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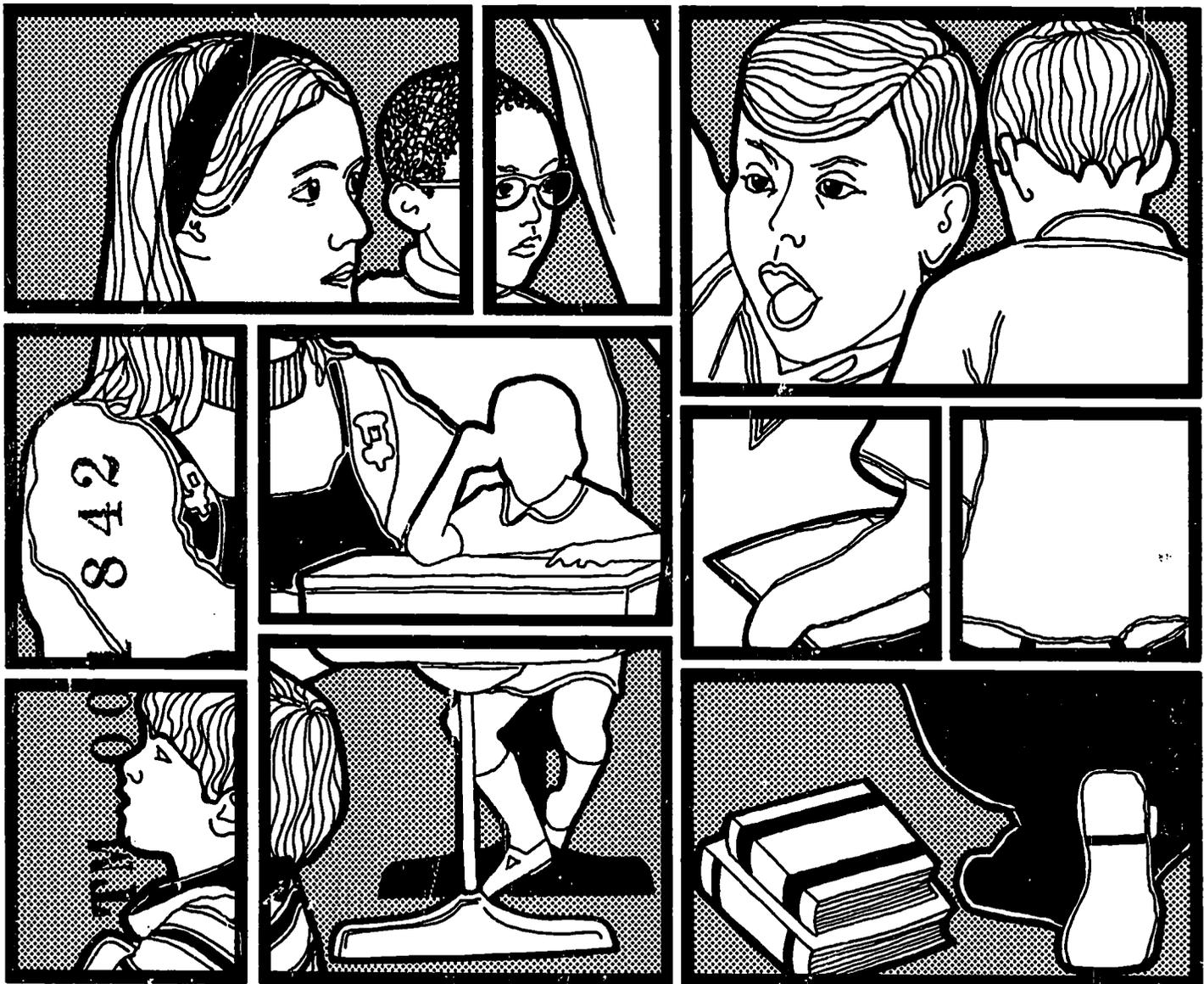
ABSTRACT

Third in the 1971-72 series, the report provides local school district officials with information regarding their own school districts and its schools as assessed by the Michigan Educational Assessment Program. The information can assist local officials in making decisions regarding the allocation of resources and the design of educational programs. It also provides a general indication of areas within the local school district which may need closer study. Specific evaluations of the areas so identified can be initiated by local school people. The three sections of the report present (1) precautions and statistical terms necessary for the interpretation of the educational assessment data; (2) listing of educational assessment measures and a description of the district and school reports; and (3) norm tables and education profiles. (LH)

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local district and school report: explanatory materials

THE THIRD REPORT OF THE 1971-72 MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM
MICHIGAN DEPARTMENT OF EDUCATION MAY 1972



State Board of Education

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LOCAL DISTRICT AND SCHOOL REPORT: EXPLANATORY MATERIALS

The third report of the 1971-72
Michigan Educational Assessment Program

Prepared by Research, Evaluation and Assessment Services

Michigan Department of Education

May, 1972

FOREWORD

The Michigan Educational Assessment Program was initiated by the State Board of Education, supported by the Governor, and enacted by the Legislature initially through Act 307 of the Public Acts of 1969 and subsequently under Act 38 of the Public Acts of 1970.

The purpose of this report, the third in the 1971-72 series, is to provide local school district officials with information regarding their own school district and its schools.

Assessment of educational needs is the third step of a six-step process adopted by the State Board of Education as a guide or model for improving Michigan education. The assessment information in this report can assist local district officials in making local decisions regarding the allocation of resources and the design of educational programs. It also provides a general indication of areas within the local school district which may need closer study. Specific evaluations of the areas so identified can be initiated by local school people.

Thanks are due to a large number of individuals and groups for making the Michigan Educational Assessment Program a reality and for supporting it through its first three years. Michigan educators have given particularly valuable assistance. The program was designed and administered by the Research, Evaluation and Assessment Services, Michigan Department of Education, with the assistance of Educational Testing Service of Princeton, New Jersey, and the counsel of several ad hoc advisory groups.

This report was prepared by Mr. Arthur Carstens, Dr. David Donovan, Mr. Robert Huyser, Dr. Philip Kearney, Mrs. June Olsen, and Dr. Daniel E. Schooley. Questions or requests for additional information relative to this report should be directed to the educational assessment staff.

John W. Porter
Superintendent of
Public Instruction

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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 to groups of other districts and schools throughout Michigan, and in their community type.¹ These profiles will also enable school officials and citizens to identify the levels of educational performance in selected basic skills areas and the levels of factors related to performance in their district and schools.

This explanatory booklet has three sections.

1. The first section states precautions which must be considered in using and interpreting the assessment data. It also defines certain statistical terms which are necessary for proper interpretations of the data.

2. The second section lists the assessment measures and introduces the computer printouts which contain the local district and school data.

3. The third section describes the norm tables that are provided with this report and explains how to construct and interpret district-level and school-level education profiles.

It also should be noted that Appendix A contains a listing of Michigan school districts classified according to community type; Appendix B contains the definitions of the educational assessment measures.

By careful reading of this explanatory booklet, local school officials will be able to construct and interpret education profiles for their own districts and schools.

¹The new community type definitions and classifications used in the 1971-72 Michigan Educational Assessment Program were determined in the fall of 1971 and employ 1970 U.S. Census data. These definitions and a list of districts by community type can be found in Appendix A of this booklet.

SECTION I

PRECAUTIONS AND STATISTICAL TERMS NECESSARY FOR THE INTERPRETATION OF THE EDUCATIONAL ASSESSMENT DATA

The data presented in the school and district printouts that accompany this booklet could help to identify pupil and school building educational needs and therefore, when used along with other needs assessment data, could lead to improved educational decision-making at the local level. This section of the report is divided into two parts. Part 1 states several precautions which must be taken in the construction and interpretation of the education profiles. Part 2 defines selected statistical terms which the reader will need to know in order to interpret the data.

Part 1

Precautions in the Use of Assessment Data

This part discusses the following precautions: relationships among assessment variables, relationships to local programs, value of other data, accuracy of district and school means, comparisons with 1970-71 educational assessment results, and construction of norm tables.

Relationships Among Educational Assessment Variables

Recent research indicates that certain characteristics of students' background--including their relative socioeconomic status, attitudes, and aspirations--are related to achievement. Research also indicates a moderate relationship between qualities of the instructional staff and achievement. In addition, available information has shown that the amount of financial resources spent by a district bears a relationship to achievement levels because schools with more financial resources are generally able to provide

a greater variety of instructional programs and support for the teaching staff.²

It must be understood that previous research has been conducted on large samples of school districts and schools. Therefore it must not be assumed that these relationships among achievement and other variables would be apparent in all individual district and school reports which are being provided to Michigan school officials. Moreover, it must be understood and emphasized that causal relationships have not been demonstrated, either by the previous research or by the Michigan Educational Assessment Program data.

Appropriateness of the Test to Local Programs

The educational assessment results provide a general measure of the basic skills achievement levels of each pupil compared to the basic skills achievement levels of all pupils throughout the state. In assembling the assessment battery an effort has been made to focus on the broader outcomes sought by all schools in reading, the mechanics of written English, and mathematics. However, regardless of how representative the test questions may be, they may not match the programs of every district and school equally well. A poor fit between a sub-test's content and a particular school's program in that subject may tend to lower the scores of pupils on the sub-test and on composite achievement, hence lowering the school's and district's mean scores as well. Conversely, a better-than-average fit may raise the scores and averages.

Value of Other Data

Care must be taken not to interpret educational assessment scores in isolation when comparing schools and school districts. It must be remembered that other relevant school and community data (e.g., population mobility, educational

²For 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).

attitudes and aspirations of the community, density and sparsity of population, etc.) are important in making inferences from the educational assessment results. Basic skills levels alone may not provide adequate comparisons of districts, especially if the districts are not similar on other factors.

Accuracy of District and School Means

District and school means can be subject to error for a variety of reasons. Two reasons in particular should be noted. First, when making interpretations of assessment data it is important to bear in mind the magnitude of possible errors that may creep into the measures used, thus lowering their ability to produce meaningful and trustworthy information. For example a district or school mean in reading will tend to contain little error if the group of pupils taking the test in a district or school is large and representative. But if the number of pupils tested in a district or school is small--say thirty--the absence of several good readers could have an effect on the mean reading score for that district or school. Lack of representativeness in the mean scores of a district or school may also arise from the variation in performance from grade to grade that may occur in small districts or schools. Thus, to the extent that the grades tested are not typical of the general school enrollment, the results will not faithfully reflect the performance of all pupils in the district or school.

