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BUREAU OF EDUCATIONAL RESEARCH
COLLEGE OF EDUCATION

A SURVEY OF THE
CITY SCHOOLS OF MARION,
ILLINOIS

By

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TABLE OF CONTENTS

	PAGE
PREFACE.....	5
CHAPTER I. INTRODUCTION.....	7
CHAPTER II. MARION'S INVESTMENT FOR ELEMENTARY SCHOOLS	10
CHAPTER III. BUILDINGS AND EQUIPMENT.....	23
CHAPTER IV. TEACHING STAFF AND QUALITY OF INSTRUCTION...	34
CHAPTER V. COURSE OF STUDY.....	39
CHAPTER VI. ACHIEVEMENTS OF SCHOOL CHILDREN.....	43
CHAPTER VII. RECOMMENDATIONS.....	53

LIST OF TABLES

	PAGE
Table I. Ratio of assessed valuation to true valuation.....	13
Table II. Number of pupils enrolled per 1000 population.....	14
Table III. Current expenditures for elementary schools for items per pupil in a.d.a.....	15
Table IV. Estimated value of elementary school property.....	16
Table V. Indebtedness for elementary schools.....	18
Table VI. Marion's wealth.....	19
Table VII. Tax rates for elementary schools per \$100 on basis of assessed value	20
Table VIII. Total tax rates for elementary schools on basis of assessed value..	21
Table IX. Scores of Marion school buildings.....	26
Table X. Summary of scores for elementary school buildings.....	27
Table XI. Salaries of teachers and principals.....	35
Table XII. Distribution of salaries of elementary school teachers in 260 cities having a population between 5000 and 10,000, 1922-1923.....	36
Table XIII. Time allotments for Marion and Holmes' standards.....	40
Table XIV. Median mental ages, Illinois General Intelligence Scale.....	44
Table XV. Median scores for the Pressey Classification Tests.....	45
Table XVI. Distribution of scores for Illinois General Intelligence Scale.....	46
Table XVII. Summary of median scores for silent reading.....	47
Table XVIII. Summary of median scores for arithmetic.....	49
Table XIX. Median scores on the Stanford Achievement Tests.....	50
Table XX. Distribution of the composite scores on the Stanford Achievement Test.....	51

PREFACE

The Survey of the Marion Public Schools was undertaken in response to an invitation from Superintendent J. W. Asbury and the Board of Education. The fact that this invitation was extended by the school authorities is in itself significant. So far as the writer has been able to learn, at the time the survey was inaugurated, there had been only one formal survey of a school system, that of Alton, in the state since the Springfield Survey of 1914. This being the case the Superintendent and the Board of Education at Marion are to be congratulated on their initiative in securing a systematic evaluation of their school system by an outside agency.

The Survey has been conducted as a project of the Bureau of Educational Research. With the exception of the assistance rendered by Charles E. Chadsey, Dean of the College of Education, all of the work has been done by members of the Bureau Staff. Charles W. Odell and George W. Reagan made the survey of the buildings and equipment. Ruth Streitz supervised the administration of the educational tests. George W. Reagan also made a study of the expenditures, indebtedness and tax rates. Charles E. Chadsey contributed the recommendations which appear in Chapter VII. The report, except for the final chapter, was written by Walter S. Monroe, Director of the Bureau of Educational Research, who also directed the Survey. Credit for editing the manuscript and for supervising its publication should be given to Mrs. Charles Hughes Johnston.

The Survey renders a very definite service to Marion by describing the present status of the elementary school system and by making specific recommendations for the future. It is hoped that the published report may be helpful also to other communities by illustrating the procedure for making a simple yet effective survey in cities of the size of Marion. A superintendent who understands how to use standardized tests and who is familiar with some of the more elementary statistical procedures should be able to duplicate this survey in his school system. Such an undertaking, of course, would require considerable time and the superintendent would find it necessary to arrange his program so that he would have adequate time for the work.

The plan of the Survey is simple. It is limited to those divisions which, in the judgment of the Survey Staff, are considered essential.

The elaboration of topics has been intentionally avoided. Except in the evaluation of the buildings and equipment, the survey deals only with data for the system as a whole. Analysis of the measures of achievement, including comparisons between buildings and even between teachers, doubtless would be of assistance in the administration and supervision of the school, but this work should be done by the superintendent and principals rather than by an outside agency.

WALTER S. MONROE, *Director*,
Bureau of Educational Research.

October 6, 1924

A SURVEY OF THE CITY SCHOOLS OF MARION, ILLINOIS

CHAPTER I

INTRODUCTION

Survey made in response to invitation from superintendent and board of education. After some preliminary correspondence with Superintendent J. W. Asbury, the Director of the Bureau of Educational Research was invited to meet with the superintendent and the board of education on October 4, 1923. At this conference the general plan of the proposed survey and an estimate of the expense involved were presented. The board of education approved the plans and guaranteed expenses up to \$500.

Cooperation of teachers. The plans for the survey involved the cooperation of the teachers in the administration of the standardized tests, which were used for measuring general intelligence and school achievement. They were asked also to score most of the test papers.¹ This cooperation was requested for two reasons. In the first place their participation would aid them in understanding what was being done and would prove especially helpful if remedial work based on the results of the survey were attempted. The second reason was the reduction of expenses. If it had been necessary to bring to Marion trained examiners and to employ clerical help for the scoring of all papers the cost of the survey would have been materially increased. No reluctance on the part of teachers to give this cooperation was noted and the Survey Staff found no reason to believe that the results of the testing program were less valid than they would have been had this work been done by trained examiners.

Date of survey. The standardized educational tests were administered under the direction of Ruth Streitz during the week beginning October 22, 1923. At the same time Charles W. Odell and George W. Reagan scored the buildings and equipment by the Strayer-Engelhardt Score Card, and collected also much of the additional data required in the survey. Charles E. Chadsey, Dean of the College of Education, and Walter S. Monroe, Director of the Survey, spent November 8 in Marion, the former for the purpose of becom-

¹For details of the testing program see page 43.

ing acquainted with the general organization of the school system, and the latter in order to observe classroom instruction.

Geographical location and population of Marion. Marion, the county seat of Williamson county, is slightly more than one hundred miles southeast of St. Louis, near the southern end of the state of Illinois. It is located in the midst of a rich coal mining region, although there are no mines within the boundaries of the school district. Neither are there any significant industries in the city. It is primarily a residential community. The Federal Census for 1920 gives its population as 9582. Since that date there has been a rather steady growth and the population is probably now in the neighborhood of 14,000. The number of residences noted in the process of construction indicates that the city is still growing, although answers to inquiries show that no material increases in population are anticipated.

General plan of the school system. Marion has what is known as the dual school system, that is, the elementary schools and the high school are under the jurisdiction of separate boards of education. This survey relates only to the elementary schools of the city, no information having been gathered with reference to the township high school. The eight grades of the elementary school system are housed in six buildings: Lincoln, Washington, Logan, Jefferson, McKinley, and Douglas, the last building being used exclusively for colored children. The children in the first five grades go to the building in the vicinity of their homes. For their sixth-grade work all children go to the Logan building, and for their seventh and eighth-grade work to the Washington building, both of which are located near the center of the city. The departmental organization is used in the sixth, seventh, and eighth grades, and in one building, the McKinley, a partial departmental organization is being tried in the fifth grade. All colored children are segregated for all eight grades in the Douglas building.

The supervisory and teaching staff consists of fifty-five teachers, six principals, a supervisor of music, and a superintendent of schools. The principals are all men and, with the exception of those at the Washington and Logan buildings, teach full time. The teachers are distributed as follows: Grade I, 9; Grade II, 8; Grade III, 8; Grade IV, 7; Grade V, 7; Grade VI, 7; Grade VII, 10; Grade VIII, 5.² The

²This distribution includes the six principals. Some of the teachers listed for the seventh grade instruct some eighth-grade classes.

enrollment on October 1, 1923, the end of the first month of school, is given below:

Grade.....	I	II	III	IV	V	VI	VII	VIII	Total
Enrollment.....	374	324	386	352	353	316	258	217	2580

Attitude of the community toward public schools. No systematic attempt was made on the part of the Survey Staff to collect information with reference to the attitude of the community toward the elementary schools. However, the general impression was gained by all on the Staff that the citizens of Marion were only moderately interested in their schools. In fact, there was some evidence of a distinct lack of pride with reference to buildings and grounds. At one building where there were a large number of broken windows, the comment was made that it did little good to repair windows because the public sentiment in that section of the city was such as not to deter children and even adults from damaging school property. A lack of ornamentation and neatness with respect to both buildings and grounds was also noted. On the other hand, it was reported that the patrons of the school were greatly interested in public exercises by their children, and some parents were observed visiting the schools on the days during which the survey was being made. Conversation with a number of residents indicated that the attitude of the community toward the schools should not be characterized as one of gross indifference. The fact that the board of education is made up of successful business men shows that prominent citizens have enough interest to give a part of their time to directing the activities of the schools.

