch Dist  
27-030 Bessemer Twp Sch Dist  
21-065 Big Bay De Noc Sch Dist  
49-020 Bois Blanc Pines Sch Dist  
21-030 Brampton Twp Sch Dist  
49-030 Brevort Twp Sch Dist  
17-140 Brimley Pub Schs  
02-020 Burt Twp Sch  
31-030 Calumet Pub Sch Dist  
31-040 Calumet Twp Sch Dist 2  
55-010 Carney Nadeau Pub Schs  
52-010 Champion-Humboldt Spurr S D  
31-050 Chassell Twp Sch Dist  
52-020 Chocolay Twp Sch Dist  
07-030 Covington Sch Dist  
21-040 Delta Co Sch Dist 7  
17-050 Detour Twp Sch  
31-070 Elm River Twp Sch  
52-030 Ely Twp Sch Dist  
49-055 Engadine Cons Schs  
66-045 Ewen Trout Creek Cons S D  
21-100 Flat Rock Public Sch Dist  
52-040 Forsyth Sch Dist  
42-030 Grant Twp Schs  
55-060 Hermansville Pub Sch  
52-050 Ishpeming Twp Sch Dist  
49-040 Les Cheneaux Comm Sch Dist  
02-050 Limestone Twp Sch  
49-110 Mackinac Island Pub Sch Dist  
27-060 Marenisco Sch Dist

Region 4, continued

V RURAL, continued

52-060 Marquette Twp Sch Dist  
02-060 Mathias Twp Sch  
49-070 Moran Twp Sch Dist  
52-080 National Mine Sch Dist  
22-045 North Dickinson Co Sch Dist  
31-100 Osceola Twp Sch Dist  
17-090 Pickford Pub Schs  
52-100 Powell Twp Sch Dist  
55-110 Powers Spalding Pub Sch  
21-060 Rapid River Pub Schs  
52-110 Republic Michigamme Schs  
21-130 Rock Pub Sch Dist  
02-080 Rock River Twp Sch  
17-110 Rudyard Twp Sch  
52-130 Sands Twp Sch Dist  
52-140 Skandia Sch Dist  
49-100 St Ignace Twp Sch Dist  
31-140 Stanton Twp Sch Dist  
55-120 Stephenson Area Pub Schs  
27-080 Watersmeet Twp Sch Dist  
52-160 Wells Twp Sch Dist  
66-070 White Pine Sch Dist  
17-160 Whitefish Sch

## APPENDIX D

### BIBLIOGRAPHY OF PUBLISHED AND PLANNED ASSESSMENT REPORTS

1. Purposes and Procedures of the Michigan Assessment of Education. Lansing, Michigan: Michigan Department of Education, Assessment Report No. 1, 1969.
2. Activities and Arrangements for the 1969-70 Michigan Assessment of Education. Lansing, Michigan: Michigan Department of Education, Assessment Report No. 2, 1969.
3. Research into the Correlates of School Performance: A Review and Summary of the Literature. Lansing, Michigan: Michigan Department of Education, Assessment Report No. 3, 1970.
4. Levels of Educational Performance and Related Factors in Michigan. Lansing, Michigan: Michigan Department of Education, Assessment Report No. 4, 1970.
5. Distribution of Educational Performance and Related Factors in Michigan. Lansing, Michigan: Michigan Department of Education Assessment Report No. 5, 1970.
6. Local District Report. Lansing, Michigan: Michigan Department of Education, Assessment Report No. 6, 1970.
7. Levels of Educational Performance and Related Factors in Michigan: A Supplement. Lansing, Michigan: Michigan Department of Education, Assessment Report No. 7, 1970. (Tentative title; planned for August/September publication).
8. Distribution of Educational Performance and Related Factors in Michigan: A Supplement. Lansing, Michigan: Michigan Department of Education, Assessment Report No. 8, 1970. (Tentative title; planned for August/September publication).
9. Correlates of School Performance in Michigan. Lansing, Michigan: Michigan Department of Education, Assessment Report No. 9, 1970. (Tentative title; planned for September/October publication).

LOCAL DISTRICT REPORT: EXPLANATORY MATERIALS

ERRATA

In the attempt to make Assessment results available to local districts as quickly as possible, four errors in Local District Report: Explanatory Materials went unnoticed until after the booklet was printed. Therefore the local district official is requested to make the following corrections:

- p. 1. The first sentence of the second paragraph should read:  
"This explanatory booklet has four sections."
- p. 2. The first line should read:  
"...profiles similar to those prepared for the hypothetical Michville district and its schools."
- p. 6. The seventh line of the first paragraph should read:  
"...included with these materials contains the local scores on these factors."
- p. 17. and all DISTRICT NORMS tables.

The figures in the column labeled PUPIL/TEACHER RATIO on the DISTRICT NORMS tables were erroneously printed in reverse order. This must be kept in mind when plotting district education profiles because the "better" a district is on this measure--that is, the lower its pupil/teacher ratio--the lower it will fall on the present percentile scale. It is therefore suggested that district officials reverse their pupil/teacher ratio percentile ranks when plotting the profiles. For example, a pupil/teacher ratio of 27.01, which would be plotted at the eighty-fifth percentile on the grade four Michigan table, should actually be plotted at the fifteenth percentile. Also, the correct pupil/teacher ratio for the fifteenth percentile, 27.01, should be written in, and the incorrect ratio, 21.25, should be crossed out.

**SCHOOL NORMS**

**GRADE 4**

**MICHIGAN**

		VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")				ACHIEVEMENT ("OUTPUTS")				
		SES	ATTITUDES AND ASPIRATIONS			VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
		SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION	C ATTITUDE TOWARD SCHOOL		READING	ENGLISH EXPRESSION	MATHEMATICS	
PERCENTILE DISTRIBUTION	95	58.99	53.32	54.03	54.80	57.24	56.46	56.45	56.73	56.37
	90	55.31	52.68	53.03	53.90	55.16	55.14	55.23	55.30	55.03
	85	53.46	52.25	52.31	53.23	54.09	54.30	54.28	54.46	54.22
	80	52.46	51.84	51.84	52.82	53.36	53.58	53.63	53.68	53.54
	75	51.60	51.49	51.42	52.42	52.78	53.00	53.02	53.03	52.96
	70	50.88	51.16	51.04	52.03	52.20	52.48	52.51	52.44	52.41
	65	50.22	50.84	50.69	51.66	51.69	51.99	52.02	51.96	51.93
	60	49.66	50.53	50.40	51.32	51.25	51.54	51.54	51.51	51.50
	55	49.17	50.23	50.11	50.97	50.80	51.13	51.08	51.06	51.09
	50	48.68	49.95	49.83	50.61	50.36	50.77	50.64	50.63	50.69
	45	48.32	49.66	49.56	50.25	49.97	50.32	50.21	50.20	50.30
	40	47.96	49.34	49.28	49.87	49.55	49.87	49.80	49.76	49.86
	35	47.57	48.97	48.97	49.43	49.05	49.36	49.30	49.21	49.41
	30	47.13	48.59	48.65	48.94	48.49	48.72	48.81	48.55	48.91
	25	46.75	48.18	48.33	48.39	47.91	48.11	48.14	47.91	48.24
	20	46.31	47.73	47.95	47.81	47.18	47.32	47.30	47.10	47.39
	15	45.84	47.24	47.50	47.00	46.28	46.28	46.20	46.14	46.32
	10	45.25	46.53	46.90	46.00	44.78	44.64	44.72	44.71	44.88
5	44.40	45.43	46.04	44.63	42.86	42.35	42.26	42.40	42.40	
MEAN		49.72	49.73	49.93	50.26	50.27	50.32	50.31	50.33	50.34
STANDARD DEVIATION		4.47	2.48	2.50	3.13	4.07	4.06	4.10	4.14	3.98
NUMBER OF SCHOOLS		2433	2433	2433	2433	2492	2492	2492	2492	2492