A second potential source of error in district and school means is unreliability in the individual scores upon which the means are based. The basic skills achievement test scores reported in the Michigan Educational Assessment Program are accurate enough to warrant the reporting of individual pupil scores and thus produce highly reliable group scores. Socioeconomic status (SES) results, however, are group estimates and not sufficiently reliable

to produce dependable individual scores. The results have been regarded by measurement experts as sufficiently reliable for reporting district and school mean scores.

Safeguards Against Error

Great care is taken to prevent errors in preparing assessment reports. Steps are included to confirm the accuracy of scoring the tests, converting to standard scores, matching with data from state records, and mailing reports. Although these steps prevent most errors, a remote possibility exists that a specific error will escape detection. If you find reason to question any part of your report, please contact a member of the Assessment Program staff. Because of space limitations, it is impossible for Educational Testing Service to retain answer sheets indefinitely. Therefore, questions about the accuracy of means based on pupil scores must be raised within nine months after the testing.

Comparisons with Previous Educational Assessment Results

The educational assessment data contained in this report should be compared with last year's assessment data only in terms of rank among other districts and schools. A future educational assessment report will present equated standard scores which will be directly comparable to the standard scores obtained in previous years of the Michigan Educational Assessment Program.

Construction of Norm Tables

The prime reference group for interpreting district mean scores and other data aggregated at the district level should be similar data on all K-12 districts in the state as reflected in the district norm tables. Similarly, the prime reference group for interpreting school mean scores and other data aggregated at the school level should be similar data on all schools testing at the appropriate grade level in Michigan K-12 districts as reflected in the school

norm tables.

In constructing the education profiles, care should be taken not to use school mean scores with district norm tables or district mean scores with school norm tables. Since the norming populations are different, a mean score falls at a different percentile on the school norm table than on the district table. Thus the district's or school's education profile could be inadvertently misrepresented and interpreted incorrectly. Furthermore, only the district norm table provides information for interpreting all of the data aggregated at the district level.

Additional understanding of district and school means can be obtained by also consulting a table of pupil norms. With a table of pupil norms one can answer the question: "Where would a pupil rank among other pupils if he had a standard score equal to our district or school mean?" Statewide pupil norm tables have been prepared for this purpose, but to prevent possible misunderstanding as to their intended use they are not provided routinely. They are, however, available on request from Research, Evaluation and Assessment Services. Their availability is experimental, in the hope that their use by local school officials will illuminate rather than confuse the meaning of the test results.

Part 2

Statistical Terms

Statistical terms used in this report are defined below to assist the reader in interpreting the data. These definitions are substantively the same as used in prior educational assessment program reports.

Mean

A mean score is an average of a set of scores and is obtained by adding

all of the scores in the set and dividing the sum by the total number of scores.

Median

The median is that point in a range of scores above which are exactly half the scores and below which are the other half. Thus, the median is that point in the "middle" of a distribution of scores.

Standard Deviation

In addition to establishing a mean for a distribution of scores, it is often useful to know the "spread" of the scores. Two groups of scores could have the same mean but the "spread" still be quite different. For example, one district might have pupils whose scores on composite achievement cluster close together and have a mean of fifty. In this district, the "spread" of scores would be small. Another district might have a number of pupils with high scores and a number of pupils with low scores and still have a mean of fifty. In this district, however, the "spread" of scores would be large.

One common way of indicating the "spread" of scores is to calculate a standard deviation. The standard deviation will indicate how much "spread" there is in the distribution of scores on which it was calculated. Usually about two-thirds of the scores will fall between one standard deviation above and one standard deviation below the mean. The larger the standard deviation, the larger will be the "spread" or variability in the scores of a distribution. In the example above, the district with the mixture of high and low scores would have a larger standard deviation than would the district with scores that fell close together. It should also be noted that a distribution of district mean scores has a smaller standard deviation than a distribution of school or pupil scores.

Standard Scores

Standard scores are scores that are derived from "raw" or response scores using the mean and standard deviation. In the Michigan Educational Assessment Program, standard scores were developed so that a pupil's scores on the different tests could be expressed in similar units for ease in comparison. Pupil scores are expressed in units that yield a mean of 50 and a standard deviation of ten when computed for all public school pupils at the same grade level in 1971-72. For example, a pupil with a standard score of 40 on reading was one standard deviation below the state mean; a pupil with a standard score of 60 was one standard deviation above the mean; a pupil with a standard score of 65 was one and one-half standard deviations above the mean, and so forth.

Percentile Distribution

A percentile distribution is a ranking of entries (e.g., scores, ratios, means, etc.) which is divided into 100 equal parts. Each part has an equal number--one percent--of the total number of entries. For example, a district mean score at the 50th percentile in a distribution of districts mean scores would be at the median--or middle--of the distribution. A district score at the 75th percentile would be above 75 percent--and below 25 percent--of the district mean scores in the distribution. In a typical distribution, 50 percent of the scores are above--and 50 percent are below--the median.

Decile Distribution

A decile distribution is a ranking of scores which is divided into ten equal parts. Each part has an equal number--ten percent--of the total number of scores. When deciles are computed on a statewide basis, ten percent of the

the state's pupil will fall into each decile. Pupils in the first decile on composite achievement constitute the lowest scoring ten percent of the pupils tested throughout the state. Pupils in the tenth decile on composite achievement constitute the highest ten percent of the pupils tested. District and school decile distributions are valuable because they can show whether the scores of pupils in the district or school are concentrated in one part of the score distribution or another, or scattered more evenly throughout the range of possible decile scores.

SECTION II

LISTING OF EDUCATIONAL ASSESSMENT MEASURES AND A DESCRIPTION OF THE SCHOOL AND DISTRICT REPORTS

This section consists of two parts. Part 1 lists the educational assessment measures which are presented in this booklet. (A definition of these assessment measures is included in Appendix B.) Part 2 presents a description of the Local School and District Reports which accompany this document.

Part 1

Listing of Educational Assessment Measures

For the reader's convenience, the twenty-two measures reported in the Michigan Educational Assessment Program are listed in Table I. These measures are grouped into six major categories: (A) Human Resources; (B) District Financial Resources; (C) Student Background; (D) Dropout Rate; (E) Achievement; and (F) Size Measures. Those measures which are newly added since the 1970-71 educational assessment program are indicated by an asterisk (*). Measures substantially changed since the 1970-71 program are indicated by a square (□). Sources of the information used to compute each measure are identified in Appendix B.

Table I lists the twenty-two measures which are reported at the district level. Table I also identifies the fifteen measures which are reported at the school level. The remaining seven measures were unavailable at the school level and could only be reported at the district level.

Part 2

Description of the District and School Reports

As indicated earlier there are six categories and twenty-two measures reported in the 1971-72 Michigan Educational Assessment Program. The following

TABLE I
A LIST OF THE TWENTY-TWO MEASURES REPORTED
AT THE DISTRICT OR SCHOOL LEVELS

MEASURES	DISTRICT	SCHOOL
A. Human Resources		
(1) Professional Instructional Staff per 1,000 Pupils <input type="checkbox"/>	X	X
(2) Teachers per 1,000 Pupils <input type="checkbox"/>	X	X
(3) Average Years Teaching Experience <input type="checkbox"/>	X	X
(4) Percent of Teachers with Master's Degree or Above	X	X
(5) Average Contracted Salary per Teacher <input type="checkbox"/>	X	X
B. District Financial Resources		
(6) State Equalized Valuation per Resident Member (1970-71)	X	
(7) Local Revenue per Pupil (1970-71)	X	
(8) State School Aid per Pupil (1970-71)	X	
(9) K-12 Instructional Expense per Pupil (1970-71)	X	
(10) Elementary Instructional Expense per Pupil (1970-71)*	X	
(11) Total Current Operating Expense per Pupil (1970-71)	X	
C. Student Background		
(12) Percent of Racial-Ethnic Minority Students	X	X
(13) Composite Estimate of Socioeconomic Status <input type="checkbox"/>	X	X
D. Dropout Rate		
(14) School Dropout Rate (1970-71) <input type="checkbox"/>	X	
E. Achievement (Provided separately for grades 4 and 7)		
(15) Word Relationships	X	X
(16) Reading	X	X
(17) Mechanics of Written English	X	X
(18) Mathematics	X	X
(19) Basic Skills Composite Achievement	X	X
F. Size Measures		
(20) Grade 4 Membership*	X	X
(21) Grade 7 Membership*	X	X
(22) Total Membership <input type="checkbox"/>	X	X

*This measure is new since the 1970-71 educational assessment program

This measure has been substantially changed since the 1970-71 educational assessment program.

NOTE: Undated measures are based on 1971-72 data.

description uses Michville as a hypothetical school district and Able as a hypothetical school building within the Michville district. The illustrative tables in this report contain fictitious data for this district and school. The measures are arranged in the six groups shown in Table I. Similar categories are used throughout the report.

In the Local District Report (Table II) most measures are shown as either simple ratios, years, percentages, or dollars. The 13th measure, composite estimate of socioeconomic status, is expressed as an estimated average standard score. Measures 15 through 19 make up the Achievement category and summarize the scores of the pupils tested throughout the district. Shown for each measure are the mean of the pupil scores in the district, their standard deviation, and the number of pupils tested. These statistics are reported for both the fourth and seventh grades. The last three measures, 20 through 22, are Size Measures and are reported as head counts. They are located below the district name, code number and community type on the right side of the report form. At the bottom of the table are decile distributions of composite achievement for all pupils in the district who completed the battery.

The format of the Local School Report (Table III) is like that of the Local District Report. Lacking financial resource and dropout measures, the Local School Report contains only fifteen measures. The Size Measures for the school appear on the right, below the school and district name and code numbers. Again, some measures are expressed as ratios and percentages, while the five Achievement Measures are described by the mean score, standard deviation and number of pupils tested. Like the district report, the Local School Report concludes with a decile distribution of composite achievement scores by grade for the pupils who completed the battery.