CHAPTER II

MARION'S INVESTMENT FOR ELEMENTARY SCHOOLS

Plan of studying Marion's investment for elementary schools.

The educational investment which a given community is making should be judged by comparison (1) with its educational needs and (2) with the investment being made by other communities. The significance of the comparison with other communities will depend upon the degree of similarity with respect to population, type of school organization and general status of the community. The nineteen cities chosen for comparison with Marion are located in Illinois and have dual school systems. With two exceptions, Chicago Heights and Waukegan, the population of these cities as given by the Federal Census for 1920 is between 5000 and 15,000. The list includes approximately two-thirds of the cities in Illinois within these population limits which have dual school systems. Most of the cities are very similar to Marion with respect to general status; the most marked differences being in the industrial interests which are very conspicuous in certain cases. Data were gathered for Wilmette and Winnetka but they were excluded from the list because the general status of these communities is exceptional.

The cities chosen for comparison together with their population as given by the Federal Census for 1920 are as follows:

<i>Name of City</i>	<i>Federal Census 1920</i>	<i>Name of City</i>	<i>Federal Census 1920</i>
Centralia.....	12,491	Johnston City.....	7,137
Chicago Heights.....	19,653	LaSalle.....	13,050
Clinton.....	5,898	Lawrenceville.....	5,080
DuQuoin.....	7,285	Litchfield.....	6,215
East Moline.....	8,675	Marion	9,582
Eldorado.....	5,004	Murphysboro.....	10,703
Granite City.....	14,757	Ottawa.....	10,816
Harvey.....	9,216	Spring Valley.....	6,493
Herrin.....	10,986	Streator.....	14,779
Hillsboro.....	5,074	Waukegan.....	19,226

Sources of data. The report of the Fourteenth Census of the United States for 1920 was used as the source for the population of the several communities. The figures for enrollment were taken from the Illinois School Directory for 1923-24. The additional data were

secured by means of a questionnaire, a copy of which is reproduced below, addressed to the superintendent of elementary schools in the respective cities. Some of the entries in the questionnaires which were returned were obviously inaccurate. In such cases a letter was addressed to the superintendent and the correction secured. For several of the cities certain items of information were not reported. Hence in the following tables comparison is not made always with the same number of cities, a blank indicating that the necessary information had not been received.

Financial Statistics for the School Year of 1922-23

Name.....Official position.....
 City.....Unit or dual system.....

1. School census (ages 6-21) of district.....(See Instruction 1)
2. Total enrollment for 1922-23:

	(a) Elementary	(b) High School
Resident		
Non-Resident		
Total		

3. Average daily attendance for year:

(a) elementary schools..... (b) high school.....

4. District boundaries:

(a) Are the city limits the same as the boundaries of the elementary school district?.....If not, approximately what percent of non-tuition elementary-school pupils come from without the city limits?.....(b) Are the city limits the same as the boundaries of the high-school district?.....If not, approximately what percent of non-tuition high-school pupils come from without the city limits?.....

5. Total assessed valuation of district.....

6. What percent of the true value was the assessed value? (See Instruction 6)

7. Total value of school property (including equipment) at end of school year:

(a) elementary schools..... (b) high school.....

8. Total bonded indebtedness at end of school year.....

Total of other indebtedness.....

9. Tax rate for educational purposes.....buildings.....
 total.....

10. Tax rate (in city) for all municipal purposes including schools.....

11. Total tax rate in city.....

12. Expenditures. (See Instruction 12.)

Items	(a) Elementary	(b) High School
1. General control		
2. Instruction		
3. Operation		
4. Maintenance		
5. Auxiliary		
6. Total current expenses		
7. New buildings and grounds		
8. New equipment (not replacement)		
9. Principal and interest on bonds		
10. Total net expenditures		

Instructions for Filling Blanks

1. The census of 1922 is referred to. High-school principals in dual systems may be unable to give this information.

2. In unit systems the superintendent will fill both (a) and (b). In dual systems the superintendent will fill (a) and the principal (b).

3. and 4. Same directions as for 2.

6. This will be largely a matter of opinion. Approximate as closely as you can.

7. Same directions as for 2. Be sure that (a) does not include high school, as it probably does in the annual report.

10. May be obtained from the County Clerk. Note that the tax rate for all municipal purposes (including schools) is asked for.

11. May be obtained from the County Clerk. The total tax rate for all purposes is desired.

12. The items under this question are used with the same meaning as in the annual report made to the county superintendent. If these items are not kept separately in unit systems for elementary schools and high schools, the superintendent is asked to estimate the amount that should be charged to each division of the school system. (6) is the sum of 1, 2, 3, 4, and 5. (10) may be larger than the sum of 6, 7, 8, and 9.

Indices of a community's investment for educational purposes.

A community's investment for educational purposes is represented by the value of the school plant and by the current expenditures made for carrying on the work of the school.¹ Along with these two items the amount of indebtedness, bonded and otherwise, should be considered. For making comparisons with other cities, it is necessary to secure an index of the educational investment that a community

¹See list above for a specification of the items included under current expenditures.

TABLE I. RATIO OF ASSESSED VALUATION TO TRUE VALUATION

City	Reported by Superintendent	Reported by Principal
Centralia.....	.33½	
Clinton.....	.33½	
DuQuoin.....	.16½	
East Moline.....	.50	
Eldorado.....	.33½	.50
Granite City.....	.33½	.10
Hillsboro.....	.20	
LaSalle.....	.40	
Lawrenceville.....	.40	
Litchfield.....	.50	
Marion.....	.25	
Murphysboro.....	.25	
Ottawa.....	.50	
Streator.....	.12½	.20
Waukegan.....	.16½	

is making. The tax rate is one such index but it is not entirely satisfactory because it does not accurately represent the amount of expenditures for any given year. Another index can be secured by taking the ratio of the investment to the population of the community. A third may be computed by taking the ratio of the expenditures to the assessed valuation of the school district. Because no one of these three indices alone is entirely satisfactory, all of them have been used in studying Marion's investment for elementary education.

Assessed valuation not a valid index of wealth. The assessed valuation is not a truthful index of the wealth of the school district because the ratio of the assessed valuation to the true value of property varies widely in the different communities. The city superintendents, in the cities from which comparative data were secured, were asked to give an estimated true valuation. The ratios of the assessed valuation to the estimated true valuation are given in Table I. These vary from 12½ percent for Streator to 50 percent for East Moline, Ottawa, and Litchfield. The high-school principals in these cities were asked also to give an estimated true value of the property. Two estimates were secured for three cities, Eldorado, Streator, and Granite City. In no case do the two estimates agree even closely. This disagreement, as well as the variation in the ratios, indicates that the estimated valuations are not highly accurate. This conclu-

TABLE II. NUMBER OF PUPILS ENROLLED PER 1000 POPULATION

CITY	1922-1923	1919-1920
Marion.....	264	235
Eldorado.....	244	217
DuQuoin.....	233	205
Johnston City.....	230	217
Herrin.....	214	232
Hillsboro.....	214	194
Lawrenceville.....	214	187
Centralia.....	186	161
Waukegan.....	184	139
Granite City.....	168	162
East Moline.....	162	127
Murphysboro.....	161	134
Spring Valley.....	154	200
Harvey.....	152	125
Litchfield.....	150	145
Clinton.....	149	151
Streator.....	138	121
Chicago Heights.....	137	112
Ottawa.....	115	115
LaSalle.....	114	95

sion is corroborated by the comments of a number of superintendents and by the refusal of others to give an estimated true value of the property within the boundaries of the district.

Although the assessed valuation is clearly not a valid index of the wealth of the district, it has been used in preference to the estimated true values. This had been done for two reasons—first, an estimate of the true value was not received from a number of cities; second, there was no evidence to show that the estimated values would be more valid indices of the actual wealth.