**SCHOOL NORMS**

**GRADE 4**

**REGION 2**

		VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")				ACHIEVEMENT ("OUTPUTS")				
		SES	ATTITUDES AND ASPIRATIONS			VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
		SOCIO ECONOMIC STATUS	A	B	C		READING	ENGLISH EXPRESSION	MATHEMATICS	
			IMPORTANCE OF SCHOOL ACHIEVEMENT	SELF PERCEPTION	ATTITUDE TOWARD SCHOOL					
<b>PERCENTILE DISTRIBUTION</b>	95	57.56	53.12	54.07	54.73	56.99	56.33	56.01	56.12	55.95
	90	54.64	52.35	53.04	53.94	54.89	54.95	54.77	54.94	54.65
	85	53.14	51.74	52.18	53.30	53.78	54.09	53.94	54.08	53.92
	80	52.05	51.30	51.69	52.86	53.17	53.45	53.24	53.36	53.28
	75	51.24	50.92	51.20	52.46	52.56	52.90	52.64	52.68	52.69
	70	50.42	50.57	50.74	52.09	51.97	52.36	52.18	52.14	52.15
	65	49.73	50.24	50.44	51.73	51.51	51.88	51.74	51.70	51.73
	60	49.20	49.96	50.16	51.43	51.06	51.46	51.29	51.27	51.34
	55	48.78	49.68	49.90	51.08	50.57	51.08	50.79	50.91	50.95
	50	48.57	49.41	49.63	50.70	50.16	50.73	50.39	50.53	50.55
	45	48.04	49.12	49.33	50.36	49.83	50.31	50.00	50.10	50.15
	40	47.70	48.76	49.01	50.01	49.46	49.87	49.59	49.63	49.76
	35	47.29	48.42	48.70	49.61	49.02	49.44	49.15	49.13	49.36
	30	46.92	48.03	48.41	49.12	48.53	48.93	48.76	48.53	48.94
	25	46.52	47.62	48.08	48.60	47.97	48.38	48.18	47.98	48.41
	20	46.12	47.23	47.69	48.04	47.37	47.80	47.52	47.30	47.67
15	45.74	46.76	47.21	47.32	46.80	46.82	46.62	46.45	46.70	
10	45.14	46.05	46.61	46.34	45.55	45.17	45.38	45.43	45.73	
5	44.34	45.11	45.85	45.07	43.58	43.03	43.01	42.98	43.05	
<b>MEAN</b>	49.34	49.25	49.74	50.40	50.26	50.41	50.21	50.25	50.31	
<b>STANDARD DEVIATION</b>	4.20	2.48	2.62	3.02	3.83	3.84	3.79	3.80	3.70	
<b>NUMBER OF SCHOOLS</b>	1192	1192	1192	1192	1213	1213	1213	1213	1213	

### SCHOOL NORMS

GRADE 4

III. TOWNS

		VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")				ACHIEVEMENT ("OUTPUTS")				
		SES	ATTITUDES AND ASPIRATIONS			VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
		SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION	C ATTITUDE TOWARD SCHOOL		READING	ENGLISH EXPRESSION	MATHEMATICS	
PERCENTILE DISTRIBUTION	95	54.59	52.72	53.30	55.17	56.28	56.11	56.44	56.79	56.42
	90	53.12	51.65	52.32	54.12	54.74	55.17	55.29	55.57	55.02
	85	52.10	51.26	51.70	53.48	53.96	54.52	54.44	54.79	54.37
	80	51.50	50.92	51.20	52.99	53.39	53.64	53.82	53.97	53.76
	75	50.78	50.46	50.75	52.47	52.92	53.19	53.05	53.40	53.13
	70	50.33	50.09	50.39	51.98	52.40	52.74	52.63	52.72	52.61
	65	49.90	49.84	50.07	51.59	51.94	52.46	52.19	52.17	52.12
	60	49.46	49.57	49.77	51.25	51.57	52.15	51.74	51.86	51.75
	55	49.07	49.29	49.47	50.98	51.25	51.73	51.28	51.40	51.43
	50	48.73	48.97	49.19	50.69	50.76	51.29	50.89	50.99	51.11
	45	48.44	48.63	48.94	50.26	50.36	50.92	50.55	50.65	50.81
	40	48.13	48.25	48.68	49.89	50.00	50.55	50.24	50.34	50.49
	35	47.78	47.96	48.38	49.56	49.67	50.18	49.90	49.98	50.16
	30	47.38	47.65	48.10	49.24	49.35	49.79	49.47	49.57	49.86
	25	47.02	47.31	47.85	48.78	48.95	49.33	49.04	49.10	49.44
	20	46.66	46.78	47.44	48.16	48.48	48.87	48.57	48.54	48.81
	15	46.13	46.27	46.97	47.60	47.89	48.19	47.90	47.90	48.14
10	45.57	45.63	46.43	46.78	47.21	47.54	47.26	47.22	47.51	
5	44.47	44.56	45.79	45.07	46.28	46.41	45.94	46.33	46.35	
MEAN		49.10	48.77	49.34	50.48	50.95	51.26	51.03	51.22	51.18
STANDARD DEVIATION		3.08	2.53	2.29	3.03	2.95	3.04	3.17	3.27	3.00
NUMBER OF SCHOOLS		365	365	365	365	373	373	373	373	373