1971-72 Michigan Educational Assessment Program LOCAL DISTRICT REPORT

SCHOOL DISTRICT MICHVILLE PUBLIC SCHOOL CODE NUMBER 86-010

COMMUNITY TYPE III TOWNS

SIZE MEASURES: Total Membership 1,096

TABLE II

DISTRICT MEANS, STANDARD DEVIATIONS, AND NUMBER TESTED									
GRADE FOUR					GRADE SEVEN				
Mean	Standard Deviation	Number of Pupils	Mean	Standard Deviation	Number of Pupils	Mean	Standard Deviation	Number of Pupils	Number of Pupils
49.2	9.3	89	50.6	8.7	85				
48.5	8.5	89	49.2	9.3	85				
49.3	9.3	87	48.0	9.5	85				
50.6	8.5	87	48.2	10.3	85				
49.8	9.2	87	48.4	8.5	85				

HUMAN RESOURCES	
Professional instructional staff per 1,000 pupils <input type="checkbox"/>	54.6
Teachers per 1,000 pupils <input type="checkbox"/>	43.2
Average years teaching experience <input type="checkbox"/>	9.4 Yrs
Percent of teachers with master's degree or above	9.7%
Average contracted salary per teacher <input type="checkbox"/>	\$9,483
DISTRICT FINANCIAL RESOURCES	
State equalized valuation per resident member (1970-71)...	\$15,590
Local revenue per pupil (1970-71)	346
State school aid per pupil (1970-71)	290
K-12 instructional expense per pupil (1970-71)	381
Elementary instructional expense per pupil (1970-71)*	330
Total current operating expense per pupil (1970-71)	598
STUDENT BACKGROUND	
Percent of racial-ethnic minority students	28.2%
Composite estimate of socioeconomic status <input type="checkbox"/>	49.6
DROPOUT RATE	
School dropout rate (1970-71) <input type="checkbox"/>	3.3
ACHIEVEMENT (PROVIDED SEPARATELY FOR GRADES 4 AND 7)	
Word relationships	.....
Reading	.....
Mechanics of written English	.....
Mathematics	.....
Basic skills composite achievement	.....
DISTRIBUTIONS OF COMPOSITE ACHIEVEMENT SCORES BY DECILE	
Number of grade 4 scores	.....
Number of grade 7 scores	.....

DECILES

1	2	3	4	5	6	7	8	9	10
9	11	10	8	7	5	8	7	8	14
10	8	10	12	9	8	7	6	7	8

* This measure is new since the 1970-71 educational assessment program
 This measure has been substantially changed since the 1970-71 educational assessment program.

1971-72 Michigan Educational Assessment Program

LOCAL SCHOOL REPORT

SCHOOL ABLE ELEMENTARY SCHOOL CODE 3487
 DISTRICT MICHVILLE PUBLIC SCHOOL CODE 86-010
 COMMUNITY TYPE III TOWNS

SIZE MEASURES: Total Membership 307

Grade 4 membership* 50 Grade 7 membership*

TABLE III

SCHOOL MEANS, STANDARD DEVIATIONS, AND NUMBER TESTED									
GRADE FOUR					GRADE SEVEN				
Mean	Standard Deviation	Number of Pupils	Mean	Standard Deviation	Number of Pupils	Mean	Standard Deviation	Number of Pupils	Number of Pupils
50.1	9.7	49							
48.6	8.5	49							
50.4	8.3	49							
48.6	7.5	49							
49.7	8.8	49							

DECILES									
1	2	3	4	5	6	7	8	9	10
5	6	4	5	2	4	5	4	5	9

HUMAN RESOURCES	
Professional instructional staff per 1,000 pupils <input type="checkbox"/>	48.8
Teachers per 1,000 pupils <input type="checkbox"/>	38.8
Average years teaching experience <input type="checkbox"/>	9.1 Yrs
Percent of teachers with master's degree or above	6.0%
Average contracted salary per teacher <input type="checkbox"/>	\$9,200
STUDENT BACKGROUND	
Percent of racial-ethnic minority students	39.1%
Composite estimate of socioeconomic status <input type="checkbox"/>	47.2
ACHIEVEMENT (PROVIDED SEPARATELY FOR GRADES 4 AND 7)	
Word relationships	.....
Reading	.....
Mechanics of written English	.....
Mathematics	.....
Basic skills composite achievement	.....
DISTRIBUTIONS OF COMPOSITE ACHIEVEMENT SCORES BY DECILE	
Number of grade 4 scores	.....
Number of grade 7 scores	.....

* This measure is new since the 1970-71 educational assessment program.
 This measure has been substantially changed since the 1970-71 educational assessment program.

Decile Distributions of Composite Achievement Scores

Information about each district's and school's composite achievement scores is presented in the form of decile distributions to show how many of the fourth and seventh grade pupils earned composite achievement scores in each decile of a statewide tabulation of pupils' scores. These decile distributions show how many of each district's and school's pupils scored in each of ten composite achievement levels. For most districts and schools, more or less than ten percent will actually fall into each decile. For example, districts and schools whose average scores are higher than the state average will tend to find larger percentages of their pupils falling into the higher deciles, and correspondingly smaller percentages into the lower deciles. In any event, the clustering of composite achievement scores for a grade will often prove to be of interest and of possible value in program planning.

SECTION III

NORM TABLES AND EDUCATION PROFILES

This section is divided into two parts. Part 1 describes the norm tables which accompany this booklet. Part 2 explains how the data presented in the district and school reports may be plotted onto the norm tables to develop district-level and school-level education profiles.

Part 1

Explanation of the Norm Tables

Local school officials will receive a total of six norm tables. District norm tables include test data from both the fourth grade and seventh grade for the first time this year. Separate school-level norm tables have been prepared for the fourth and seventh grades. The district and school norm tables are based on available statewide data or community type data for K-12 districts in operation as of January, 1972, as follows:

District Norm Tables

- Michigan, Grades 4 and 7
- Your community type, Grades 4 and 7

School Norm Tables

- Michigan, Grade 4
- Your community type, Grade 4
- Michigan, Grade 7
- Your community type, Grade 7

Data from the non K-12 districts have been eliminated from the computation of district and school norms this year. This step was taken because data from non K-12 districts have proved sometimes to be erratic or incomplete, particularly in the measures of human and financial resources, and their test results

were based on small numbers of pupils. In the past the erratic influence of means based on small numbers has been reduced by eliminating from the norms mean scores for districts and schools testing fewer than five pupils. As a result non K-12 districts have not been fully represented in the norms in the past. It seems preferable to exclude them entirely rather than to have them reflected in some columns and partially or not at all in others. Assessment results from these districts will continue to be reported in the Michigan Educational Assessment Program as they have in the past.

Please note that Tables IV and V are constructed with fictitious data and these tables should not be used by the local districts for plotting education profiles. Norm tables constructed with actual data are supplied on separate sheets to each district.

Table IV provides an example of a norm table constructed with fictitious statewide, district-level fourth and seventh grade data. Column 2 on this table indicates that the statewide median (50th percentile) at the district level for teachers per 1,000 pupils was 41.7. The 75th percentile was 45.0. In the bottom three rows of the table are the mean score, standard deviation, and the number of districts used in the preparation of each distribution. For example, the district-level mean for teachers per 1,000 pupils was 42.0, the standard deviation was 5.2, and 528 districts were used in determining these values. It should be noted that the numbers of districts in all columns are not equal. Variations are due to the unavailability of data for certain districts and to the exclusion from the norms of districts that tested fewer than five pupils.

TABLE
DISTRICT NORMS

	HUMAN RESOURCES					DISTRICT FINANCIAL RESOURCES						STUDENT BACKGROUND	
	(1) PROF. INSTRUCTIONAL STAFF PER 1,000 PUPILS	(2) TEACHERS PER 1,000 PUPILS	(3) AVERAGE YEARS TEACHING EXPERIENCE	(4) PERCENT TEACHERS WITH MASTERS DEGREE	(5) AVERAGE CONTRACTED SALARY OF TEACHERS	(6) SEV PER RESIDENT MEMBER (1970-71)	(7) LOCAL REVENUE PER PUPIL (70-71)	(8) STATE SCHOOL AIO PER PUPIL (70-71)	(9) K-12 INSTRUCTIONAL EXPENSE PER PUPIL (1970-71)	(10) ELEMENTARY INSTRUCTIONAL EXPENSE PER PUPIL (1970-71)	(11) TOTAL CURRENT OPERATING EXPENSE PER PUPIL (1970-71)	(12) PERCENT OF RACIAL-ETHNIC MINORITY STUDENTS	(13) COMPOSITE ESTIMATE OF SOCIO ECONOMIC STATUS
95	60.2											21.8	
90	55.2											10.4	
85	53.2											7.6	
80	51.5	46.1				19112						5.4	
75	50.5	45.0				17548						3.7	
70	49.4	44.2			10946	16338	419					3.1	
65		43.3			9833	15280	396					2.8	
60		42.9	10.7		9728	14468	374					2.0	50.2
55		42.1	10.3		9615	13487	353					1.4	49.8
50		41.7	9.9	18.9	9502	12837	338						49.6
45			9.5	17.6	9367		320			636			49.3
40			9.1	16.4	9222		301	324		625			49.0
35			8.7	14.8	9013			317	430	416	614		48.6
30				13.5				308	422	410	592		48.3
25				11.2				295	414	402	583		
20				9.7				280	403	384	571		
15				6.3				261	390	371	555		
10				1.8				226	377	346	526		
5									332	291			
MEAN	46.5	42.0	9.6	20.1	9116	15027	382	336	458	425	650	4.5	49.7
STANDARD DEVIATION	6.1	5.2	3.5	12.5	1251	11623	201	87	96	83	142	10.5	2.9
NUMBER OF DISTRICTS	528	528	528	528	528	528	528	528	528	528	528	528	520