Indices of educational needs. The educational needs of a community are represented by the number of children to be educated. One measure of this is the school census but, since the number of pupils attending parochial or private schools varies from community to community, it is not a valid index. In studying Marion's educational needs the number of pupils reported as being in average daily attendance for the school year of 1922-23 has been used. The tables of this chapter include the ratio of the educational investments of the several communities to the number of pupils in average daily attendance. This ratio is an index of the extent to which a community is providing for its educational needs.

TABLE III. CURRENT EXPENDITURES FOR ELEMENTARY SCHOOLS
FOR ITEMS PER PUPIL IN A. D. A.

CITY	Total	Instruc- tion	General Control	Opera- tion	Mainte- nance	Auxili- aries
Streator.....	77.55	56.84	4.41	12.42	2.53	1.35
Ottawa.....	75.70	49.72	8.62	6.98	10.38	1.54
Waukegan.....	71.38	54.31	2.11	8.90	5.53	.52
Harvey.....	61.43	41.63	4.47	9.47	2.72	3.14
LaSalle.....	59.72	44.19	3.70	8.23	2.89	.71
Clinton.....	54.81	32.16	3.81	11.42	7.27	.14
Hillsboro.....	52.30	33.99	3.39	7.58	4.65	2.69
East Moline.....	51.41	33.13	2.66	11.55	2.03	2.04
Chicago Heights.....	46.12	33.28	3.59			.42
Murphysboro.....	39.73	32.15	.40	2.77	1.33	3.09
Litchfield.....	39.18	30.72	1.53		6.93	
Spring Valley.....	36.11	26.17	2.96	5.47	1.52	
Johnston City.....	35.57					
Lawrenceville.....	34.25	26.16	2.37	3.25	1.08	1.38
Marion.....	33.07	25.05	1.92	3.37	.68	2.05
Eldorado.....	32.16	22.34	2.59	3.96	3.15	.11
Centralia.....	20.92					
DuQuoin.....		22.93				
Average.....	48.32	35.30	3.24	7.34	3.76	1.48

Marion's educational needs relatively large. The ratio of the number of school children to the population of a community is not constant. Some communities have relatively greater educational needs than others. In Table II the number of pupils enrolled per one-thousand population is given for the school years of 1919-20 and of 1922-23. The population stated in the 1920 Federal Census is used in all cases, whereas the enrollment figures for 1919-20 are taken from the Illinois School Directory of that year, and for 1922-23, from the questionnaire which was sent the superintendents. Correction has been made for the number of non-resident or tuition pupils. It is noted that the number of pupils (264) enrolled in the elementary school per one-thousand population is greater for Marion than for any other city of this group. Thus we are justified in the statement that Marion's educational needs are relatively large.

Current expenditures for elementary education. Current expenditures for elementary education as defined here include the following items: (1) instruction, (2) general control, (3) operation, (4) maintenance, and (5) auxiliary. These expenditures, with the exception of the amount spent for capital outlay, represent the annual investment for the school year of 1922-23. In Table III, the amounts for

TABLE IV. ESTIMATED VALUE OF ELEMENTARY SCHOOL PROPERTY

CITY	Total	Per Pupil in A. D. A.	Per Capita	Per \$1000 Assessed Value
Murphysboro.....	495,000	331.55	46.25	206.25
Clinton.....	275,000	286.16	46.63	152.78
Streator.....	435,000	258.62	29.43	85.29
Ottawa.....	266,000	247.67	24.59	57.21
La Salle.....	300,000	241.16	22.99	74.63
Litchfield.....	206,000	226.13	33.15	128.31
Hillsboro.....	200,000	221.24	39.42	120.48
DuQuoin.....	275,000	204.77	37.75	101.85
East Moline.....	229,950	204.22	26.51	96.54
Centralia.....	200,000	161.68	16.01	61.29
Harvey.....	175,000	153.37	18.99	79.56
Marion.....	350,000	151.78	36.53	145.30
Spring Valley.....	100,000	102.04	15.40	85.95
Eldorado.....	112,000	99.29	22.38	117.15
Lawrenceville.....	94,000	92.70	18.50	52.45
Granite City.....	601,000		40.73	117.04
Herrin.....	250,000		22.76	125.00
Average.....		198.83	29.30	106.30

the several items of current expenditures per pupil in average daily attendance are given for Marion and for the other cities with which comparisons are made. In this table the figures given for the several items are not accurate in a number of cases. For example, the variation in the amounts for general control is so great as to be unreasonable, and is probably due to differences in bookkeeping which resulted in a lack of uniformity in the items charged to general control. Similar conditions are apparent in the other sub-items.

In this table Marion occupies fifteenth place among seventeen cities in total current expenditures. When only the amounts expended for instruction are considered, it ranks fourteenth among sixteen cities. The average total current expenditures per pupil in daily attendance is \$48.32. That for Marion is \$33.07. If instruction is considered separately the average expenditure per pupil in average daily attendance is \$35.30. For Marion it is \$25.05. Thus it is clear that when judged with respect to current expenditures per pupil in average daily attendance Marion occupies a position near the bottom in this list of cities, although it is not the lowest for any of the items except maintenance.

Value of school plant. Table IV gives the total estimated value of the school plant, the value per pupil in average daily attendance, per capita, and per \$1000 of assessed valuation. The amounts reported as the "total valuation" of the school plants are probably only estimates in all cases and therefore cannot be considered highly accurate.² Furthermore, the present value of a school plant is not necessarily a valid index of its usefulness for school purposes. For example, old buildings will in general be valued less than newer ones containing the same number of classrooms. This is due partly to the increased cost of building during recent years and partly to the fact that allowance must be made for depreciation in the case of an old building. Hence, the data in Table IV are only roughly comparable because of variations in the date of construction of the school plants in the different cities. However, some indication is given of the capital outlay of the buildings and equipment provided for elementary education by the various cities.

Marion ranks twelfth among fifteen cities in the value of school property per pupil in average daily attendance. When considered with reference to assessed valuation it ranks third among seventeen, and with reference to per capita investment, sixth among seventeen. The average value of school property per pupil in average daily attendance is \$198.83; Marion's investment is \$151.78. When the investment is considered with reference to the population, that for Marion is approximately equal to the average for the entire group of cities. Thus we may conclude that the school plant of Marion, when considered with reference to the population of the city, is approximately average but, with reference to the assessed valuation, is distinctly above the average. However, Marion has a relatively larger number of children to educate than most cities, and its school plant, when considered in regard to the number of pupils in average daily attendance, is distinctly inadequate in comparison with provisions made in other cities. However, it should be noted that Marion does not occupy last place in this respect.

²For example, the total original cost of the six buildings at Marion was given as \$189,000. The estimated value is \$350,000. The difference between these amounts is so great that one naturally doubts the accuracy of the estimated value.

TABLE V. INDEBTEDNESS FOR ELEMENTARY SCHOOLS

City	Bonded	Other	Total	Per Pupil in A. D. A.	Per Capita	Per \$1000 Assessed Valuation
Harvey.....	110,000	85,000	195,000	170.90	21.16	88.65
Waukegan.....	354,500		354,500	125.89	18.44	47.15
Chicago Heights....	202,400	95,000	297,400	99.77	15.13	67.91
La Salle.....	118,000		118,000	94.86	9.04	29.35
East Moline.....	90,500		90,500	80.37	10.43	38.00
Marion.....	108,000	57,000	165,000	71.55	17.22	68.50
Centralia.....	54,000		54,000	43.65	4.32	16.55
Eldorado.....	25,000	20,000	45,000	39.89	8.99	47.07
Streator.....	55,000		55,000	32.70	3.72	10.78
Murphysboro.....	21,000	20,000	41,000	27.46	3.83	17.08
Clinton.....	20,000		20,000	20.81	3.39	11.11
Ottawa.....	12,000		12,000	11.17	1.11	2.58
Hillsboro.....	9,000		9,000	9.96	1.77	5.42
Litchfield.....	9,000		9,000	9.88	1.45	5.61
DuQuoin.....	12,000		12,000	8.94	1.65	4.44
Lawrenceville.....	1,900		1,900	1.87	.37	1.06
Granite City.....	210,000	100,000	310,000		21.01	60.37
Herrin.....	30,000		30,000		2.73	15.00
Average.....				53.10	8.10	29.81

Indebtedness. Table V gives the facts with reference to the indebtedness reported for the various school systems. The amount of indebtedness is significant when considering the community's investment for educational purposes. A tax rate does not necessarily represent what the community actually spends for it may be spending more than the revenue received. In Marion and a number of other cities a considerable indebtedness other than bonded is reported. This means that the expenditures during recent years have been in excess of the total revenue received. When considered with reference to the number of pupils in average daily attendance, Marion ranks sixth among seventeen cities; with reference to population, it is fourth among nineteen, and with reference to assessed valuation, it is second among nineteen. Thus Marion's indebtedness is distinctly greater than that of the average or typical city of this group.