**SCHOOL NORMS**

REGION 2  
III. TOWNS

GRADE 4

		VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")				ACHIEVEMENT ("OUTPUTS")				
		SES	ATTITUDES AND ASPIRATIONS			VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
		SOCIO ECONOMIC STATUS	A	B	C		READING	ENGLISH EXPRESSION	MATHEMATICS	
			IMPORTANCE OF SCHOOL ACHIEVEMENT	SELF PERCEPTION	ATTITUDE TOWARD SCHOOL					
PERCENTILE DISTRIBUTION	95	53.30	52.81	53.31	55.02	54.96	55.52	55.22	55.61	54.91
	90	52.80	51.64	52.28	53.91	53.86	54.28	54.20	54.63	54.07
	85	51.90	51.04	51.75	53.25	53.33	53.54	53.21	53.75	53.33
	80	51.33	50.53	51.08	52.93	52.72	53.19	52.74	53.22	52.85
	75	50.59	50.11	50.54	52.49	52.13	52.73	52.38	52.51	52.39
	70	50.15	49.82	50.20	51.98	51.78	52.43	52.03	52.09	52.02
	65	49.80	49.57	49.96	51.59	51.49	52.09	51.66	51.79	51.72
	60	49.37	49.34	49.71	51.26	51.17	51.70	51.26	51.26	51.46
	55	49.02	49.03	49.42	50.92	50.68	51.38	50.88	50.96	51.19
	50	48.72	48.67	49.16	50.55	50.33	51.06	50.55	50.66	50.88
	45	48.47	48.32	48.93	50.15	50.05	50.72	50.25	50.38	50.55
	40	48.21	48.05	48.70	49.78	49.79	50.34	49.96	50.03	50.22
	35	47.88	47.80	48.43	49.47	49.52	49.98	49.60	49.64	49.94
	30	47.52	47.47	48.12	49.15	49.25	49.61	49.18	49.28	49.62
	25	47.11	47.09	47.74	48.77	48.63	49.21	48.89	48.86	49.24
	20	46.63	46.66	47.27	48.18	48.22	48.86	48.40	48.32	48.72
	15	46.12	46.29	46.79	47.64	47.71	48.22	47.91	47.87	48.20
	10	45.61	45.72	46.28	46.73	47.28	47.81	47.38	47.09	47.63
5	44.81	44.78	45.70	45.29	46.53	46.88	45.95	46.14	46.42	
MEAN		48.91	48.61	49.26	50.45	50.55	50.99	50.60	50.71	50.78
STANDARD DEVIATION		2.62	2.48	2.25	2.92	2.68	2.77	2.81	2.89	2.64
NUMBER OF SCHOOLS		227	227	227	227	227	227	227	227	227

## SCHOOL NORMS

GRADE 7

MICHIGAN

		VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")				ACHIEVEMENT ("OUTPUTS")				
		SES	ATTITUDES AND ASPIRATIONS			VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
		SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION	C ATTITUDE TOWARD SCHOOL		READING	ENGLISH EXPRESSION	MATHEMATICS	
PERCENTILE DISTRIBUTION	95	56.67	53.14	53.21	55.48	55.40	55.24	55.28	56.08	55.45
	90	53.70	52.45	52.28	54.57	53.91	53.82	54.23	54.65	54.07
	85	52.26	51.92	51.70	53.90	53.06	53.16	53.48	53.64	53.30
	80	51.18	51.54	51.35	53.38	52.52	52.65	52.99	52.97	52.76
	75	50.38	51.21	51.04	52.95	52.11	52.22	52.47	52.45	52.28
	70	49.74	50.94	50.73	52.58	51.70	51.79	52.03	52.02	51.89
	65	49.23	50.67	50.46	52.24	51.23	51.48	51.64	51.63	51.55
	60	48.64	50.41	50.20	51.81	50.91	51.16	51.19	51.31	51.22
	55	48.18	50.16	49.98	51.35	50.57	50.79	50.86	50.92	50.89
	50	47.79	49.92	49.76	51.02	50.24	50.41	50.49	50.52	50.53
	45	47.37	49.68	49.53	50.72	49.85	50.05	50.09	50.14	50.16
	40	46.96	49.45	49.30	50.30	49.51	49.71	49.70	49.79	49.83
	35	46.47	49.21	49.03	49.88	49.18	49.34	49.34	49.42	49.46
	30	45.97	48.93	48.76	49.45	48.76	48.98	48.89	49.03	49.08
	25	45.49	48.63	48.46	48.86	48.28	48.57	48.45	48.56	48.65
	20	45.00	48.29	48.09	48.02	47.54	47.98	47.89	47.93	48.02
	15	44.47	47.83	47.63	46.95	46.76	47.26	47.10	46.92	47.19
	10	43.82	47.21	47.24	45.82	45.31	45.87	45.78	45.03	45.69
5	42.70	46.46	46.12	43.94	42.13	43.52	43.22	41.79	43.07	
MEAN		48.42	49.90	49.74	50.62	49.88	50.13	50.20	50.22	50.20
STANDARD DEVIATION		4.29	2.11	2.16	3.52	3.69	3.37	3.54	3.90	3.49
NUMBER OF SCHOOLS		892	892	892	892	909	909	909	909	909

**SCHOOL NORMS**

**GRADE 7**

**REGION 2**

		VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")				ACHIEVEMENT ("OUTPUTS")				
		SES	ATTITUDES AND ASPIRATIONS			VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
			SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION		C ATTITUDE TOWARD SCHOOL	READING	ENGLISH EXPRESSION	
PERCENTILE DISTRIBUTION	95	55.53	52.72	52.42	55.37	54.55	54.00	53.89	55.17	54.20
	90	52.56	51.76	51.52	54.59	53.01	53.21	53.02	53.57	53.22
	85	50.99	51.38	51.12	54.06	52.34	52.56	52.43	52.82	52.62
	80	50.34	51.04	50.81	53.60	51.92	52.07	51.98	52.41	52.04
	75	49.76	50.72	50.54	53.20	51.48	51.67	51.59	52.01	51.63
	70	49.21	50.43	50.29	52.90	51.09	51.43	51.21	51.61	51.32
	65	48.73	50.16	50.05	52.59	50.78	51.17	50.96	51.25	51.05
	60	48.30	49.90	49.82	52.26	50.50	50.86	50.70	50.88	50.79
	55	47.96	49.66	49.60	51.91	50.23	50.50	50.35	50.55	50.48
	50	47.62	49.44	49.40	51.57	49.94	50.17	49.98	50.25	50.18
	45	47.29	49.22	49.20	51.25	49.66	49.92	49.65	49.98	49.93
	40	46.90	48.98	49.00	50.94	49.42	49.66	49.40	49.70	49.66
	35	46.48	48.74	48.81	50.53	49.16	49.34	49.09	49.35	49.34
	30	46.11	48.50	48.58	50.05	48.82	49.06	48.71	49.03	49.05
	25	45.79	48.26	48.34	49.62	48.50	48.79	48.38	48.71	48.76
	20	45.33	47.96	47.99	49.11	48.13	48.35	47.99	48.28	48.30
	15	44.84	47.59	47.61	48.46	47.56	47.80	47.48	47.79	47.71
10	44.23	47.07	47.26	47.14	46.83	47.26	46.76	46.99	47.04	
5	43.35	46.49	46.34	45.79	45.36	46.01	45.41	45.83	45.91	
MEAN	48.10	49.49	49.43	51.24	49.85	50.10	49.85	50.21	50.07	
STANDARD DEVIATION	3.65	2.00	1.87	2.97	2.97	2.74	2.83	3.03	2.74	
NUMBER OF SCHOOLS	406	406	406	406	412	412	412	412	412	