FICTITIOUS DATA

IV

M I C H I G A N

DROPOUT RATE	ACHIEVEMENT (DISTRICT MEANS)										SIZE MEASURE	
	GRADE 4					GRADE 7						
(14)	(15)	(16)	(17)	(18)	(19)	(15)	(16)	(17)	(18)	(19)	(22)	
SCHOOL DROPOUT RATE (1970-71)	WORD RELATIONSHIPS	READING	MECHANICS OF WRITTEN ENGLISH	MATHEMATICS	BASIC SKILLS COMPOSITE ACHIEVEMENT	WORD RELATIONSHIPS	READING	MECHANICS OF WRITTEN ENGLISH	MATHEMATICS	BASIC SKILLS COMPOSITE ACHIEVEMENT	TOTAL MEMBERSHIP	
												95
												90
												85
												80
												75
												70
												65
												60
												55
												50
												45
											1704	40
4.2	49.9		50.1	50.4	50.5	50.3	50.3	50.3	49.9	50.2	1568	35
3.8	49.7	50.3	49.7	50.1	50.1	50.0	49.9	50.0	49.7	49.8	1262	30
3.5	49.5	49.9	49.4	49.7	49.8	49.7	49.7	49.6	49.5	49.4	1118	25
3.2	49.2	49.7	49.1	49.3	49.5	49.5	49.4	49.2	49.2	49.0	873	20
2.8	48.8	49.1	48.8		49.1	49.0	49.0	48.8	49.0	48.7	706	15
2.4	48.1	48.9	48.2		48.5		48.4	48.3	48.6	48.0	540	10
	47.1	47.7	47.4		47.8		47.6	47.5	48.1	47.5	302	5
		46.6						46.3	46.5	46.7		
5.2	50.6	51.1	50.7	51.1	51.0	50.9	50.9	50.9	51.0	51.0	3551	
2.8	2.9	2.7	2.9	2.9	2.7	2.8	2.8	2.9	2.8	2.7	11503	
521	516	516	516	516	516	520	520	520	520	520	528	

FICTITIOUS DATA

PERCENTILE DISTRIBUTION

Table V provides an example of a norm table constructed with fictitious statewide school-level fourth grade data.

Explanation of the Michville District-Level Education Profile

The line on Table IV is the fourth and seventh grade district-level education profile for Michville. The numbers that have been plotted are the Michville district-level means on the educational assessment measures. This district-level education profile for Michville (Table IV) was constructed as follows:

Step One. Michville's professional instructional staff per 1,000 pupils, 54.6, was taken from the Local District Report (see Table II).

Step Two. The point in the professional instructional staff per 1,000 pupils column of the district-level norm table corresponding to 54.6 was marked (see Table IV). Michville's rank on this measure was found to fall between 53.2 and 55.2, or at about the 88th percentile of the distribution of district means.

Step Three. Steps one and two were repeated for each measure listed in the Michville District Report. For example, Table IV shows that Michville had a score of 43.2 (about the 63rd percentile) on teachers per 1,000 pupils and 9.4 (about the 43rd percentile) on average years teaching experience.

Step Four. A line was drawn connecting the points plotted on the norm table (see Table IV). This line represents the way in which Michville means compare with the statewide distribution on each measure.

Explanation of the Michville School-Level Education Profiles

Michville's school-level education profiles (Table V) were prepared with information from the educational assessment measures gathered at the school building level (see Table I for the listing of school-level measures). Similar to the district data in Table IV, the numbers of schools in all columns are not

TABLE V

SCHOOL NORMS MICHIGAN

GRADE	HUMAN RESOURCES					STUDENT BACKGROUND		ACHIEVEMENT (SCHOOL MEANS)					SIZE MEASURE
	(1)	(2)	(3)	(4)	(5)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(22)
	PROF. INSTRUCTIONAL STAFF PER 1,000 PUPILS	TEACHERS PER 1,000 PUPILS	AVERAGE YEARS TEACHING EXPERIENCE	PERCENT TEACHERS WITH MASTERS DEGREE	AVERAGE CONTRACTED SALARY OF TEACHERS	PERCENT OF RACIAL-MINORITY STUDENTS	COMPOSITE ESTIMATE OF SOCIO-ECONOMIC STATUS	WORD RELATIONSHIPS	READING	MECHANICS OF WRITTEN ENGLISH	MATHEMATICS	BASIC SKILLS COMPOSITE ACHIEVEMENT	TOTAL MEMBERSHIP
95	60.2					95.1							
90	54.4					40.8							
85	52.1					18.3							
80	49.8					10.2							
75	48.3					6.8							
70	47.2	41.2			9919	4.9							
65	45.9	40.2	11.5		9767	3.7							
60	44.8	39.5	10.9		9614	3.1		51.3		51.5			
55		38.9	10.3		9462	2.6		50.9		51.1			
50		38.3	9.8		9370			50.5		50.6		50.8	367
45		37.7	9.3		9163			50.0		50.1		50.4	345
40		37.3	8.8		9011		48.9	49.6	50.1	49.7	50.0	49.9	326
35			8.2	13.7	8868		48.4	49.2	49.6	49.2	49.5	49.5	306
30			7.6	11.2			48.0		49.0	48.7	48.8	48.9	283
25			7.1	9.8			47.3		48.3	48.1	48.1	48.4	259
20				7.4			46.5		47.5		47.3		
15				3.1			45.6		46.2		46.0		
10				0.3			44.3						
5				0.0			42.6						
MEAN	43.3	38.6	8.5	20.5	8929	12.0	49.9	50.3	50.4	50.3	50.4	50.4	407
STANDARD DEVIATION	6.4	5.0	3.3	15.4	1110	25.7	4.5	4.1	4.1	4.1	4.4	4.1	193
NUMBER OF SCHOOLS	2415	2415	2415	2415	2415	2415	2402	2406	2406	2406	2406	2406	2415

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equal. Variations are due to the unavailability of data for certain schools and to the exclusion from the norms of schools that tested fewer than five pupils. The procedures used were as follows:

Step One: Able Elementary School's figure on professional instructional staff per 1,000 pupils, 48.8, was located on the Local School Report (see Table III).

Step Two: The appropriate point in the professional instructional staff per 1,000 pupils column of the statewide school norm table was found and marked (see Table V). The figure 48.8 was found to fall between 48.3 and 49.8, or near the 77th percentile.

Step Three: Steps one and two were repeated for the means on each variable listed for the Able Elementary School.

Step Four: A line was drawn on the school norm table connecting the points established in steps one, two and three. This line is the profile for Able Elementary School as compared to statewide school norms. The profiles of additional schools may be shown on the same table.

In the same manner, profiles can be drawn to compare Michville district and its schools with other districts and schools of the same community type, by using the community type norm tables provided.

Part 2

Uses of Education Profiles

The introduction to this booklet stated that construction of education profiles would enable school officials and citizens to identify the levels of educational performance and the levels of factors related to performance in a district and its schools in terms of the state as a whole, and in terms of other districts and schools of the same community type. Tables IV and V provide this information for Michville.

As an example of the potential uses of these data, Table IV indicates that fourth grade pupils in Michville school district, scored on the average, low on mathematics. This information could be used by the Michville school district officials as a general indicator of a subject area that might need closer examination. An analysis of the mathematics program (i.e., the district's delivery system for mathematics) would be conducted by the local school district. The results of the local analysis hopefully would indicate appropriate curricular and resource adjustments.

The construction of education profiles similar to those constructed for Michville will enable school officials and citizens throughout Michigan to gain a greater understanding of the relative standing of their district and its schools. This information along with other information will be helpful to local school officials as they make decisions about the allocation of educational resources and the design of curricula.

APPENDIX A

LISTING OF MICHIGAN SCHOOL DISTRICTS CLASSIFIED BY MAJOR COMMUNITY TYPE SERVED

This list contains 620 school districts that were in existence as of September 30, 1971, classified by community type. Of these, 530 were organized to operate K-12 programs. The remainder, which are denoted by an asterisk (*), were not organized to operate a K-12 program in 1971-72.

DEFINITIONS

1. Metropolitan Core Cities:

Communities are classified as Metropolitan Core Cities if they meet at least one of the following criteria:

- (a) the community is the central city of a Michigan Standard Metropolitan Statistical Area; or
- (b) the community is an enclave within the central city of a Michigan Standard Metropolitan Statistical Area.
- (c) the community was previously classified as a Metropolitan Core City.

Note: The U.S. Census Bureau defines the central city of a Standard Metropolitan Statistical Area as those cities named in the titles of the Standard Metropolitan Statistical Area. (See U.S. Department of Commerce, Statistical Abstract of the United States [Washington: Bureau of the Census, 1968], p. 2.)

2. Cities:

Communities are classified as Cities if they have a population of 10,000 or more and have not been classified as a Metropolitan Core City or Urban Fringe.

3. Towns:

Communities are classified as Towns if they have a population of 2,500 to 9,999. Rural communities impacted by large military installations nearby are also classified as Towns.

4. Urban Fringe:

Communities are classified as Urban Fringe, regardless of their size, if they meet at least one of the following criteria:

- (a) the mailing address of the community is a Metropolitan Core City or a City unless it is on a RFD Route; or
- (b) the community is within ten miles of the center of a Metropolitan Core City; or
- (c) the community is within five miles of the center of a city.

5. Rural

Communities are classified as Rural if they have a population of less than 2,500, or if their address is an RFD Route of a Town, City, Urban Fringe, or Metropolitan Core, and they lie outside the perimeter defined above under Urban Fringe.

NOTE: No communities in Wayne County are classified rural.

These definitions of community types were arrived at in the Fall of 1971. They have been developed to make the classification as objective and consistent as possible without altering the basic principles of classification. All classifications have been made using 1970 census data and the most recent address available for each district.

The numbers preceding school district names are Department of Education county and school district code numbers. The first two digits refer to the county, and the remaining three digits refer to the school district within the county. A key to the county code numbers follows the lists.