Marion's wealth. Table VI gives the total assessed valuation for the several communities. It also includes the amount per pupil in average daily attendance and the amount per capita. Marion ranks sixteenth among eighteen cities in assessed valuation per pupil in average daily attendance, and twelfth among nineteen cities when the ratio of its wealth to its population is considered. As we pointed

TABLE VI. MARION'S WEALTH

CITY	Total Assessed Valuation	Per Pupil in A. D. A.	Per Capita
Ottawa.....	4,649,663	4329	429
La Salle.....	4,020,000	3232	308
Streator.....	5,100,000	3032	345
Waukegan.....	7,519,000	2670	391
Centralia.....	3,263,313	2638	261
East Moline.....	2,381,863	2115	275
DuQuoin.....	2,700,000	2010	371
Harvey.....	2,199,662	1928	239
Clinton.....	1,800,000	1873	306
Hillsboro.....	1,660,000	1836	327
Lawrenceville.....	1,792,261	1768	353
Litchfield.....	1,605,516	1762	258
Murphysboro.....	2,400,000	1608	224
Chicago Heights.....	4,379,301	1469	223
Spring Valley.....	1,163,404	1187	179
Marion.....	2,408,851	1045	251
Eldorado.....	956,000	848	191
Johnston City.....	1,250,104	805	175
Herrin.....	2,000,000		182
Average.....		2009	278

out in the beginning of this chapter, the assessed valuation is not a true index of the wealth of the different communities. The estimated ratio between the assessed valuation and the true valuation was given for Marion as 25 percent. This is lower than the average for the communities from which estimates were secured. Hence it is probable that if a direct measure of the wealth of the several communities could have been secured, Marion would be found to rank higher than twelfth among the nineteen cities. It is not the most wealthy of these nineteen cities but probably occupies at least an average position in this respect. Marion's relatively low rank in wealth per pupil is to be expected since the ratio of pupils per one thousand population is larger than for any of the other cities of this group.

Tax rate for elementary education. Another measure of the support which a community gives its schools is obtained from the tax rate for educational purposes. Table VII shows the rates for educational and for building purposes in this group of cities. The total rates vary from \$1.84 per \$100 in Clinton to \$4.00 in Chicago Heights, Harvey, Herrin, and Granite City. It should be remem-

TABLE VII. TAX RATES FOR ELEMENTARY SCHOOLS PER \$100
ON BASIS OF ASSESSED VALUE

CITY	Educational	Building	Total
Chicago Heights.....	3.00	1.00	4.00
Granite City.....	3.00	1.00	4.00
Harvey.....	3.00	1.00	4.00
Herrin.....	3.00	1.00	4.00
Eldorado.....	3.00	.75	3.75
DuQuoin.....	3.00	.50	3.50
East Moline.....	2.50	1.00	3.50
Centralia.....	2.51	.75	3.26
Waukegan.....	2.20	.67	2.87
Marion.....	2.00	.75	2.75
Hillsboro.....	2.00	.75	2.75
Litchfield.....	2.00	.75	2.75
Murphysboro.....	2.00	.75	2.75
Johnston City.....	1.82½	.91¼	2.73¾
Streator.....	2.45	.20	2.65
Spring Valley.....	1.75	.69	2.44
LaSalle.....	1.90	.30	2.20
Lawrenceville.....	1.68	.43	2.11
Ottawa.....			2.10
Clinton.....	1.62	.22	1.84
Average.....	2.34	.71	3.00

bered that in all of these cities the dual plan of school organization prevails and consequently an additional tax is levied for the support of the high school. Marion ranks eleventh among nineteen cities in its tax for educational purposes and seventh among nineteen for building purposes. When the total tax is considered it occupies tenth place among twenty cities. The average total tax rate is \$3.00; Marion's is \$2.75, slightly below the average. Since the ratio of the assessed valuation to the true value of property is less than the average for this group of cities, the real difference between the tax rate for Marion and that for the average of these cities is even greater. When considered with reference to the estimated true value of property the average tax rate has been calculated to be about \$.93; for Marion it is \$.69.

In addition to the amount which the citizens of the community contribute for school purposes, taxes are paid for municipal, county, and state purposes. The total tax rate was secured for several of these cities, and is given in Table VIII, together with the percent used for elementary schools. The total tax rates vary from \$8.45 per \$100 of assessed valuation to \$11.62. The percent of the total

TABLE VIII. TOTAL TAX RATES FOR ELEMENTARY SCHOOLS
ON BASIS OF ASSESSED VALUE

CITY	Total Tax	Percent spent for elementary schools
Harvey.....	10.23	39
East Moline.....	9.52	38
Chicago Heights.....	11.62	34
Eldorado.....	11.37	33
Hillsboro.....	8.45	33
Centralia.....	10.10	32
Streator.....	8.57	31
Johnston City.....	9.00	30
Waukegan.....	10.01	29
Marion.....	10.50	26

tax which is spent for elementary schools varies from 26 to 39. This percent is less in the case of Marion than in any of the other cities of this group. This means that Marion is attaching relatively less importance to elementary education than any of the other cities considered. This fact is very significant since it probably reflects something of the general attitude of the community towards its elementary schools.

Summary. When considered with reference to its educational needs, Marion's educational investment for 1922-23 is distinctly below the average of the group of cities with which comparison is made. If only current expenditures are considered Marion occupies an even lower place. With respect to the estimated value of school property, which is a rough index of the educational investment made, Marion ranks below the average of the group when the number of children in average daily attendance is taken, but above the average when the ratio to either the population or to the assessed valuation is taken. Marion ranks high with reference to indebtedness and low with reference to tax rate. If the tax rate were based upon true valuation rather than assessed valuation it is likely that Marion would occupy an even lower position.

Our data appear to justify these statements:

(1) Marion, when its population and wealth are considered, has been reasonably generous in providing a school plant. However, this plant does not meet the educational needs as well as they are met in other communities.

(2) Marion ranks distinctly below average in its current educational investment, but is spending more money than is being raised by taxation.

(3) The ratio of assessed valuation to true valuation seems to be somewhat lower in Marion than in other cities.

(4) Only 26 percent of the total taxes paid by the citizens of Marion is devoted to the elementary schools. This is a lower ratio than is found in any of the other cities of this group.

CHAPTER III

BUILDINGS AND EQUIPMENT

Dates of construction and original costs of buildings. The dates of construction and approximate costs of the six buildings in which the elementary-school system of Marion is housed are as follows:

Washington, 18 rooms (Manual Training Shop in basement), 1888 or earlier, \$10,000. Addition, 1896, \$8,000.

Logan, 16 rooms, 1902, \$20,000. Addition and refinishing, 1922, \$55,000.

Lincoln, 9 rooms (1 in basement), 1904, \$10,000. Second story and refinishing, 1921, \$40,000.

Jefferson, 9 rooms (1 in basement), 1908, \$16,000.

Douglas (colored), 3 rooms, 1912, \$5,000.

McKinley, 8 rooms, 1916, \$25,000.

The information furnished the Survey Staff did not indicate whether the figures given above included the cost of the site or not but this item was relatively small in all cases. The total of the above costs is \$189,000. In the questionnaire, which was used to gather facts relative to Marion's educational investment, the estimated present value of the school plant was given as \$350,000.

General status of buildings and equipment. In addition to the casual observations made by other members of the Survey Staff, Charles W. Odell and George W. Reagan rated the school buildings by the Strayer-Engelhardt Score Card. It was obvious that both buildings and equipment do not meet our present standards and hence probably tend to place limitations upon the efficiency of the work of the school. In this connection it should be noted that the need for improving the buildings and equipment had been recognized both by the superintendent and by the board of education.