## SCHOOL NORMS

GRADE 7

III. TOWNS

		VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")				ACHIEVEMENT ("OUTPUTS")				
		SES	ATTITUDES AND ASPIRATIONS			VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
		SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION	C ATTITUDE TOWARD SCHDOL		READING	ENGLISH EXPRESSION	MATHEMATICS	
PERCENTILE DISTRIBUTION	95	52.74	52.24	52.87	54.99	54.98	54.06	54.71	55.21	54.61
	90	51.84	51.53	51.49	54.24	53.67	53.44	53.82	54.09	53.72
	85	51.10	51.14	50.95	53.74	52.80	53.11	53.23	53.60	53.22
	80	50.66	50.84	50.55	53.31	52.40	52.85	52.92	53.11	52.88
	75	50.22	50.48	50.22	53.03	51.94	52.59	52.55	52.76	52.54
	70	49.61	50.16	50.06	52.78	51.51	52.34	52.18	52.48	52.21
	65	49.24	49.93	49.90	52.45	51.19	51.96	51.94	52.19	51.93
	60	48.98	49.71	49.74	52.08	51.01	51.64	51.70	51.85	51.66
	55	48.73	49.56	49.59	51.67	50.83	51.42	51.47	51.60	51.40
	50	48.43	49.41	49.44	51.33	50.67	51.16	51.23	51.40	51.17
	45	48.14	49.26	49.29	51.09	50.53	50.77	50.95	51.17	50.96
	40	47.89	49.10	49.06	50.87	50.39	50.46	50.62	50.86	50.76
	35	47.62	48.94	48.81	50.63	50.25	50.19	50.21	50.53	50.45
	30	47.32	48.78	48.58	50.35	50.03	50.01	49.95	50.18	50.13
	25	46.95	48.35	48.37	49.94	49.81	49.83	49.70	49.80	49.79
	20	46.47	47.98	48.11	49.43	49.55	49.54	49.44	49.50	49.52
	15	45.87	47.60	47.81	49.06	49.27	49.17	49.14	49.19	49.27
10	45.44	47.06	47.40	48.76	48.77	48.87	48.71	48.58	48.93	
5	44.88	46.15	46.85	47.27	47.79	48.27	48.32	47.77	48.27	
MEAN	48.57	49.39	49.44	51.38	50.96	51.12	51.21	51.37	51.24	
STANDARD DEVIATION	2.73	1.76	1.70	2.30	2.18	1.93	2.05	2.31	1.98	
NUMBER OF SCHOOLS	121	121	121	121	123	123	123	123	123	

GRADE 7

SCHOOL NORMS

REGION 2  
III. TOWNS

		VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")				ACHIEVEMENT ("OUTPUTS")				
		SES	ATTITUDES AND ASPIRATIONS			VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
		SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION	C ATTITUDE TOWARD SCHOOL		READING	ENGLISH EXPRESSION	MATHEMATICS	
PERCENTILE DISTRIBUTION	95	51.99	51.97	52.86	54.82	53.97	53.32	53.12	53.86	53.36
	90	51.04	51.36	51.40	54.04	52.99	52.94	52.82	53.14	52.94
	85	50.70	51.03	51.03	53.64	52.54	52.54	52.42	52.79	52.47
	80	50.40	50.73	50.73	53.18	51.95	52.10	52.13	52.52	52.03
	75	50.03	50.44	50.44	52.95	51.41	51.72	51.93	52.27	51.71
	70	49.53	50.18	50.20	52.71	51.11	51.57	51.72	51.92	51.54
	65	49.16	50.01	50.08	52.27	50.88	51.42	51.43	51.67	51.36
	60	48.98	49.83	49.95	51.82	50.70	51.27	51.18	51.50	51.20
	55	48.80	49.66	49.82	51.54	50.57	51.00	51.00	51.34	51.06
	50	48.54	49.50	49.69	51.29	50.45	50.72	50.82	51.14	50.92
	45	48.24	49.34	49.56	51.06	50.32	50.50	50.41	50.89	50.79
	40	47.89	49.16	49.42	50.84	50.17	50.27	50.11	50.62	50.59
	35	47.62	48.96	49.28	50.48	49.99	50.13	49.91	50.32	50.37
	30	47.39	48.77	49.06	50.04	49.82	49.99	49.71	50.06	50.04
	25	47.09	48.43	48.80	49.59	49.63	49.86	49.54	49.80	49.68
	20	46.65	48.07	48.52	49.20	49.43	49.67	49.36	49.55	49.48
	15	46.19	47.69	48.19	48.98	49.21	49.32	49.12	49.30	49.29
10	45.66	47.14	47.64	48.76	48.86	49.01	48.76	48.64	49.04	
5	45.30	46.64	47.18	47.01	48.14	48.68	48.32	48.14	48.79	
MEAN	48.46	49.42	49.67	51.17	50.64	50.86	50.74	50.99	50.88	
STANDARD DEVIATION	2.11	1.72	1.48	2.32	1.73	1.40	1.52	1.77	1.42	
NUMBER OF SCHOOLS	71	71	71	71	71	71	71	71	71	

**GRADE 4**

**DISTRICT**

**VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INFLUENCING VARIABLES")**

	PERCENTILE DISTRIBUTION	VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INFLUENCING VARIABLES")								
		SES	ATTITUDES AND ASPIRATIONS			SCHOOL HUMAN RESOURCES				STATE EQUALIZATION VALUATION PER PUPIL
		SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION	C ATTITUDE TOWARD SCHOOL	PUPIL/TEACHER RATIO	AVERAGE YEARS TEACHING EXPERIENCE	PERCENTAGE OF TEACHERS WITH MASTERS OR ABOVE	AVERAGE TEACHER SALARY	
95	54.00	52.06	52.92	54.47	29.45	14.67	37.46	9864	27783	
90	52.18	51.49	51.84	53.55	28.09	13.58	33.16	9478	21962	
85	51.28	51.11	51.29	52.97	27.01	12.81	29.25	9173	19441	
80	50.45	50.75	50.88	52.65	26.56	12.19	25.94	8949	17679	
75	49.87	50.42	50.60	52.40	26.11	11.66	24.01	8761	16305	
70	49.36	50.13	50.37	52.11	25.66	11.24	22.26	8646	15124	
65	48.94	49.89	50.16	51.77	25.22	10.86	20.22	8530	14217	
60	48.59	49.66	49.97	51.57	24.83	10.49	18.76	8415	13310	
55	48.30	49.45	49.78	51.38	24.49	10.10	17.62	8311	12444	
50	48.03	49.25	49.55	51.15	24.16	9.71	16.48	8209	11925	
45	47.76	49.00	49.30	50.87	23.82	9.33	15.38	8106	11406	
40	47.46	48.76	49.08	50.60	23.48	8.98	14.29	8004	10887	
35	47.16	48.44	48.85	50.36	23.15	8.62	13.15	7890	10367	
30	46.87	48.14	48.60	50.10	22.72	8.25	11.92	7776	9848	
25	46.53	47.86	48.32	49.84	22.23	7.85	10.68	7662	9277	
20	46.14	47.49	48.02	49.44	21.74	7.50	8.67	7503	8600	
15	45.70	47.00	47.72	48.94	21.25	6.95	6.30	7291	7923	
10	45.25	46.25	47.25	48.43	20.38	6.36	2.46	6896	7246	
5	44.41	45.28	46.24	47.41	19.14	5.63	0.13	5957	6568	
MEAN	48.47	48.99	49.47	51.06	24.26	10.04	17.60	8146.80	13947.5	
STANDARD DEVIATION	3.21	2.23	2.17	2.10	3.66	3.50	11.07	1157.30	7882.4	
NUMBER OF DISTRICTS	579	579	579	579	585	585	585	583	623	