COMMUNITY TYPE I - METROPOLITAN CORE

81-010	Ann Arbor City S D	38-170	Jackson Union S D
13-020	Battle Creek City Schs	39-010	Kalamazoo City S D
09-010	Bay City S D	33-020	Lansing Pub S D
82-010	Detroit City S D	61-010	Muskegon City S D
25-010	Flint City S D	61-020	Muskegon Heights City S D
41-010	Grand Rapids City S D	63-030	Pontiac City S D
82-060	Hamtramck City Schs	73-010	Saginaw City S D
82-070	Highland Park City Schs		

COMMUNITY TYPE II - CITY

46-010	Adrian City S D	56-010	Midland City S D
13-010	Albion City Schs	58-010	Monroe City Pub Schs
04-010	Alpena City S D	50-160	Mt Clemens Comm S D
11-010	Benton Harbor City S D	37-010	Mt Pleasant City S D
54-010	Big Rapids Public Schs	11-300	Niles Comm S D
63-010	Birmingham City S D	78-110	Owosso Pub S D
21-010	Escanaba Area Pub Schs	82-100	Plymouth Comm S D
82-050	Garden City S D	74-010	Port Huron City S D
70-010	Grand Haven City S D	82-130	Romulus Comm Schs
70-020	Holland City S D	17-010	Sault Ste Marie Area Schs
82-080	Inkster City S D	11-020	St. Joseph City S D
82-095	Livonia Public Schs	28-010	Traverse City Pub S D
52-170	Marquette City S D	82-170	Wyandotte City S D
55-100	Menominee Area Pub Sch		

COMMUNITY TYPE III - TOWN

74-030	Algonac Comm S D	18-010	Clare Pub Schs
03-030	Allegan Pub Schs	12-010	Coldwater Comm Schs
29-010	Alma Pub Schs	*32-270	Colfax Twp S D 2
50-040	Anchor Bay S D	*32-290	Colfax Twp S D 6
32-010	Bad Axe Pub Schs	14-020	Dowagiac Union Schs
34-080	Belding Area S D	78-030	Durand Area Schs
27-010	Bessemer City S D	74-050	East China Twp S D
46-040	Blissfield Comm Schs	23-050	Eaton Rapids Pub Schs
22-030	Breitung Twp S D	25-100	Fenton Area Pub Schs
11-310	Buchanan Pub S D	82-180	Flat Rock Comm Schs
83-010	Cadillac Area Pub Schs	73-190	Frankenmuth S D
79-020	Caro Comm Schs	62-040	Fremont Pub S D
15-050	Charlevoix Pub S D	69-020	Gaylord Comm Schs
23-030	Charlotte Pub Schs	82-290	Gibraltar S D
16-015	Cheboygan Area Schs	21-025	Gladstone Area Pub S D
81-040	Chelsea S D	59-070	Greenville Pub Schs
73-110	Chesaning Union Schs	52-040	Gwinn Area Comm Schs
*32-040	Church Sch	31-010	Hancock City S D

COMMUNITY TYPE III con't

80-120	Hartford Pub S D	35-010	Oscoda Area Schs
08-030	Hastings Pub S D	03-020	Otsego Pub Schs
30-020	Hillsdale Comm Schs	63-110	Oxford Area Comm S D
63-210	Holly Area S D	80-160	Paw Paw Pub S D
47-070	Howell Pub Schs	24-070	Petoskey S D
46-080	Hudson Area Schs	03-010	Plainwell Comm Schs
70-190	Hudsonville Pub S D	31-110	Portage Twp S D
82-340	Huron S D	34-110	Portland Pub S D
63-220	Huron Valley Schs	50-180	Richmond Comm Schs
34-010	Ionia City S D	63-260	Rochester Comm S D
22-010	Iron Mountain City S D	71-080	Rogers Union S D
27-020	Ironwood Area Schs	50-190	Romeo Comm Schs
52-180	Ishpeming Pub S D	17-110	Rudyard Twp Sch
29-060	Ithaca Pub Schs	*32-610	Sigel Twp S D 3
07-040	L'Anse Twp S D	80-010	South Haven Pub Schs
25-200	Lake Fenton Sch	63-240	South Lyon Comm Schs
63-230	Lake Orion Comm S D	41-240	Sparta Area Schs
44-010	Lapeer Pub Schs	49-010	St Ignace City S D
*32-390	Lincoln Twp S D 1 (closed)	19-140	St Johns Pub Schs
41-170	Lowell Area Schs	29-100	St Louis Pub Schs
53-040	Ludington Area S D	75-010	Sturgis City S D
51-070	Manistee City Schs	46-140	Tecumseh Pub Schs
77-010	Manistique Area Schs	75-080	Three Rivers Pub S D
13-110	Marshall Pub Schs	15-025	Twin Valley Pub S D
33-130	Mason Pub Schs	82-430	Van Buren Pub Schs
81-100	Milan Area Schs	79-150	Vassar Pub Schs
*49-070	Moran Twp S D	27-070	Wakefield Twp S D
02-070	Munising Pub Schs	63-290	Walled Lake Cons S D
52-090	Negaunee S D	61-240	White Hall Dist Schs
11-200	New Buffalo Area S D	33-230	Williamston Comm Schs
22-025	Norway Vulcan Area Schs	70-350	Zeeland Pub S D
63-100	Novi Comm S D		

COMMUNITY TYPE IV - URBAN FRINGE

82-020	Allen Park Pub Schs	11-210	Brandywine Pub S D
25-130	Atherton Comm S D	73-180	Bridgeport Comm S D
63-070	Avondale S D	73-080	Buena Vista S D
09-030	Bangor Twp Schs	56-020	Bullock Creek S D
19-100	Bath Comm Schs	25-080	Carman S D
58-030	Bedford Pub S D	73-030	Carrollton S D
25-240	Beecher S D	50-010	Center Line Pub Schs
25-060	Bendle Pub S D	82-025	Cherry Hill S D
25-230	Bentley Comm S D	50-080	Chippewa Valley Schs
63-050	Berkley City S D	*52-020	Chocolay Twp S D
63-080	Bloomfield Hills S D	63-150	City of Troy S D

COMMUNITY TYPE IV - URBAN FRINGE con't

63-090	Clarenceville S D	11-030	Lakeshore S D
63-270	Clawson City S D	13-090	Lakeview Cons S D
50-070	Clintondale Pub Schs	50-130	Lakeview Pub Schs
39-030	Comstock Pub Schs	63-280	Lamphere Pub Schs
41-080	Comstock Park S D	81-070	Lincoln Cons S D
78-100	Corunna Pub S D	82-090	Lincoln Park City Schs
82-230	Crestwood S D	63-140	Madison Heights S D
25-140	Davison Comm Schs	*52-060	Marquette Twp S D
19-010	De Witt Pub Schs	74-100	Marysville Pub S D
82-030	Dearborn City S D	82-045	Melvindale North Allen Park S D
82-040	Dearborn Heights S D 7	38-120	Michigan Center S D
81-050	Dexter Comm S D	61-060	Mona Shores S D
41-090	East Grand Rapids Pub Schs	25-040	Mt Morris Cons Schs
50-020	East Detroit City S D	38-130	Napoleon S D
38-090	East Jackson Pub Schs	82-220	North Dearbron Heights S D
33-010	East Lansing S D	61-230	North Muskegon City S D
82-250	Ecorse Pub S D	41-025	Northview Pub Sch
09-050	Essexville Hampton S D	82-390	Northville Pub Schs
*82-210	Fairlane S D	38-140	Northwest S D
63-200	Farmington Pub S D	63-250	Oak Park City S D
63-020	Ferndale City S D	61-065	Oakridge S D
50-090	Fitzgerald Pub Schs	33-170	Okemos Pub Schs
25-120	Flushing Comm Schs	*23-490	Oneida Twp Sch Dist 3
41-110	Forest Hills Pub Schs	61-190	Orchard View Schs
50-100	Fraser Pub Schs	39-130	Parchment S D
*61-420	Fruitland Twp S D 1F	13-120	Pennfield S D
61-080	Fruitport Comm Schs	39-140	Portage Pub Schs
39-050	Galesburg Augusta Comm S D	82-110	Redford Union S D
25-070	Genesee S D	61-220	Reeths Puffer Schs
41-120	Godfrey Lee Pub S D	82-120	River Rouge City Schs
41-020	Godwin Heights Pub Schs	82-400	Riverview Comm S D
25-030	Grand Blanc Comm Schs	50-030	Roseville City S D
23-060	Grand Ledge Pub Schs	63-040	Royal Oak City S D
41-130	Grandville Pub Schs	73-040	Saginaw Twp Comm Schs
38-050	Grass Lake Comm Schs	81-120	Saline Area S D
82-300	Grosse Ile Twp Schs	50-200	South Lake Schs
82-055	Grosse Pte Pub Schs	82-140	South Redford S D
13-070	Harper Creek Comm Schs	63-060	Southfield Pub S D
82-320	Harper Woods City S D	82-405	Southgate Comm S D
33-060	Haslett Pub Schs	70-300	Spring Lake Pub S D
63-130	Hazel Park City S D	13-030	Springfield City S D
33-070	Holt Pub Schs	73-255	Swan Valley S D
58-080	Jefferson Cons S D	25-180	Swartz Creek Comm S D
70-175	Jenison Pub Schs	82-150	Taylor S D
25-110	Kearsley Comm Schs	82-155	Trenton Pub Schs
41-140	Kelloggsville Pub Schs	50-210	Utica Comm Schs
41-145	Kenowa Hills Pub Schs	50-220	Van Dyke Comm Schs
41-160	Kentwood Pub Schs	38-020	Vandercook Lake Pub S D
50-140	L'Anse Creuse Pub Schs	50-230	Warren Cons Schs
50-120	Lake Shore Pub Schs	50-240	Warren Woods Pub Schs

COMMUNITY TYPE IV - URBAN FRINGE con't

63-300	Waterford S D	25-210	Westwood Heights S D
33-215	Waverly Schs	81-140	Whitmore Lake Pub S D
82-160	Wayne-Westland Comm Schs	81-150	Willow Run Pub Schs
63-160	West Bloomfield Twp S D	82-365	Woodhaven S D
70-070	West Ottawa Pub S D	41-026	Wyoming Pub Schs
38-010	Western S D	81-020	Ypsilanti City S D
82-240	Westwood Comm Schs		