The members of the Survey Staff were impressed by the fact that, with slight changes in the original plans, from one hundred to two hundred points, according to the Strayer-Engelhardt card, could have been added to the scores of four or five of the buildings. These changes would have involved no increase in cost in the majority of cases, and not more than 5 percent in any case. In judging the gen-

eral status of school buildings it should be remembered that our present standards, especially in regard to elementary schools, are largely a product of the last ten or fifteen years. The shortcomings of the older buildings at Marion are due in part to the date of their construction. With the possible exception of the Washington building, erected about 1888, an architect who claimed a knowledge of school-house construction has in every case been employed and his advice followed. It would appear, from the information secured, that the board of education has made an honest effort to provide satisfactory school buildings.

School buildings evaluated by the Strayer-Engelhardt Score Card for Measuring Elementary School Buildings. The authors of the Strayer-Engelhardt Score Card have had an unusual opportunity for studying school buildings and have formulated standards for judging them. The present card is the result of several years of experience in which they have evaluated more than a thousand school buildings. It is similar in its general structure to the score cards used by agriculturists for rating live stock and other farm products. It consists of a list of points which are to be considered in judging the building, and is accompanied by detailed instructions for evaluation with reference to each of these points. In most cases this evaluation is highly objective. In using this score card the two members of the Survey Staff worked independently and the scores given in Table IX are the averages of the two ratings.

Five major points are considered in judging a building: (1) site, (2) the building itself, (3) service system, (4) class rooms, (5) special rooms. Under each of these major heads there are a number of sub-items. In using the card a single item at a time is concentrated upon and a judgment formed with reference to it independently of all other items. Detailed directions for arriving at valid judgments are given. The various sub-items included under the five major divisions of the Strayer-Engelhardt Score Card for Measuring Elementary School Buildings are listed, as follows:

I. SITE

A. Location

1. Accessibility
2. Environment

B. Drainage

1. Elevation
2. Nature of soil

C. Size and form

II. BUILDING

A. Placement

1. Orientation
2. Position on site

B. Gross Structure

1. Type
2. Material
3. Height

- II. BUILDING (continued)
 - 4. Roof
 - 5. Foundations
 - 6. Walls
 - 7. Entrances
 - 8. Aesthetic balance
 - 9. Condition
- C. Internal Structure
 - 1. Stairways
 - 2. Corridors
 - 3. Basement
 - 4. Color Scheme
 - 5. Attic
- III. SERVICE SYSTEM
 - A. Heating and Ventilation
 - 1. Kind
 - 2. Installation
 - 3. Air supply
 - 4. Fans and motors
 - 5. Distribution
 - 6. Temperature control
 - 7. Special provisions
 - B. Fire Protection System
 - 1. Apparatus
 - 2. Fireproofness
 - 3. Escapes
 - 4. Electric wiring
 - 5. Fire doors and partitions
 - 6. Exit lights and signs
 - C. Cleaning System
 - 1. Kind
 - 2. Installation
 - 3. Efficiency
 - D. Artificial Lighting System
 - 1. Gas and electricity
 - 2. Outlets and adjustment
 - 3. Illumination
 - 4. Methods and fixtures
 - E. Electric Service System
 - 1. Clock
 - 2. Bell
 - 3. Telephone
 - F. Water Supply System
 - 1. Drinking
 - 2. Washing
 - 3. Bathing
 - 4. Hot and cold
- III. SERVICE SYSTEM (continued)
 - G. Toilet System
 - 1. Distribution
 - 2. Fixtures
 - 3. Adequacy and arrangement
 - 4. Seclusion
 - 5. Sanitation
- IV. CLASS ROOMS
 - A. Location and Connection
 - B. Construction and Finish
 - 1. Size and number
 - 2. Shape
 - 3. Floors
 - 4. Walls
 - 5. Doors
 - 6. Closets
 - 7. Blackboards
 - 8. Bulletin board
 - 9. Color scheme
 - C. Illumination
 - 1. Glass area
 - 2. Windows
 - 3. Shades
 - D. Cloakrooms and Wardrobes
 - E. Equipment
 - 1. Seats and desks
 - 2. Teacher's desk
 - 3. Other equipment
- V. SPECIAL ROOMS
 - A. Large Rooms for General Use
 - 1. Playroom
 - 2. Auditorium
 - 3. Library
 - 4. Gymnasium
 - 5. Swimming pool
 - 6. Lunch room
 - B. Rooms for School Officials
 - 1. Officers
 - 2. Teachers' room
 - 3. Medical suite
 - 4. Janitor's room
 - C. Other Special Service Rooms
 - 1. Household arts
 - 2. Industrial arts
 - 3. General science and drawing
 - 4. Store rooms

Ratings of Marion school buildings. The ratings for each building on the Strayer-Engelhardt Score Card are given in detail in Table IX. The maximum score for each item and also for the totals is placed in the first column. In interpreting the table the score for

TABLE IX. SCORES OF MARION SCHOOL BUILDINGS

ITEMS RATED	Maximum Score	Scores Assigned					
		Douglas	Jefferson	Lincoln	Logan	McKinley	Washington
I. Site							
A. Location.....	55	41	50	51	50	48	40
B. Drainage.....	30	22	21	23	21	21	18
C. Size and Form.....	40	25	25	25	25	25	20
Total.....	125	88	96	99	96	94	78
II. Building							
A. Placement.....	25	22	22	22	25	25	25
B. Gross Structure.....	60	41	44	53	46	52	30
C. Internal Structure.....	80	30	44	58	52	63	25
Total.....	165	93	110	133	123	140	80
III. Service System							
A. Heating and Ventilation....	80	20	19	36	31	37	15
B. Fire Protection System.....	65	30	26	15	18	22	14
C. Cleaning System.....	20	9	11	12	12	12	11
D. Artificial Lighting System....	20	6	2	11	11	13	5
E. Electric Service System.....	15	5	5	5	5	7	5
F. Water Supply System.....	30	2	10	10	11	10	10
G. Toilet System.....	50	8	25	35	29	32	25
Total.....	280	80	98	124	117	133	85
IV. Class Rooms							
A. Location and Connection....	35	35	30	30	32	35	30
B. Construction and Finish....	95	54	56	61	65	65	47
C. Illumination.....	85	57	64	62	64	67	50
D. Cloakrooms and Wardrobes..	25	5	19	19	12	19	5
E. Equipment.....	50	29	38	31	29	34	29
Total.....	290	180	207	203	202	220	161
V. Special Rooms							
A. Large Rooms for General Use.	65	5	0	3	11	8	3
B. Rooms for School Officials....	35	0	13	10	15	15	8
C. Other Special Service Rooms..	40	0	30	30	26	29	14
Total.....	140	5	43	43	52	52	25
Grand Total.....	1000	446	554	602	590	639	429

a building in each case should be compared with the maximum score. For example, the Douglas building received a score of 41 on location. This, when compared with the perfect score, 55, means that the Douglas building is reasonably well located. The Lincoln building has a score of 51 which indicates a location superior to that of the Douglas building. The total maximum score for site is 125. The

TABLE X. SUMMARY OF SCORES FOR ELEMENTARY SCHOOL BUILDINGS

Scores	Marion	Hackensack, N. J.	Ottawa, Kansas	Dodge City, Kansas	Lawrence Township Mercer Co. N. J. Rural	Large Cities*
900						1
800		1				1
700			2			15
600	2	2		1		47
500	2	1				80
400	2	1		1	1	63
300			3	2	4	66
200						31
100						24
0						6
T	6	5	5	4	5	334
Median	550	625	383	400	363	463

*Strayer, G. D. and Engelhardt, N. L. "Standards for elementary school buildings." New York: Bureau of Publications, Teachers College, Columbia University, 1923, p. 2.
The cities included are Atlanta, Baltimore, St. Paul, Omaha, and St. Joseph.

grand total of the scores received on all items is given on the lowest line of the table and is an index of the general status of the different buildings.

A study of Table IX reveals the shortcomings of the several buildings as indicated by the Strayer-Engelhardt Score Card. The Washington building, with a score of 429, is the poorest. The McKinley building, with a score of 639, although ranking highest, falls far short of the perfect score of 1000. When the various items are considered separately, a considerable variation from building to building is noted. For example, the ratings for the heating and ventilation system vary from 15 for the Washington building to 37 for the McKinley. The ratings for cloakrooms and wardrobes range from 5 for the Douglas and Washington buildings to 19 for the Jefferson, Lincoln, and McKinley.