**TRICT NORMS**

**MICHIGAN**

("INPUTS")					ACHIEVEMENT ("OUTPUTS")				
SCHOOL FINANCIAL RESOURCES					VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
STATE QUALIFIED ALUATION PER PUPIL	LOCAL REVENUE PER PUPIL	STATE SCHOOL AID PER PUPIL	K-12 INSTRUCTIONAL EXPENSE PER PUPIL	TOTAL CURRENT OPERATING EXPENSE PER PUPIL		READING	ENGLISH EXPRESSION	MATHEMATICS	
7783	668	402	595	795	54.99	55.24	55.78	55.69	55.21
1962	517	384	539	733	53.85	54.24	54.50	54.35	54.20
9441	450	369	508	679	53.22	53.62	53.71	53.58	53.53
7679	409	357	486	651	52.72	53.09	53.25	52.97	52.99
6305	380	346	468	629	52.24	52.57	52.70	52.50	52.57
5124	356	336	452	608	51.90	52.21	52.29	52.10	52.16
4217	334	325	438	596	51.57	51.93	51.90	51.73	51.81
3310	315	315	429	583	51.25	51.67	51.55	51.46	51.53
2444	299	306	419	571	50.90	51.44	51.21	51.20	51.27
1925	283	298	410	560	50.60	51.20	50.83	50.93	50.95
1406	269	289	400	549	50.34	50.89	50.51	50.60	50.64
0887	255	281	393	538	50.05	50.54	50.20	50.18	50.36
0367	241	274	385	528	49.75	50.17	49.92	49.83	50.07
9848	227	267	377	518	49.37	49.84	49.63	49.44	49.77
9277	212	260	370	507	48.90	49.48	49.31	48.96	49.39
8600	197	251	362	497	48.47	49.03	48.92	48.39	48.94
7923	182	237	341	482	48.01	48.46	48.45	47.82	48.40
7246	160	219	311	454	47.37	47.59	47.59	47.09	47.62
6568	133	186	260	364	46.38	46.18	45.98	46.10	46.44
0947.28	320.98	300.16	419.84	575.52	50.66	51.01	50.95	50.81	50.94
7882.42	165.03	72.20	96.53	134.03	2.73	2.68	2.79	2.97	2.66
623	623	620	623	623	585	585	585	585	585

## GRADE 4

## VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")

		SES	ATTITUDES AND ASPIRATIONS			SCHOOL HUMAN RESOURCES				
		SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION	C ATTITUDE TOWARD SCHOOL	PUPIL/TEACHER RATIO	AVERAGE YEARS TEACHING EXPERIENCE	PERCENTAGE OF TEACHERS WITH MASTERS OR ABOVE	AVERAGE TEACHER SALARY	STATE EQUALIZED VALUATION PER PUPIL
PERCENTILE DISTRIBUTION	95	53.44	51.71	53.07	54.15	29.55	13.64	34.63	9376	22419
	90	51.77	51.15	51.85	53.23	28.22	12.54	28.76	9040	18983
	85	50.63	50.80	51.12	52.89	27.24	11.96	26.23	8817	17279
	80	50.11	50.38	50.63	52.59	26.69	11.44	24.38	8691	15817
	75	49.65	50.07	50.41	52.31	26.29	11.11	22.76	8574	14845
	70	49.27	49.81	50.21	51.98	25.88	10.77	20.98	8456	14009
	65	48.95	49.59	50.05	51.69	25.47	10.44	19.32	8359	13174
	60	48.65	49.38	49.88	51.52	25.06	10.11	18.34	8282	12411
	55	48.38	49.18	49.71	51.35	24.73	9.79	17.36	8205	11949
	50	48.10	48.98	49.45	51.14	24.41	9.45	16.38	8128	11487
	45	47.82	48.78	49.21	50.88	24.09	9.09	15.42	8051	11025
	40	47.55	48.54	49.02	50.64	23.77	8.72	14.46	7971	10563
	35	47.28	48.28	48.83	50.44	23.45	8.37	13.49	7884	10101
	30	47.03	48.00	48.61	50.24	23.13	8.04	12.37	7798	9639
	25	46.79	47.71	48.35	49.99	22.72	7.70	11.25	7711	9092
	20	46.44	47.40	48.07	49.73	22.25	7.33	9.79	7624	8507
	15	46.02	46.95	47.78	49.29	21.78	6.91	7.65	7472	7922
10	45.55	46.32	47.27	48.65	21.31	6.47	5.07	7294	7337	
5	44.88	45.52	46.45	47.73	20.24	5.79	0.98	6573	6752	
MEAN		48.46	48.83	49.43	51.06	24.65	9.63	17.02	8086.93	12780.8
STANDARD DEVIATION		2.86	2.01	2.17	1.90	3.45	3.05	9.54	937.28	6094.2
NUMBER OF DISTRICTS		317	317	317	317	314	314	314	312	351

## DISTRICT NORMS

REGION 2

INPUT ("INPUTS")					ACHIEVEMENT ("OUTPUTS")				
SCHOOL FINANCIAL RESOURCES					VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
STATE EQUALIZED VALUATION PER PUPIL	LOCAL REVENUE PER PUPIL	STATE SCHOOL AID PER PUPIL	K-12 INSTRUCTIONAL EXPENSE PER PUPIL	TOTAL CURRENT OPERATING EXPENSE PER PUPIL		READING	ENGLISH EXPRESSION	MATHEMATICS	
22419	529	395	557	724	54.18	54.32	54.15	54.25	54.14
18983	442	378	504	650	53.25	53.60	53.49	53.35	53.26
17279	393	366	477	624	52.52	52.87	52.81	52.72	52.72
15817	363	355	459	604	52.09	52.42	52.36	52.23	52.23
14845	343	344	440	591	51.79	52.09	51.99	51.76	51.85
14009	323	335	431	579	51.49	51.81	51.64	51.54	51.60
13174	306	326	422	567	51.16	51.60	51.26	51.32	51.40
12411	290	317	413	557	50.78	51.40	50.95	51.10	51.17
11949	274	308	405	547	50.56	51.18	50.68	50.88	50.90
11487	261	299	397	537	50.36	50.89	50.46	50.59	50.63
11025	249	290	391	528	50.10	50.59	50.24	50.20	50.37
10563	237	283	385	520	49.78	50.30	49.98	49.91	50.12
10101	225	276	379	512	49.48	49.98	49.70	49.59	49.88
9639	212	270	373	504	49.16	49.66	49.40	49.24	49.56
9092	200	264	367	496	48.74	49.35	49.09	48.69	49.15
8507	187	258	360	483	48.40	48.92	48.78	48.24	48.79
7922	175	245	335	459	47.98	48.45	48.36	47.80	48.28
7337	153	228	300	405	47.44	47.79	47.49	47.08	47.66
6752	131	199	251	321	46.64	46.58	46.35	46.10	46.82
12780.85	286.21	300.39	402.62	538.14	50.35	50.71	50.44	50.32	50.51
6094.26	121.43	62.21	81.90	106.39	2.35	2.31	2.38	2.52	2.27
351	351	350	351	351	319	319	319	319	319