COMMUNITY TYPE V - RURAL

31-020	Adams Twp S D	21-065	Big Bay de Noc S D
46-020	Addison Comm Schs	*62-470	Big Jackson S D
53-020	Airport Comm S D	73-170	Birch Run Area S D
79-010	Akron Fairgrove Schs	*32-220	Bloomfield Twp S D 4
05-010	Alba Pub Sch	*32-230	Bloomfield Twp S D 5
01-010	Alcona Comm Schs	*32-250	Bloomfield Twp S D 7F
70-040	Allendale Pub S D	80-090	Bloomingtondale Pub S D
*42-010	Allouez Twp Schs	*49-020	Bois Blanc Pines S D
44-020	Almont Comm Schs	15-030	Boyne Falls Pub S D
*29-130	Arcada Twp S D 1F	63-180	Brandon Twp S D
*29-170	Arcada Twp S D 6	29-040	Breckenridge Comm Schs
06-010	Arenac Eastern S D	*49-030	Brevort Twp S D
50-050	Armada Area Schs	11-340	Bridgman Pub Sch
*07-010	Arvon Twp S D	47-010	Brighton Area Schs
29-020	Ashley Comm Schs	17-140	Brimley Pub Schs
13-050	Athens Area Schs	46-050	Britton Macon Area Sch
60-010	Atlanta Comm Schs	12-020	Bronson Comm S D
06-020	Au Gres Sims S D	76-060	Brown City Comm S D
*02-010	Au Train Twp Sch	28-035	Buckley Comm S D
43-040	Baldwin Pub S D	*44-190	Burnside Twp S D 10F
21-040	Baldwin Twp Schs	75-020	Burr Oak Comm S D
80-020	Bangor Pub Schs	02-020	Burt Twp Sch
*80-240	Bangor Twp S D 8	78-020	Byron Area Schs
07-020	Baraga Twp S D	41-040	Byron Center Pub Schs
21-090	Bark River Harris S D	41-050	Caledonia Comm Schs
37-040	Beal City S D	31-030	Calumet Pub S D
51-020	Bear Lake Sch	*31-040	Calumet Twp S D 2
15-010	Beaver Island Comm Schs	30-010	Camden Frontier Sch
26-010	Beaverton Rural Schs	*34-250	Campbell Twp S D 4
05-040	Bellaire Pub Sch	74-040	Capac Comm S D
23-010	Bellevue Comm Schs	55-010	Carney Nadeau Pub Schs
*64-010	Benona Comm S D	59-020	Carson City Crystal Area S D
10-015	Benzie County Central Schs	76-070	Carsonville Comm S D
66-010	Bergland Comm S D	*03-250	Casco Twp S D 4
*34-140	Berlin Twp S D 3F	32-030	Caseville Pub Sch
*34-150	Berlin Twp S D 5F	79-030	Cass City Pub Schs
11-240	Berrien Springs Pub S D	14-010	Cassopolis Pub Schs
*27-030	Bessemer Twp S D	41-070	Cedar Springs Pub Schs

COMMUNITY TYPE V - RURAL con't

15-035	Central Lake Pub Sch	03-050	Fennville Pub Schs
59-125	Central Montcalm Pub Schs	*64-030	Ferry Comm S D
75-030	Centreville Pub S D	*28-060	Fife Lake Comm S D
52-010	Champion Humboldt Spurr S D	36-015	Forest Park S D
31-050	Chassell Twp S D	19-070	Fowler Pub Schs
54-025	Chippewa Hills S D	47-030	Fowlerville Comm Schs
*57-100	Clam Union Twp S D 2 (closed)	10-025	Frankfort Area Schs
63-190	Clarkston Comm S D	*13-340	Fredonia Twp S D 2F
39-020	Climax Scotts Comm Schs	73-200	Freeland Comm S D
46-060	Clinton Comm Schs	53-030	Freesoil Comm S D
25-150	Clio Area S D	29-050	Fulton Schs
56-030	Coleman Comm S D	11-160	Galien Twp Sch
*32-260	Colfax Twp S D 1F	*03-440	Ganges Twp S D 4
*32-300	Colfax Twp S D 7 (closed)	*40-110	Garfield Twp S D 3F (closed)
*54-100	Colfax Twp S D 3F	72-010	Gerrish Higgins S D
11-330	Coloma Comm Schs	26-040	Gladwin Comm Schs
75-040	Colon Comm S D	45-010	Glen Lake Comm S D
38-040	Columbia S D	80-110	Gobles Pub S D
38-080	Concord Comm Schs	*64-050	Golden Comm S D
75-050	Constantine Pub S D	*44-240	Goodland Twp S D 1
70-120	Coopersville Pub S D	*44-260	Goodland Twp S D 2
80-040	Covert Pub Schs	25-050	Goodrich Area S D
*07-030	Covington S D	62-050	Grant Pub S D
20-015	Crawford Au Sable Schs	*42-030	Grant Twp Schs
*24-010	Cross Village S D	*28-220	Green Lake Twp S D 1F
76-080	Croswell Lexington Comm S D	39-065	Gull Lake Comm Schs
33-040	Dansville Ag Sch	*11-670	Hagar Twp S D 6
80-050	Decatur Pub Schs	35-020	Hale Area Schs
76-090	Deckerville Comm S D	03-100	Hamilton Comm Schs
46-070	Deerfield Pub Schs	*80-390	Hamilton Twp S D 6 (closed)
08-010	Delton Kellogg S D	38-100	Hanover Horton Schs
17-050	De Tour Twp Sch	32-060	Harbor Beach Comm Schs
44-050	Dryden Comm Schs	24-020	Harbor Springs S D
58-050	Dundee Comm S D	18-060	Harrison Comm Schs
*34-340	Easton Twp S D 6F	64-040	Hart Pub S D
11-250	Eau Claire Pub S D	47-060	Hartland Cons Sch
*13-060	Eckford Comm Schs	73-210	Hemlock Pub S D
14-030	Edwardsburg Pub Schs	62-060	Hesperia Comm S D
*64-020	Elbridge Comm S D	60-020	Hillman Comm Schs
05-060	Elk Rapids Schs	61-120	Holton Pub Schs
32-050	Elkton Pigeon Bayport S D	13-080	Homer Comm Schs
15-065	Ellsworth Comm Sch	03-070	Hopkins Pub Sch
*31-070	Elm River Twp Sch	72-020	Houghton Lake Comm Schs
*52-030	Ely Twp S D	58-070	Ida Pub S D
49-055	Engadine Cons Schs	44-060	Imlay City Comm Schs
67-020	Evart Pub Sch	16-050	Inland Lakes S D
66-045	Ewen Trout Creek Cons S D	*34-360	Ionia Twp S D 2F
*40-060	Excelsior Twp S D 1	*34-380	Ionia Twp S D 5
68-030	Fairview S D	*52-050	Ishpeming Twp S D
*57-010	Falmouth Elem S D	69-030	Johannesburg Central Sch
18-020	Farwell Area Schs	30-030	Jonesville Comm Schs

COMMUNITY TYPE V - RURAL con't

51-045	Kaleva Norman Dickson Schs	54-040	Morley Stanwood Comm Schs
40-040	Kalkaska Pub Schs	78-060	Morrice Area Schs
41-150	Kent City Comm Schs	*75-300	Mottville Twp S D 3F
28-090	Kingsley Area S D	52-080	National Mine S D
79-080	Kingston Comm Schs	50-170	New Haven Comm Schs
78-040	Laingsburg Comm S D	78-070	New Lothrop Area Pub S D
57-020	Lake City Area S D	62-070	Newaygo Pub S D
31-130	Lake Linden Hubbell S D	30-050	North Adams Pub Schs
59-090	Lakeview Comm Schs	44-090	North Branch Area Schs
25-280	Lakeville Comm S D	55-115	North Central Area Schs
34-090	Lakewood Pub Schs	22-045	North Dickinson County S D
80-130	Lawrence Pub S D	32-080	North Huron Schs
80-140	Lawton Comm S D	*34-480	North Plains Twp S D 1F
45-020	Leland Pub S D	45-040	Northport Pub S D
49-040	Les Cheneaux Comm S D	*75-100	Nottawa Comm Schs
33-100	Leslie Pub Schs	*40-140	Oliver Twp S D 2
*02-050	Limestone Twp Sch	23-080	Olivet Comm Schs
25-250	Linden Comm S D	71-050	Onaway Area Comm S D
30-040	Litchfield Comm Schs	51-060	Onekema Cons Sch
24-030	Littlefield Pub S D	46-110	Onsted Comm Schs
49-110	Mackinac Island Pub S D	66-050	Ontonagon Area Schs
16-070	Mackinaw City Pub Schs	*34-530	Orange Twp S D 5 (closed)
46-090	Madison Sch	*34-600	Orleans Twp S D 9
05-070	Mancelona Pub Sch	*34-610	Orleans Twp S D 10
81-080	Manchester Pub S D	31-100	Osceola Twp S D
83-060	Manton Cons S D	19-120	Ovid Elsie Area Schs
23-065	Maple Valley S D	32-090	Owendale Gagetown Area S D
14-050	Marcellus Comm Schs	*34-040	Palo Comm S D
27-060	Marenisco S D	76-180	Peck Comm Sch
67-050	Marion Pub Sch	24-040	Pellston Pub S D
*13-095	Mar-Lee Cons S D	64-070	Pentwater Pub S D
76-140	Marlette Comm S D	78-080	Perry Pub S D
03-060	Martin Pub Schs	19-125	Pewamo Westphalia Comm S D
53-010	Mason County Central S D	17-090	Pickford Pub Schs
53-020	Mason County Eastern S D	47-080	Pinckney Comm Schs
58-090	Mason Cons S D	09-090	Pinconning Area Schs
02-060	Mathias Twp Sch	67-055	Pine River Area Schs
80-150	Mattawan Cons S D	*62-080	Pineview S D
79-090	Mayville Comm Schs	30-060	Pittsford Rural Ag Schs
57-030	McBain Rural Ag S D	32-120	Port Austin Pub Schs
74-120	Memphis Comm Schs	32-130	Port Hope Comm Schs
75-060	Mendon Comm S D	*34-710	Portland Twp S D 5F
56-050	Meridian Pub S D	71-060	Posen Cons S D
73-230	Merrill Comm S D	23-090	Potterville Pub Schs
83-070	Mesick Cons S D	*52-100	Powell Twp S D
79-100	Millington Comm Schs	12-040	Quincy Comm S D
68-010	Mio Au Sable S D	21-060	Rapid River Pub Schs
59-045	Montabella Comm S D	61-210	Ravenna Pub Schs
61-180	Montague Pub Schs	30-070	Reading Comm Schs
25-260	Montrose Twp Schs	*32-140	Red Sch
46-100	Morenci Area Schs	67-060	Reed City Pub Schs