Table X gives comparative scores for elementary-school buildings of other cities. In making comparisons between these scores and those for Marion, it should be borne in mind that probably the buildings in those cities for which scores have been reported are not typical of school buildings in general, because one motive for making the building survey was the recognition of the inadequacy of the buildings. Hence the status of elementary-school buildings in general

is probably higher than is indicated by this table. Another point to be borne in mind is that the cities for which comparative data are available are not similar to Marion in a number of respects. However, the conclusion is probably justified that the elementary-school buildings at Marion are not inferior to those in many other cities and are even superior to those in several cities. This conclusion, however, should not overshadow the fact that the buildings at Marion, particularly the Washington, are far from meeting present-day standards.

Location of buildings. The location of the buildings with reference to the distribution of the population of the district is reasonably satisfactory. A large majority of the children do not have to walk more than half of a mile to reach their school. The only marked exceptions to this are in the sixth, seventh, and eighth grades which are centered in one building.¹ In these grades some children are required to walk more than one mile but none as much as two miles. A few lower-grade children, who reside outside of the city limits, are obliged to travel more than one mile to reach the Jefferson building.

In general the environment of the schools is good. No other buildings that cause danger from fire or interference with the light are in close proximity. A few trees close to the Lincoln building interfere somewhat with the light in the rooms on the first floor. No particularly disturbing factors were noted in the environment, except for the dust from dirt streets, of which from one to four are next to each site, and for the railroad tracks in the immediate rear of the Washington grounds. In most cases the school grounds are surrounded by modest homes. At the Washington building, however, and to a lesser extent at the McKinley, there are a number of unsightly barns and other out-houses adjacent to the school grounds or immediately across the street.

Playgrounds and equipment. With the exception of the Washington school, from 125 to 200 or more square feet of actual playground space are provided for each pupil. The Washington school with only about 80 square feet per pupil is distinctly inadequate. The soil on the playgrounds is of the clay type found in Marion. At all buildings the surface of the grounds contains ashes, cinders, brick bats, broken glass, and other substances, which although they do not cover the entire grounds are present in such quantities as to

¹The sixth grade is housed in the Logan building and the seventh and eighth grades in the Washington building.

be decidedly undesirable. Certain parts of the playgrounds at the Jefferson and McKinley buildings and the one at the rear of the Washington building are unfit for play during rainy weather. On several of the playgrounds a number of shade trees are growing, and on others young trees have been started. Practically no attention appears to have been paid to developing lawns nor to gardens, shrubbery, etc.

Playground equipment is decidedly lacking at the Douglas, the only equipment consisting of one rickety pair of basket-ball goals. At the Washington there are four pairs of goals and two teeter boards. At the McKinley there are six teeter boards and at the Lincoln, nine. At the Jefferson building there is one pair of basket-ball goals and at the Logan four pairs of basket-ball goals, ten teeter boards, one slide, and an old tennis court used for volley ball. When the number of pupils in the respective buildings is considered, these provisions are seen to be entirely inadequate. On some of the playgrounds there are remains of apparatus that could be easily repaired. For example, there are uprights and crossbars for swings but no swings upon them, and supports for teeters but no boards.

Protection from fire. The McKinley building is the only one that can be considered fireproof. The Lincoln might be so considered if the furnace room were properly separated from the rest of the building. The new part of the Logan is reasonably satisfactory. In no cases are the stairways separated by fireproof enclosures from the rest of the building. The stairs in the Lincoln, McKinley, and new part of the Logan are of concrete and steel and are therefore fireproof. In the other buildings they are of wood construction. Three of the buildings are provided with a limited number of fire extinguishers but in the other three none could be found. In the Washington although there is a fire hose in the basement it is located so that it is comparatively inaccessible. The equipment of fire extinguishers and of fire hose is decidedly inadequate.

A few years ago the board of education had fire escapes constructed at the Jefferson, Lincoln, and Washington buildings. These fire escapes are stairways constructed of concrete and extend at right angles from the walls of the building. At the Jefferson these escapes are located so that direct exit from all four second-story rooms is possible. At the Logan building the fire escapes are conveniently located for the second-story rooms in the older part of the building. At the Washington building the escapes serve directly

only a portion of the second floor. The construction of the fire escapes is such that the steps, unless precautions are taken, are likely to be icy during the greater part of the winter. No inquiry was made concerning the practice in regard to these outside stairways; but if they were not kept free from ice they would be dangerous in case of fire. The outside doors to the buildings are in general narrower than the vestibules or corridors; some are provided with panic bolts but not all of these are in good working order. Many of the children would not be able to open the doors. The electric wiring appeared to be satisfactory except at the Washington and Douglas buildings, the condition at the former being particularly unsatisfactory.

Need for repairs. Probably the most conspicuous condition observed in the survey of the buildings was the lack of repair. In every building there are a number of broken panes of glass, this number exceeding thirty in one case. Many of these windows were broken last year if not earlier. Also there are many cracks and even some holes in the plastering. Evidences of leaks in the roof were also noted. In the McKinley building the walls have been defaced by pupils and in the Douglas building the original color, because of the smoked condition from the furnace, is hardly recognizable. The walls in the Washington building are much soiled and in need of redecorating. The leaders on several of the buildings should be repaired. A number of the interior doors in the Logan building have sills under them which should be moved and which had been placed by the architect, the principal explained, in spite of the protest of the board of education. There appears to be great laxity in keeping the toilet rooms in order. For example, in the Washington building the only lavatory in which the boys can wash is out of order and has been so for a long time. In the Lincoln building almost half of the toilet facilities cannot be used and most of those that are unusable have been so for several months. Several drinking fountains were observed which work improperly or not at all. Perhaps one cause of this condition is the attitude of the janitors, one of whom explained that he knew the school board was short of funds and therefore did not have the heart to report broken window-panes or to ask for repairs.

Classrooms. The number of classrooms is inadequate. In order to relieve the congestion, basement rooms in two buildings are being used for instructional purposes. In both the Logan and Washington buildings it is necessary to use some small rooms which are not

suitable for classrooms and which are very much crowded at certain times of the day. With the exception of these rooms the size of the classrooms is reasonably satisfactory and closely approximates the standard of fifteen square feet of floor space and two-hundred cubic feet per pupil. However, because of the unusually large number of pupils in certain classes there are one or more rooms in every building in which these standards are not met. The shape of the classrooms is not entirely satisfactory; many are approximately square, or wider than they are long.

The classroom floors are of wood. Those in the McKinley are in good condition and those in the Lincoln and Logan buildings are reasonably satisfactory. However, the floors in the Washington building are badly worn, many boards being loose so that they squeak when one walks over the floor. There are also a number of cracks. The walls are generally of a rough finish, and, as has already been noted, are in need of cleaning or painting.

The blackboards are uniformly of good material but in almost all cases are placed too high. In the Washington building, for example, the bottom of many of them is 36 inches from the floor. Some are even higher. In other buildings many, if not most, of the blackboards are from three to six inches too high for the children using them. The best conditions are found in the McKinley building. For the first two grades the bottom of the blackboards should be about 24 inches from the floor, and should be increased about one inch for each grade up to the eighth. In general, the amount of blackboard space is satisfactory except in the Lincoln building and in the small rooms of the other buildings. In the Lincoln building there are several rooms in which not more than half of the pupils can work at the blackboard at one time. Good bulletin boards are provided in the Lincoln and Logan buildings and less satisfactory ones in the McKinley, Washington, and Douglas. The Jefferson has none at all. A narrow bulletin board placed above the blackboard was found in some of the buildings. This practice is to be commended.

The glass area for lighting is sufficient at the Douglas building and except in the basement rooms at the Jefferson and Lincoln buildings. In each of the other three buildings several rooms do not have sufficient window space. The standard ratio of glass area to wall space is from one-fourth to one-fifth. The placement of windows, however, is not good in a number of instances and in no cases are standard requirements met. All windows should be at the left

of the pupils when they are seated, should reach almost to the ceiling and should be from three to three and one-half feet from the floor; the mullions should not exceed one foot in width; and from five to seven feet of dead-wall space should be left at the front of the room. The Logan building first and the McKinley second most nearly approximate the standards. In the other buildings there are rooms which have windows on at least two sides; in many cases the mullions are too wide and the windows are found too near the front of the room.