**GRADE 4**

**DISTRICT M**

**VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")**

		SES	ATTITUDES AND ASPIRATIONS			SCHOOL HUMAN RESOURCES				
		SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION	C ATTITUDE TOWARD SCHOOL	PUPIL/TEACHER RATIO	AVERAGE YEARS TEACHING EXPERIENCE	PERCENTAGE OF TEACHERS WITH MASTERS OR ABOVE	AVERAGE TEACHER SALARY	STATE EQUALIZED VALUATION PER PUPIL
PERCENTILE DISTRIBUTION	95	53.15	51.13	51.83	53.95	29.92	14.25	37.31	9500	21350
	90	52.07	50.63	50.88	53.01	28.62	13.67	33.86	9154	18412
	85	51.53	50.21	50.60	52.43	27.81	13.08	31.61	8992	17485
	80	50.45	49.89	50.38	51.93	27.00	12.50	27.64	8831	16559
	75	49.85	49.69	50.18	51.66	26.70	12.10	25.45	8743	15632
	70	49.54	49.58	50.01	51.51	26.40	11.69	24.40	8673	14825
	65	49.28	49.47	49.84	51.36	26.10	11.34	23.35	8603	14038
	60	49.06	49.36	49.67	51.16	25.80	11.03	22.23	8533	13250
	55	48.84	49.25	49.51	50.87	25.50	10.72	20.80	8463	12483
	50	48.63	49.07	49.34	50.64	25.20	10.42	19.40	8391	12133
	45	48.43	48.89	49.19	50.46	24.88	10.13	18.35	8300	11783
	40	48.23	48.69	49.06	50.27	24.52	9.83	17.30	8209	11433
	35	48.00	48.45	48.92	50.06	24.16	9.54	16.35	8117	11083
	30	47.76	48.22	48.78	49.84	23.79	9.24	15.72	8026	10733
	25	47.44	48.00	48.50	49.50	23.43	8.93	15.09	7937	10383
	20	47.15	47.78	48.20	49.11	23.07	8.62	14.46	7850	10033
15	46.91	47.31	47.98	48.79	22.50	8.04	13.83	7762	9683	
10	46.59	46.79	47.77	48.10	21.88	7.29	12.75	7675	8875	
5	45.95	45.80	47.35	47.43	21.26	6.54	11.18	7525	7562	
MEAN		48.98	48.81	49.34	50.66	25.18	10.46	21.34	8376.86	13245.3
STANDARD DEVIATION		2.23	1.61	1.28	1.82	2.50	2.37	8.24	729.27	4317.5
NUMBER OF DISTRICTS		104	104	104	104	105	105	105	105	105

**STRICT NORMS**

**III. TOWNS**

T ("INPUTS")					ACHIEVEMENT ("OUTPUTS")				
SCHOOL FINANCIAL RESOURCES					VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
STATE EQUALIZED VALUATION PER PUPIL	LOCAL REVENUE PER PUPIL	STATE SCHOOL AID PER PUPIL	K-12 INSTRUCTIONAL EXPENSE PER PUPIL	TOTAL CURRENT OPERATING EXPENSE PER PUPIL		READING	ENGLISH EXPRESSION	MATHEMATICS	
21350	423	371	510	687	54.44	55.38	55.38	56.38	55.44
18412	391	355	487	645	53.80	54.56	54.61	55.12	54.80
17485	368	342	472	625	53.51	53.91	54.32	54.28	53.94
16559	354	333	460	608	53.25	53.46	53.50	53.50	53.38
15632	340	323	448	598	52.81	53.02	53.01	53.05	52.98
14825	326	315	438	588	52.38	52.63	52.72	52.71	52.60
14038	315	309	433	578	52.04	52.36	52.39	52.34	52.19
13250	304	304	428	569	51.75	52.16	52.00	51.92	52.00
12483	293	299	422	561	51.53	52.01	51.66	51.61	51.81
12133	282	294	417	554	51.31	51.85	51.46	51.40	51.62
11783	272	289	412	547	51.06	51.68	51.26	51.15	51.41
11433	263	284	406	540	50.80	51.46	50.94	50.86	51.18
11083	254	279	401	532	50.60	51.23	50.63	50.34	50.80
10733	245	273	394	525	50.41	50.79	50.33	50.00	50.47
10383	236	268	388	517	50.16	50.35	50.04	49.68	50.15
10033	227	262	381	510	49.50	49.75	49.75	49.13	49.86
9683	211	257	375	502	48.67	49.38	49.21	48.52	49.21
8875	193	244	368	495	48.34	48.90	48.50	48.00	48.44
7562	176	229	362	480	47.88	47.79	47.46	47.13	47.53
3245.34	293.74	298.63	421.06	564.94	51.30	51.69	51.50	51.48	51.57
4317.55	80.17	44.74	43.25	58.98	2.12	2.19	2.32	2.66	2.26
105	105	105	105	105	105	105	105	105	105