COMMUNITY TYPE V - RURAL con't

79-110	Reese Pub Schs	33-200	Stockbrige Comm Schs
52-110	Republic Michigamme Schs	58-100	Summerfield S D
11-033	River Valley S D	45-050	Suttons Bay Pub S D
21-130	Rock Pub S D	48-040	Tahquamenon Area Schs
02-080	Rock River Twp Sch	35-030	Tawas Area Schs
41-210	Rockford Pub Schs	13-130	Tekonsha Comm Sch
*34-750	Ronald Twp S D 8 (closed)	08-050	Thornapple Kellogg S D
*23-590	Roxand Twp S D 12	59-080	Tri-County Area Schs
46-130	Sand Creek Comm Schs	32-170	Ubly Comm Schs
*52-130	Sands Twp S D	13-135	Union City Comm S D
76-210	Sandusky Comm S D	69-040	Vanderbilt Area Sch
*76-710	Sanilac Twp S D 1	*32-650	Verona Twp S D 1F
34-120	Sarananc Comm S D	59-150	Vestaburg Comm Schs
03-080	Saugatuck Pub Schs	39-170	Vicksburg Comm Schs
39-160	Schoolcraft Comm Schs	30-080	Waldron Area Schs
*34-800	Sebewa Twp S D 8	64-090	Walkerville Rural Comm S D
79-145	Sebewaing Unionville Schs	27-080	Watersmeet Twp S D
*29-790	Seville Twp S D 4F	11-320	Watervliet S D
64-080	Shelby Pub S D	03-040	Wayland Union Schs
37-060	Shepard Pub S D	*64-095	Weare Crystal Comm S D
*32-530	Sheridan Twp S D 4	33-220	Webberville Pub Schs
*32-540	Sheridan Twp S D 5	*52-160	Wells Twp S D
*32-620	Sigel Twp S D 4	65-045	West Branch Rose City Area Schs
*32-630	Sigel Twp S D 6	36-025	West Iron County S D
*11-830	Sodus Twp S D 5	62-090	White Cloud Pub Schs
*40-020	South Boardman Area Sch	66-070	White Pine S D
38-150	Springport Pub Sch	75-070	White Pigeon Comm S D
73-240	St Charles Comm S D	17-160	Whitefish Sch
*49-100	St Ignace Twp S D	58-110	Whiteford Ag S D
06-050	Standish Sterling Comm S D	35-040	Whittmore Prescott Area S D
*31-140	Stanton Twp S D	16-100	Wolverine Comm S D
55-120	Stephenson Area Pub Schs	74-130	Yale Pub S D

COUNTY CODE NUMBERS

01	Alcona	43	Lake
02	Alger	44	Lapeer
03	Allegan	45	Leelanau
04	Alpena	46	Lenawee
05	Antrim	47	Livingston
06	Arenac	48	Luce
07	Baraga	49	Mackinac
08	Barry	50	Macomb
09	Bay	51	Manistee
10	Benzie	52	Marquette
11	Berrien	53	Mason
12	Branch	54	Mecosta
13	Calhoun	55	Menominee
14	Cass	56	Midland
15	Charlevoix	57	Missaukee
16	Cheboygan	58	Monroe
17	Chippewa	59	Montcalm
18	Clare	60	Montmorency
19	Clinton	61	Muskegon
20	Crawford	62	Newaygo
21	Delta	63	Oakland
22	Dickinson	64	Oceana
23	Eaton	65	Ogemaw
24	Emmet	66	Ontonagon
25	Genesee	67	Osceola
26	Gladwin	68	Oscoda
27	Gogebic	69	Otsego
28	Grand Traverse	70	Ottawa
29	Gratiot	71	Presque Isle
30	Hillsdale	72	Roscommon
31	Houghton	73	Saginaw
32	Huron	74	St. Clair
33	Ingham	75	St. Joseph
34	Ionia	76	Sanilac
35	Iosco	77	Schoolcraft
36	Iron	78	Shiawassee
37	Isabella	79	Tuscola
38	Jackson	80	Van Buren
39	Kalamazoo	81	Washtenaw
40	Kalkaska	82	Wayne
41	Kent	83	Wexford
42	Keweenaw		

APPENDIX B

DEFINITIONS OF THE EDUCATIONAL ASSESSMENT MEASURES

For the reader's information, the 22 measures reported in the 1971-72 Michigan Educational Assessment Program are defined below. Three measures, elementary instructional expense per pupil, Grade 4 membership, and Grade 7 membership, were added since the 1970-71 assessment program. The title word relationships, in the achievement measures, was formerly vocabulary; and total membership, in the size measures, replaces the 1970-71 measures called number of students in school, reported at the school level, and district state aid membership, reported at the district level.

Seven measures have been substantially changed since the 1970-71 educational assessment program. These measures are listed and the changes explained below:

1. Professional instructional staff per 1,000 students. This was pupil/professional instructional staff ratio in the 1970-71 assessment program. Information used to compute the measure is unchanged. Only the method of computation is changed. To convert professional instructional staff per 1,000 students to pupil/professional instructional staff ratio, divide the figure for professional instructional staff per 1,000 students into 1 and multiply the result by 1,000. For example, if the professional instructional staff per 1,000 students is equal to 40.0, the pupil/professional instructional staff ratio will be 25.0; $(1 \div 40.0) \times 1000 = 25.0$.

2. Teachers per 1,000 students. This measure was formerly pupil/teacher ratio. The explanation of the change is the same as that above. The formula given above can be used for converting from teachers per 1,000 students to pupil/teacher ratio.

3. Average years teaching experience. This measure has been updated to use most recent available information. The 1970-71 assessment program used information from the 1969-70 teacher certification records for computing this measure. Information from the 1971-72 "Fourth Friday Report" was used for the 1971-72 computation.

5. Average contracted salary per teacher. Information for this measure, too, has been updated so that contracted salary figures for 1971-72 could be used in the 1971-72 assessment program. Only full time classroom teachers are counted in computing the 1971-72 average. The 1970-71 assessment program used information from 1969-70 district financial reports for computing this measure. Information from the 1971-72 "Fourth Friday Report" was used for the 1971-72 computation.

13. Composite estimate of socioeconomic status. This measure has been changed from students' estimate of socioeconomic status. The title reflects the change in method of arriving at an estimate of socioeconomic status.

14. School dropout rate. This measure has been updated by two years. Information used is from the 1970-71 School Dropout Report. This provides the dropout rate for the 1970-71 academic year. The 1970-71 educational assessment program used dropout data for the 1968-69 academic year.

22. Total membership. This measure replaces number of students in school at the school level, and district state aid membership at the district level, in the 1970-71 assessment program. It reflects the number of full time students in all grades operated by the district from kindergarten through grade twelve, except special education students. The count was taken as

of the "Fourth Friday" of the 1971-72 academic year, and aggregated at the school and district levels. The 1970-71 figures included part time students on a full time equivalency basis. The 1970-71 number of students in school did not include kindergarten pupils.

A. Human Resources

Five human resource measures were included in the 1971-72 educational assessment program: (1) professional instructional staff per 1,000 pupils; (2) teachers per 1,000 pupils; (3) average years teaching experience; (4) percent of teachers with master's degree; and (5) average contracted salary of teachers. Each measure is described below.

1. Professional instructional staff per 1,000 pupils. The information to compute this measure was taken from the 1971 "Fourth Friday Report." The total number of professional instructional staff was obtained by adding the number of elementary and secondary staff (expressed as full time equivalency) in the following categories; principals, assistant principals, other administrators, (excluding district-wide administrative staff), consultants and supervisors, classroom teachers, librarians, audio-visual staff, guidance personnel and school counselors, psychological staff, radio and television instructional staff, teachers of the homebound, and other instructional staff. The total number of pupils was obtained by counting all pupils enrolled in grades one through twelve except special education pupils. Pupils who attended the school for a portion of the day and attended a non-public school for the remainder of the day were included on a full time equivalency basis. For example, a pupil who attended the school for one-fourth of each day and attended a non-public school for the other three-fourths of each day was counted as one-fourth pupil. In order to obtain the number of professional

instructional staff per 1,000 pupils, the total number of professional instructional staff was multiplied by 1,000 and divided by the total number of pupils.

2. Teachers per 1,000 pupils. The information to compute this measure was taken from the 1971 "Fourth Friday Report." The total number of teachers was obtained by adding the number of elementary and secondary classroom teachers. Kindergarten teachers, special education teachers, and non-classroom teachers were not included in the total. The total number of pupils was obtained by counting all pupils enrolled in grades one through twelve except special education pupils. Pupils who attended the school for a portion of the day and attended a non-public school for the remainder of the day were included on a full time equivalency basis. In order to obtain the number of teachers per 1,000 pupils, the total number of teachers was multiplied by 1,000 and divided by the total number of pupils.

3. Average years teaching experience. The information to compute this measure was taken from the 1971 "Fourth Friday Report." Excluded from the calculation of average years teaching experience were individuals who were employed to work exclusively in the areas of administration, special education, adult education, guidance and counseling, and nursery work. All other professional personnel employed by the district were included in calculating average years of teaching experience. The average was obtained by dividing the total years of teaching experience by the total number of teachers (full time and part time).

4. Percent of teachers with master's degree. The information to compute this measure was taken from the 1971 "Fourth Friday Report." It was obtained by dividing the number of classroom teachers (full time and part time) who had

completed all of the requirements for a master's degree by the total number of classroom teachers (full time and part time). The resultant value was multiplied by 100 to convert to a percent figure.