All of the buildings are wired for electric lights but the number of lights provided is entirely inadequate. The general provision appears to be four lights to a room. However, in many cases, this provision was not met and bulbs were often missing. One teacher expressed herself concerning a room in the Washington building that contained but one bulb: "I would just as soon have a fire-fly turned loose in the room as to use this light on a dark day." The light is direct in all cases, although at the McKinley opaque globes are used.

The cloakrooms in the Jefferson, Lincoln, and McKinley buildings and the newer part of the Logan building are reasonably satisfactory. In the other buildings the accommodations are unsatisfactory. Closets for the storage of supplies and teaching equipment have been provided in only a few of the classrooms. A number of the present closets are too small.

Classroom equipment. The chief criticism of pupils' desks is the small number of adjustable ones. In some of the buildings there are a considerable number of the adjustable type but no evidence that any use was made of this feature. Many of the teachers' desks are unsatisfactory, some being entirely too small. In several rooms the teacher has only a table and consequently no place for storing books and papers away from the dust. The number of chairs in many rooms is insufficient. Frequently a member of the Survey Staff found that when he visited a classroom the teacher was forced to offer him her own chair or none at all. The number of maps, charts, supplementary readers, reference books, and other items of teaching equipment is much less than that found in many elementary schools. In general the teaching equipment may properly be described as inadequate for highly efficient instruction.

The school system as a whole is practically without so-called special rooms. Four of the buildings have large rooms that might be used as auditoriums, although none of them are so equipped. In

three of the buildings these rooms are on the second floor. However, with the exception of the Douglas school in which the enrollment is small, only a small percent of the pupils could be assembled in even these rooms. At three of the buildings, the Lincoln, Logan, and McKinley, there are one or two basement rooms which might be fitted up to be used as play-rooms in bad weather. Accommodations could not be provided for all pupils at the same time but at least those in the primary grades could be taken care of and perhaps those in some other grades if recesses were given at different times. It would be possible to provide play-rooms at the Douglas and Jefferson buildings although some expense would be involved.

The only building having a lunch-room is the Logan, and the room itself is all that is furnished by the board of education. The furniture and equipment belong to private individuals. In view of the fact that except in the Washington and Logan buildings most of the pupils reside in the immediate vicinity of the school attended, there probably is no need for additional lunch-rooms in any building but the Washington. There is a principal's office in all of the buildings except the Douglas. In three, the Jefferson, Logan, and McKinley, there are teachers' rooms but in no cases are they properly equipped. In none of the buildings is there a library, gymnasium, swimming-pool, or janitor's office other than the furnace room. At the Washington building there is an industrial-arts room and an inadequately equipped sewing-room. There is no room for teaching cooking and drawing.

Summary. The elementary-school buildings at Marion have a number of shortcomings, several of which could easily be remedied. Others are partially or wholly inherent in the construction of the buildings and cannot be easily corrected. The present use of the basement rooms due to crowded conditions is to be condemned. The buildings as a group probably approach the average of the buildings in similar cities. No city should be satisfied, however, to *approach the average* because school buildings in general, particularly those for elementary schools, are far below present-day standards and probably constitute a distinct handicap upon the efficiency of elementary education.

CHAPTER IV

TEACHING STAFF AND QUALITY OF INSTRUCTION

Teaching staff. The teaching staff of the elementary schools of Marion consists of fifty-five teachers, six principals, a supervisor of music and the superintendent of public schools. In the tables of this chapter the superintendent of schools and the supervisor of music are omitted.

Training. Of the sixty-one teachers and principals, thirty-nine have had less than thirty-six weeks of training in a normal school or college. Fifteen other teachers have had as much as one year, but less than two years. Of the remaining seven teachers, five have had two years beyond the high school, one, three years and one, over four years. Comparative data are not available for other cities in the southern part of the state. It is, therefore, not possible to state the rank which Marion has with respect to the training of its teachers but this amount of training is generally considered inadequate preparation for efficient teaching in the elementary schools.

The lack of training has been recognized by the board of education which required thirty-five teachers to attend school during the summer of 1923. A number of other teachers voluntarily attended summer school. If such attendance is continued, the status of the teaching staff with respect to training will be materially increased during the next few years.

Experience. Only three teachers reported no experience prior to the present year. Eight were engaged in their second year of teaching. Five have had twenty-five years or more of experience; twenty-one have had ten years or more. The median number of years is seven, the mode is four years. Slightly less than one-half of the teachers have taught only in the schools of Marion. This means that Marion has not been able to attract a sufficient number of experienced teachers and has found it necessary to employ teachers without experience and in many cases without adequate training.

Salaries. Marion has not had a definite salary schedule although the board of education has been working toward one. The present practice, with some exceptions, may be described as follows. The teach-

TABLE XI. SALARIES OF TEACHERS AND PRINCIPALS

SALARY	GRADES								TOTAL
	I	II	III	IV	V	VI	VII	VIII	
\$ 630.00				1					1
652.50			5	2					7
675.00		1	2	1	1				5
720.00			1						1
787.50		4		3	3	6			16
810.00		2							2
900.00	1						2		3
1012.50	8	1					7	2	18
1125.00							1		1
1305.00								1	1
1350.00								1*	1
1575.00					3*	1*		1*	5
Total	9	8	8	7	7	7	10	5	61
Average	1000.00	807.31	666.56	710.36	1108.93	900.00	1001.25	1251.00	919.55
									852.14†

*Principals.

†Average, omitting principals.

ers in the first, seventh, and eighth grades are started usually at a salary of \$112.50 per month or \$1012.50 for the term of nine months. In the other grades the usual beginning salary is \$70 per month, and an increase of \$2.50 per month each year is allowed until the salary reaches \$87.50 per month as a maximum. The maximum salary for principals is \$1575 per year.

A summary of the salaries by grades is given in Table XI. The low salaries paid to teachers in the third, fourth, fifth, and sixth grades are perhaps the most significant features of this table. Although Marion's practice in assigning the most poorly paid and hence, in general, the least efficient teachers, to these grades is not unusual, it is probably unwise. The foundation for the later work is laid in these grades and it is highly important that the so-called "tool subjects" be well taught.

Salaries of elementary-school teachers in other cities. Table XII gives a distribution of the salaries of elementary-school teachers in 260 cities having a population between 5000 and 10,000.¹ These salaries are for 1923. It should be noted that some salaries lower than

¹"Teachers' salaries and salary trends in 1923." National Education Association Research Bulletin, Vol. 1, No. 3. Washington: National Education Association, 1923, p. 16.

TABLE XII. DISTRIBUTION OF SALARIES OF ELEMENTARY SCHOOL TEACHERS IN 260 CITIES HAVING A POPULATION BETWEEN 5000 AND 10,000. 1922-1923.*

Salary	Number of teachers	Salary	Number of teachers
\$2500	1	\$1300	890
2400	2	1200	1201
2300		1100	1269
2200		1000	914
2100	1	900	681
2000	7	800	499
1900	10	700	156
1800	52	600	159
1700	127	Below 600	38
1600	210		
1500	552	Total	7551
1400	782	Median	\$1204.95

*"Teachers' salaries and salary trends in 1923." National Education Association Research Bulletin, Vol. 1, No. 3. Washington: National Education Association, 1923, p. 16.

those paid in Marion are reported but in general they are distinctly greater. The median, \$1204, is above the average for Marion. In the same bulletin from which Table XII is taken the median salary for Illinois is given as \$1016. This is probably a better criterion to use in judging of the salaries paid in Marion than the distribution given in Table XII.

Purchasing power of a dollar a factor in comparing salaries.

In making comparison between salaries paid in different cities, consideration should be given to the purchasing power of a dollar. If the cost of living is high in a given community a salary of \$1,500 per year may be actually less than one of \$1,200 per year in another community where the cost of living is much less. No statistical information was secured concerning the purchasing power of a dollar in Marion, but the observation of the Survey Staff and casual conversation with certain residents lead to the conclusion that living costs are somewhat less than in a number of cities of Illinois. Probably the statement is justified, that the purchasing power of a dollar in Marion is greater than for the average of the state as a whole. If this is true, the difference between the salaries paid in Marion and in other places in the state is somewhat less than indicated by comparisons made in the preceding paragraph.