## GRADE 7

## VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ('INPUTS')

		VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ('INPUTS')									
		SES	ATTITUDES AND ASPIRATIONS			SCHOOL HUMAN RESOURCES					
		SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION	C ATTITUDE TOWARD SCHOOL	PUPIL/TEACHER RATIO	AVERAGE YEARS TEACHING EXPERIENCE	PERCENTAGE OF TEACHERS WITH MASTERS OR ABOVE	AVERAGE TEACHER SALARY	STATE EQUALIZED VALUATION PER PUPIL	
PERCENTILE DISTRIBUTION	95	54.74	52.62	52.71	55.87	29.06	14.34	37.66	9877	26967	
	90	52.24	51.69	51.81	54.89	27.99	13.35	33.43	9496	21604	
	85	51.15	51.29	51.30	54.35	26.98	12.62	29.56	9193	19031	
	80	50.31	50.95	50.91	53.88	26.54	12.06	26.32	8975	17452	
	75	49.58	50.65	50.60	53.48	26.11	11.54	24.26	8778	16127	
	70	49.04	50.39	50.35	53.14	25.67	11.16	22.59	8666	15037	
	65	48.53	50.14	50.12	52.83	25.23	10.80	20.63	8554	14157	
	60	48.11	49.91	49.89	52.55	24.85	10.43	19.02	8442	13278	
	55	47.78	49.69	49.68	52.28	24.51	10.05	17.92	8337	12440	
	50	47.44	49.49	49.48	51.93	24.18	9.67	16.81	8237	11918	
	45	47.08	49.28	49.28	51.57	23.85	9.31	15.74	8137	11395	
	40	46.69	49.06	49.02	51.22	23.52	8.96	14.67	8037	10873	
	35	46.22	48.83	48.74	50.87	23.18	8.61	13.61	7928	10351	
	30	45.87	48.56	48.50	50.49	22.78	8.25	12.42	7815	9828	
	25	45.43	48.25	48.26	50.09	22.29	7.88	11.22	7702	9252	
	20	44.99	47.87	47.80	49.66	21.80	7.52	9.67	7580	8584	
	15	44.52	47.46	47.40	49.25	21.31	6.99	7.59	7374	7917	
10	43.90	46.94	46.81	48.19	20.54	6.44	5.03	7112	7249		
5	42.86	46.15	45.75	46.70	19.25	5.69	0.74	6189	6581		
MEAN		47.87	49.42	49.40	51.71	24.24	9.89	18.12	8198.29	13730.32	
STANDARD DEVIATION		3.67	2.05	2.13	2.74	3.12	2.97	10.81	1138.05	7290.96	
NUMBER OF DISTRICTS		561	561	561	561	568	568	568	566	592	

**STRICT NORMS**
**MICHIGAN**

COST ("INPUTS")					ACHIEVEMENT ("OUTPUTS")				
SCHOOL FINANCIAL RESOURCES					VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
STATE QUALIFIED SALVATION PER PUPIL	LOCAL REVENUE PER PUPIL	STATE SCHOOL AID PER PUPIL	K-12 INSTRUCTIONAL EXPENSE PER PUPIL	TOTAL CURRENT OPERATING EXPENSE PER PUPIL		READING	ENGLISH EXPRESSION	MATHEMATICS	
26967	634	402	596	787	54.87	54.79	55.04	55.88	55.05
21604	504	384	541	730	53.52	53.72	54.00	54.42	53.94
19031	442	370	510	678	52.81	53.10	53.38	53.68	53.25
17452	406	358	489	651	52.32	52.53	52.90	53.10	52.73
16127	378	347	477	630	51.95	52.12	52.29	52.62	52.20
15037	355	337	456	610	51.57	51.74	51.95	52.15	51.88
14157	332	327	441	598	51.16	51.50	51.61	51.75	51.57
13278	314	317	432	586	50.85	51.26	51.22	51.47	51.27
12440	299	308	423	574	50.55	50.92	50.94	51.18	50.99
11918	284	299	414	563	50.27	50.59	50.64	50.87	50.72
11395	269	291	405	553	50.00	50.28	50.31	50.50	50.42
10873	255	282	396	542	49.73	49.98	49.95	50.12	50.12
10351	242	276	389	532	49.47	49.69	49.63	49.79	49.81
9828	228	269	382	522	49.19	49.42	49.35	49.52	49.53
9252	213	262	374	512	48.89	49.15	49.01	49.25	49.24
8584	197	255	367	503	48.51	48.86	48.63	48.90	48.92
7917	182	240	357	493	47.97	48.52	48.26	48.44	48.51
7249	159	225	332	469	47.24	47.91	47.49	47.85	47.89
6581	132	194	286	415	46.21	46.58	46.52	46.57	46.83
3730.32	315.58	302.42	425.31	578.98	50.39	50.68	50.69	50.97	50.79
7290.96	148.85	67.37	88.91	113.23	2.62	2.49	2.67	2.88	2.55
592	592	592	592	592	566	566	566	566	566

GRADE 7

VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")

		SES	ATTITUDES AND ASPIRATIONS			SCHOOL HUMAN RESOURCES				
		SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION	C ATTITUDE TOWARD SCHOOL	PUPIL/TEACHER RATIO	AVERAGE YEARS TEACHING EXPERIENCE	PERCENTAGE OF TEACHERS WITH MASTERS OR ABOVE	AVERAGE TEACHER SALARY	STATE EQUALIZED VALUATION PER PUPIL
PERCENTILE DISTRIBUTION	95	53.65	52.03	52.21	55.58	29.27	13.27	34.76	9388	22400
	90	51.40	51.49	51.43	54.80	28.14	12.36	29.01	9049	18837
	85	50.43	51.10	51.02	54.31	27.17	11.81	26.37	8830	17231
	80	49.81	50.72	50.67	53.91	26.67	11.36	24.51	8700	15809
	75	49.22	50.48	50.42	53.51	26.27	11.03	22.91	8585	14871
	70	48.84	50.22	50.17	53.16	25.87	10.70	21.18	8469	14068
	65	48.36	49.94	49.94	52.89	25.47	10.38	19.45	8370	13265
	60	48.01	49.68	49.72	52.61	25.07	10.06	18.49	8294	12477
	55	47.71	49.49	49.55	52.32	24.74	9.74	17.52	8219	12003
	50	47.44	49.30	49.37	52.02	24.42	9.41	16.56	8143	11529
	45	47.13	49.10	49.18	51.72	24.11	9.05	15.62	8068	11054
	40	46.73	48.89	48.96	51.43	23.79	8.69	14.68	7991	10580
	35	46.32	48.66	48.75	51.11	23.47	8.35	13.73	7906	10106
	30	46.05	48.41	48.53	50.76	23.15	8.02	12.67	7821	9631
	25	45.08	48.14	48.32	50.18	22.76	7.69	11.57	7736	9076
	20	45.36	47.85	47.98	49.79	22.29	7.33	10.45	7651	8491
15	44.94	47.44	47.60	49.34	21.82	6.91	8.35	7530	7905	
10	44.48	46.99	47.27	48.53	21.36	6.49	5.97	7355	7319	
5	43.77	46.34	46.29	46.94	20.45	5.82	2.30	7030	6733	
MEAN		47.80	49.30	49.36	51.79	24.57	9.44	17.35	8126.31	12720.30
STANDARD DEVIATION		3.21	2.00	1.88	2.56	2.86	2.41	9.33	898.25	5746.71
NUMBER OF DISTRICTS		308	308	308	308	308	308	308	306	332