5. Average contracted salary of teachers. The information necessary to compute this measure was taken from the 1971 "Fourth Friday Report." It was obtained by dividing the total annual contractual salaries paid to full-time classroom teachers who work only in a school by the number of such teachers in that school. Excluded were supplemental payments such as payments for coaching, summer school, department head bonus, etc. District level averages were obtained by adding the total annual contractual salaries for all schools in the district and dividing by the sum of full-time classroom teachers in all schools in the district. (see note at end of appendix).

B. School District Financial Resources

Six district financial resources were included in the 1971-72 educational assessment program: (6) state equalized valuation per resident member; (7) local revenue per pupil; (8) state school aid per pupil; (9) K-12 instructional expense per pupil; (10) elementary instructional expense per pupil, and (11) total current operating expense per pupil. These measures are available at the district level only and are based on 1970-71 data. Each measure is described in detail below.

6. State equalized valuation per resident member (1970-71). The information to compute this measure was taken from records filed with the Michigan Department of Education. The total state equalized valuation (SEV) is equal to approximately 50 percent of the fair cash value of the real and personal property in the district. It is calculated as of May 25, 1970 (the

fourth Monday in May) and applied to the 1970-71 academic year. In order to obtain a per pupil value for SEV, the total SEV was divided by resident membership for the 1970-71 academic year. Resident membership, obtained from the 1970-71 "Fourth Friday Report," includes all pupils residing in the district who attended public school in that district or in any other district; resident membership excludes pupils who attended school in the district but resided in another district, as well as excluding pupils who attended private or parochial schools.

7. Local revenue per pupil (1970-71). The information to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. The financial information was reported in the Annual School District Financial Report for the fiscal year which ended June 30, 1971. The total value for local revenue included revenue from sources such as the following: property tax (the major source of local revenue), local government appropriations, tuition, transportation fees, revolving funds (i.e., revenue from food services, book stores, and student body activities), rent from school facilities, etc. Tuition from community college patrons was not included in the calculation. In order to obtain local revenue per pupil, total local revenue was divided by the state aid membership (the total number of pupils enrolled in the district as of October 2, 1970, the fourth Friday after Labor Day).

8. State school aid per pupil (1970-71). The information to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. The financial data were taken from the Annual School District Financial Report for the fiscal year which ended June 30, 1971. The value for total state school aid represented the direct

appropriations from the state, including appropriations for state school aid, driver education, underprivileged children, and other state grants. In order to compute the state school aid per pupil, the total state school aid was divided by 1970-71 state aid membership.

9. K-12 instructional expense per pupil (1970-71). The information to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. The financial information was reported in the Annual School Financial Report for the fiscal year which ended June 30, 1971. The total K-12 instructional expense included expenditures for salaries and supplies connected with elementary education, secondary education, special education, summer school, and adult education. Expenditures associated with community colleges were omitted from the calculation. In order to obtain a value for instructional expense per pupil, total K-12 instructional expense was divided by the 1970-71 state aid membership.

10. Elementary instructional expense per pupil (1970-71). The information to compute this measure was taken from financial reports provided by the local districts and filed with the Michigan Department of Education. Financial information was reported in the Annual School District Financial Report for the fiscal year which ended June 30, 1971. The elementary instructional expense included expenditures for salaries and supplies connected with elementary education. In order to obtain a value for elementary instructional expense per pupil for districts organized to operate a high school, total elementary instructional expense was divided by the elementary state aid membership, taken from the 1970-71 "Fourth Friday Report." For districts not

organized to operate a high school (i.e., those that operate no grade above grade 8) total elementary instructional expense was divided by the K-8 state aid membership. Pre-kindergarten and special education pupils were not included.

11. Total current operating expense per pupil (1970-71). The information to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. The financial information was reported in the Annual School District Financial Report for the fiscal year which ended June 30, 1971. The total current operating expense included expenses connected with administration, attendance, health services, pupil transportation, plant operation, plant maintenance, and fixed charges, in addition to instructional expenses (including elementary, secondary, special education, summer school, and adult education instructional expenses). Community college expenses were not included in the computation of total operating expense. The value for total current operating expense was divided by the 1970-71 state aid membership.

C. Student Background

Two measures of student background were included in the 1971-72 educational assessment program: (12) percent of racial-ethnic minority students, and (13) composite estimate of socioeconomic status.

12. Percent of racial-ethnic minority students. Percent of racial-ethnic minority students was computed for each school in the state. The information to compute this measure was taken from the 1971 "Fourth Friday Report." The total number of racial-ethnic minority students included all racial-ethnic minority students in the school except pre-kindergarten students. Kinder-

garten students, special education students and part-time students were all included in the total. Since the information was expressed in terms of a head count, part time students were not counted differently from full time students. Students were classified as belonging to a racial-ethnic minority group if they were considered by the school to be of that group. The total number of students included all students except pre-kindergarten students. Again kindergarten students, special education students, and part time students were included in the total. In order to calculate the percent of racial-ethnic minority students, the total number of racial-ethnic minority students was divided by the total number of students and the resultant figure was multiplied by 100.

13. Composite estimate of socioeconomic status. A composite estimate of socioeconomic status was computed for each school in the state based upon one or both of the following: (1) questions included in the 1970-71 battery designed to indirectly assess group socioeconomic background; and (2) a principal's questionnaire. The questions included in No. 1 above concerned biographical information, educational attainment of parents, quality of housing, family structure and stability, occupation, income, and possessions. For this measure, the questions asked of the fourth graders and the questions asked of the seventh graders were identical. It is important to note that the students responded anonymously to these questions; only the school name--not the student's name--was recorded on the answer sheet. Thus, it is impossible for anyone to ascertain the responses of a particular individual. Indeed, the purpose of the instrument was to arrive at a group measure, not individual pupil measures. The principal's questionnaire asked for estimates

of parent educational and occupational levels and income. Also included were questions dealing with cost, quality, and density of housing, family structure and stability, and percent of families on welfare. Two additional questions were included to obtain estimates of the extent and nature of changes in average socioeconomic status in the school attendance area since the previous year.

D. Dropout Rate (1970-71)

14. School dropout rate. School dropout rate was computed from information taken from records provided by the local districts and filed with the Michigan Department of Education. The measure was based on figures from the local districts' School Dropout Report and enrollment of students in grades 9-12 during the 1970-71 academic year. Included as dropouts were students who left school for any of the following reasons: married, sent to corrective institutions, accepted employment, or dropped from attendance roll because absent 10-30 days. Not included as dropouts were students who left the district because they transferred to another district, were sent to institutions for defectives, or the student was sick or died. The dropout rate is calculated by dividing the number of dropouts by the sum of the number of students enrolled in grades 9-12 on the "Fourth Friday" plus new students enrolled during the year, computed from the 1970-71 School Dropout Report. The resultant figure was multiplied by 100.

E. Achievement

Performance on the basic skills portion was determined by measuring the following: (15) word relationships; (16) reading; (17) mechanics of written English; (18) mathematics; and (19) composite achievement. The number of items and time limits are indicated in the description of each test, which follows.

School Districts were asked to administer the tests between January 3 and January 21, 1972. Additional technical information concerning these measures will be provided in a future educational assessment report.

15. Word relationships. The word relationship test for grade four contained 45 verbal analogy problems which were designed to measure students' knowledge of the meaning of words and the relationships between words and concepts. The seventh grade test, while similar in purposes and content, contained 50 problems which were on the average more difficult. The time allowed to work on this section was 20 minutes at both grades.

16. Reading. The reading test contained 50 questions which assessed paragraph comprehension, ability to understand words from the context in which they are encountered, and ability to identify the correct synonym for a word. Students at both grade levels were allowed 35 minutes to work on this section.

17. Mechanics of written English. The mechanics of written English test consisted of four parts, each separately timed. In part A, spelling, students were to identify misspelled words. The fourth grade test presented 15 items to be completed in five minutes; the seventh grade test had 20 items and allowed six minutes. In part B, effectiveness of written expression, students were required to select the best way of expressing a thought. The test contained 14 items for each grade and nine minutes were allowed for its completion. In part C of the fourth grade test, written usage, students were to recognize grammatical errors. It contained 14 items and was timed for eight minutes. In part D of the fourth grade test (part C in the seventh grade test), punctuation and capitalization, students were to identify

errors of punctuation and capitalization. Part D of the fourth grade test presented 12 items to be completed in eight minutes, and part C of the seventh grade test presented 20 items to be completed in eleven minutes.

18. Mathematics. The mathematics test involved mathematical reasoning, problem solving, and computation. In addition, problems in the seventh grade test involved algebraic and geometric concepts. Each grade had 30 minutes in which to answer 40 questions.

19. Basic skills composite achievement. A composite achievement score was computed for each student. The composite score was obtained by averaging the individual's standard score on reading, the mechanics of written English, and the mathematics tests. The test scores were averaged in such a way that each score contributed equally to the average--despite the fact that the number of items was different on the three tests. IT SHOULD BE NOTED THAT THE WORD RELATIONSHIPS TEST SCORE WAS NOT INCLUDED IN THE CALCULATION OF THE COMPOSITE ACHIEVEMENT SCORE. The word relationships score is believed to respond more slowly to the influence of schooling. Therefore, the word relationships score was excluded to focus the composite achievement score upon those aspects of achievement that respond more readily to change.

F. Size Measures

Grade 4 membership, grade 7 membership, and total membership counts were provided as measures of school and district size. The district membership figures were obtained by adding the membership counts for all schools in the district. Pupils who attended school for a portion of the day were not included. These size measures were taken from the 1971 "Fourth Friday Report,"

School Summary, Page 1, Line 1A.

20. Grade 4 membership. Grade 4 membership was obtained by counting all full time pupils enrolled in grade 4 except special education pupils.

21. Grade 7 membership. Grade 7 membership was obtained by counting all full time pupils enrolled in grade 7 except special education pupils.

22. Total membership. Total membership was obtained by counting all full time pupils in all grades operated by the district from kindergarten through the 12th grade, except special education pupils.

Note: The information used to compute average contracted salary of teachers was collected during the President's wage-price freeze declared on August 14, 1971. We are unable to determine what effect if any the freeze had on the quality of the salary data collected.