**DISTRICT NORMS**
**REGION 2**

INPUT ("INPUTS")					ACHIEVEMENT ("OUTPUTS")				
SCHOOL FINANCIAL RESOURCES					VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
STATE EQUALIZED VALUATION PER PUPIL	LOCAL REVENUE PER PUPIL	STATE SCHOOL AID PER PUPIL	K-12 INSTRUCTIONAL EXPENSE PER PUPIL	TOTAL CURRENT OPERATING EXPENSE PER PUPIL		READING	ENGLISH EXPRESSION	MATHEMATICS	
22400	529	396	562	732	53.70	53.79	53.59	54.60	53.80
18837	441	380	507	655	52.75	52.96	52.89	53.50	53.11
17231	393	368	480	628	52.16	52.36	52.27	52.84	52.36
15809	364	357	463	607	51.64	51.90	51.88	52.34	51.88
14871	343	347	445	595	51.24	51.60	51.49	51.80	51.52
14068	323	338	434	583	50.92	51.37	51.16	51.48	51.21
13265	307	329	426	571	50.62	51.11	50.94	51.18	50.99
12477	292	320	417	561	50.35	50.81	50.71	50.87	50.76
12003	276	311	409	552	50.11	50.47	50.37	50.56	50.50
11529	263	302	400	543	49.89	50.16	50.01	50.25	50.23
11054	251	293	394	534	49.67	49.91	49.69	50.00	49.96
10580	238	284	388	525	49.46	49.68	49.48	49.75	49.69
10106	226	278	382	518	49.24	49.45	49.27	49.52	49.44
9631	213	272	376	510	48.97	49.22	48.95	49.29	49.19
9076	200	266	371	502	48.70	48.98	48.63	48.99	48.95
8491	188	260	365	494	48.39	48.73	48.34	48.63	48.70
7905	175	254	355	479	47.98	48.38	47.90	48.18	48.29
7319	152	234	330	455	47.42	47.71	47.29	47.69	47.69
6733	130	207	282	368	46.33	46.70	46.30	46.70	46.78
12720.30	286.34	304.29	409.90	548.83	50.00	50.28	50.04	50.43	50.27
5746.71	119.28	58.72	76.41	97.30	2.25	2.17	2.28	2.46	2.17
332	332	332	332	332	310	310	310	310	310

GRADE 7

VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")

	VARIABLES ASSUMED TO INFLUENCE ACHIEVEMENT ("INPUTS")										
	SES	ATTITUDES AND ASPIRATIONS			SCHOOL HUMAN RESOURCES					STATE EQUALIZED VALUATION PER PUPIL	R P 3
	SOCIO ECONOMIC STATUS	A IMPORTANCE OF SCHOOL ACHIEVEMENT	B SELF PERCEPTION	C ATTITUDE TOWARD SCHOOL	PUPIL/TEACHER RATIO	AVERAGE YEARS TEACHING EXPERIENCE	PERCENTAGE OF TEACHERS WITH MASTERS OR ABOVE	AVERAGE TEACHER SALARY			
PERCENTILE DISTRIBUTION	95	52.70	51.74	52.20	54.57	29.92	14.25	37.31	9500	21350	
	90	51.82	51.36	51.07	54.07	28.62	13.67	33.86	9154	18412	
	85	51.19	50.99	50.61	53.49	27.81	13.08	31.61	8992	17485	
	80	50.68	50.65	50.32	53.12	27.00	12.50	27.64	8831	16559	
	75	50.25	50.36	50.14	52.89	26.70	12.10	25.45	8743	15632	
	70	49.52	50.13	49.99	52.61	26.40	11.69	24.40	8673	14825	
	65	49.19	49.93	49.85	52.29	26.10	11.34	23.35	8603	14038	
	60	48.98	49.73	49.70	51.92	25.80	11.03	22.23	8533	13250	
	55	48.76	49.57	49.54	51.59	25.50	10.72	20.80	8463	12483	
	50	48.47	49.41	49.38	51.31	25.20	10.42	19.40	8391	12133	
	45	48.20	49.24	49.20	51.07	24.88	10.13	18.35	8300	11783	
	40	47.96	49.09	48.98	50.86	24.52	9.83	17.30	8209	11433	
	35	47.72	48.94	48.77	50.62	24.16	9.54	16.35	8117	11083	
	30	47.49	48.79	48.58	50.36	23.79	9.24	15.72	8026	10733	
	25	47.25	48.35	48.39	50.00	23.43	8.93	15.09	7937	10383	
	20	46.88	47.99	48.18	49.59	23.07	8.62	14.46	7850	10033	
	15	46.41	47.63	47.89	49.23	22.50	8.04	13.83	7762	9683	
10	45.80	47.18	47.43	48.94	21.88	7.29	12.75	7675	8875		
5	45.27	46.30	46.87	47.85	21.26	6.54	11.18	7525	7562		
MEAN	48.74	49.32	49.33	51.31	25.18	10.46	21.34	8376.86	13245.34		
STANDARD DEVIATION	2.42	1.63	1.50	2.13	2.50	2.37	8.24	729.27	4317.55		
NUMBER OF DISTRICTS	104	104	104	104	105	105	105	105	105		

DISTRICT NORMS

III. TOWNS

INPUT ("INPUTS")					ACHIEVEMENT ("OUTPUTS")				
SCHOOL FINANCIAL RESOURCES					VOCABULARY	BASIC SKILLS			BASIC SKILLS COMPOSITE ACHIEVEMENT
STATE EQUALIZED VALUATION PER PUPIL	LOCAL REVENUE PER PUPIL	STATE SCHOOL AID PER PUPIL	K-12 INSTRUCTIONAL EXPENSE PER PUPIL	TOTAL CURRENT OPERATING EXPENSE PER PUPIL		READING	ENGLISH EXPRESSION	MATHEMATICS	
21350	423	371	510	687	54.71	53.73	54.22	54.69	54.44
18412	391	355	487	645	53.13	53.36	53.71	54.00	53.63
17485	368	342	472	625	52.70	53.06	53.27	53.46	53.20
16559	354	333	460	608	52.32	52.80	52.97	53.07	52.82
15632	340	323	448	598	51.95	52.56	52.59	52.83	52.48
14825	326	315	438	588	51.59	52.32	52.15	52.53	52.19
14038	315	309	433	578	51.27	51.98	51.95	52.20	51.97
13250	304	304	428	569	51.07	51.66	51.75	51.82	51.75
12483	293	299	422	561	50.88	51.42	51.53	51.61	51.51
12133	282	294	417	554	50.71	51.14	51.31	51.43	51.27
11783	272	289	412	547	50.56	50.77	51.02	51.26	51.05
11433	263	284	406	540	50.42	50.54	50.69	51.02	50.83
11083	254	279	401	532	50.27	50.32	50.36	50.78	50.60
10733	245	273	394	525	50.09	50.13	50.07	50.30	50.36
10383	236	268	388	517	49.90	49.94	49.81	49.85	50.08
10033	227	262	381	510	49.70	49.75	49.60	49.58	49.75
9683	211	257	375	502	49.44	49.46	49.39	49.36	49.46
8875	193	244	368	495	49.10	49.14	49.06	48.83	49.14
7562	176	229	362	480	48.31	48.77	48.48	48.06	48.77
13245.34	293.74	298.63	421.06	564.94	50.98	51.21	51.26	51.41	51.30
4317.55	80.17	44.74	43.25	58.98	1.76	1.68	1.89	2.13	1.80
105	105	105	105	105	105	105	105	105	105