Size of class. The average daily attendance in rooms in which the instruction is not departmentalized is about forty-three pupils. The enrollment, however, is considerably greater than this. Seven teachers reported fifty or more pupils in average daily attendance. In a recent study² the average class size for elementary schools in Illinois is shown to be approximately thirty-six pupils. This figure refers to enrollment and not to average daily attendance. Hence it is clear that Marion should be placed among those cities in which the class size is distinctly larger than the average. In the departmentalized work the teachers meet from eight to ten sections a day, the average size of each section approximating thirty pupils. There are, however, three teachers who meet each day eight sections, four containing fifty-two pupils and four, sixty pupils. This makes a total of 448 pupils to be instructed in the course of the day. Another teacher meets eleven sections of twenty-eight pupils each.

Although evidence is lacking to show the effect of class size upon the achievements of pupils, undoubtedly the teachers in Marion are being forced to carry a heavier load than is the usual practice in Illinois. As a result it is not unlikely that they do not find the time and energy to do their work as well as it should be done.

Quality of instruction. With the exception of Charles E. Chadsey, each member of the Survey Staff spent some time in visiting classrooms for the purpose of observing instruction. No systematic attempt was made to evaluate the instruction and the report on this phase of the survey must be considered the result of somewhat casual observation. The poor quality of some of the teaching observed should not be considered wholly the fault of the teachers. In a few cases classes are held in rooms which are entirely unsuitable, blackboard space is inadequate, equipment is lacking, and the room is so crowded that the teacher cannot move about among her pupils.

Some excellent teaching was observed. Certain teachers were well acquainted with the subject, asked appropriate questions and exhibited interest in their work. The recitation moved along without loss of time and the pupils gave close attention to the lesson. On the other hand, there were a few teachers who appeared to be doing poor work. The questions asked by them would be rated low when

²Odell, Charles W. "The progress and elimination of school children in Illinois." University of Illinois Bulletin, Vol. 21, No. 38, Bureau of Educational Research Bulletin No. 19. Urbana: University of Illinois, 1924.

judged by present-day standards. Far too many memorized statements from the text were called for. More questions should have been asked which would have required thinking on the part of the pupils. Several teachers appeared to have formed the habit of repeating answers given by pupils. This is not considered good practice as it tends to waste time and the pupils do not feel the responsibility for stating their answers so that they will be heard and understood by all members of the class. Errors in the language of some teachers were almost as numerous as in that of their pupils.

In the actual recitation there was frequently a waste of time. This was noted particularly in the arithmetic work at the blackboard. There was evidence that the pupils had not been trained to work rapidly in making calculations. A number of pupils were noticed who erased their work after having nearly completed the example they were doing. No apparent reason for this was observed other than their feeling of the necessity for giving the appearance of being busy. Several teachers seemed to have the custom of requiring pupils to explain examples in the fundamental operations. This is not considered a profitable way to spend the time of the class. In general the discipline was good both in the classroom and upon the playground; no instance of gross disorder was observed by any member of the Survey Staff.

When the general quality of all of the instruction observed is considered it should be reported as somewhat below the average of that in other schools with which the members of the Survey Staff are acquainted. Certainly it is below that of recognized standards. The lack of enthusiasm and interest which was noted on the part of some teachers is perhaps not surprising in view of the teaching load that they are asked to carry and of the salaries that they receive.

Summary. Marion pays relatively low salaries and hence the teachers whom it has been able to attract are, for the most part, inadequately trained. The teaching load is heavy. The provisions for supervising the instruction and for the training of teachers in service are very inadequate. In the judgment of the Survey Staff the quality of instruction is below average, but probably not lower than should be expected when salaries, training, and provisions for supervision are considered.

CHAPTER V

COURSE OF STUDY

No printed course of study. Marion has no printed course of study. The superintendent stated that a number of years ago a course of study was printed but all copies of it seem to have disappeared. The state course of study is not used unless an individual teacher wishes to do so. At the monthly meetings of the teachers the work of the next month is outlined, and at the end of each week the superintendent requires a statement from each teacher relative to the amount of work accomplished.

Time allotments. From typical daily programs and from a general outline of the work, the number of hours per year given to the various subjects was calculated. These time allowances, together with the norms determined by Holmes¹ are given in Table XIII. The following classification by Holmes in his descriptions of the type of work included under the various subjects was used in Marion.

Reading—including phonics, literature, dramatics, story-telling, memorization of poems.

Language—including composition, grammar, punctuation, pronunciation, word study.

Spelling.

Penmanship.

Arithmetic—including algebra, geometry, business arithmetic.

Geography—including physical and commercial.

History—including civics.

Science—including nature study, elementary science, physiology and hygiene.

Drawing—including picture study, art.

Manual training—including industrial training, handwork, etc.

Physical training—including athletics, gymnastics, folk dancing.

Recess.

Miscellaneous—including unassigned time, study, etc.

The number of hours per year was calculated as follows. If the daily program showed that twenty minutes per day was given to a subject, this number was multiplied by five in order to secure the number of minutes per week; this product was in turn multiplied by thirty-six, the number of weeks in the school year; the total number

¹Holmes, Henry W. "The distributions by subjects in grades in representative cities," Fourteenth Yearbook of the National Society for the Study of Education, Part I. Chicago: University of Chicago Press, 1915, p. 21-27.

TABLE XIII. TIME ALLOTMENTS FOR MARION AND HOLMES' STANDARDS (HOURS PER YEAR. M=TIME ALLOTMENT FOR MARION. S=STANDARD TIME ALLOTMENT.)

SUBJECT		GRADES							
		I	II	III	IV	V	VI	VII	VIII
Opening Exercises	M	90	90	135	60	90			
	S	38	38	38	35	32	31	31	31
Reading.....	M	204	90	60	54	69	90	60	60
	S	266	235	188	153	126	117	98	97
Language.....	M	45	60	90	75	45	75	90	90
	S	75	79	94	106	116	118	134	142
Spelling.....	M	*	75	75	75	60	90	90	45
	S	54	66	73	67	61	58	52	51
Writing.....	M	45	54	63	36	54	54	54	54
	S	50	60	52	53	50	47	39	37
Arithmetic.....	M	*	135	60	54	60	90	90	90
	S	60	96	131	149	144	146	140	142
Geography.....	M				39	45	30	90	45
	S	16	7	50	83	102	107	98	76
History.....	M	45			†		60	90	120
	S	27	31	35	57	67	71	91	117
Science.....	M								
	S	37	41	40	37	34	40	45	57
Drawing.....	M		36	42	24	36	36	36	36
	S	98	54	56	53	50	50	50	49
Music.....	M	60	60	45	75	75	90	90	90
	S	45	84	47	48	45	45	45	44
Manual Training..	M							45	63
	S	42	47	40	45	50	57	72	74
Physical Training.	M	15	15	15		15			
	S	46	41	40	40	38	40	38	39
Recess.....	M	150	90	90	90	90	180	90	90
	S	87	83	83	77	73	70	66	66
Domestic Science.	M							45	
	S								63
Ready to Work....	M	45							
	S								
Study.....	M					30			
	S	76	63	87	77	79	78	78	87
Hygiene†.....	M					45	15	30	
	S								

*First grade spelling and numbers are taught second half of first year.

†History stories classified under Reading.

‡Hygiene and Health not accounted for in daily program. 6th, 7th and 8th grades.

of minutes was then reduced to hours. In the case of subjects which were not taught throughout the school year the last multiplier was changed to the number of weeks during which the subject was actually taught.

A study of Table XIII shows a number of marked departures from the standards given by Holmes. The meager time allotment for many of the subjects at Marion is due in part to the fact that the pupils assigned to a teacher are instructed in three groups. In each case the time allotments for Marion represent the actual number of hours spent by the pupils in recitation; those devoted to study are not included. If we accept the standards stated by Holmes as representing the amount of time which should be devoted to instruction in the various subjects, it is very clear that Marion is not giving sufficient time to instruction in reading, language, arithmetic (except in Grade II), and geography. No instruction is being given in science except the work in hygiene. The time allowed spelling, writing, music, and recess is in excess of Holmes' standards. The limited time allotments for reading and language are particularly significant, and are probably one of the most potent causes for the relatively low achievements of pupils as shown by standardized tests. (See Chapter VI.)

Textbooks. Several of the textbooks were written a number of years ago. Among the most conspicuous of these are the Blodgett readers (1910) and the Wentworth-Smith arithmetics (1907). The Alexander spelling book which is used was prepared in 1910. In view of the improvements, which have been made in the textbooks in these subjects within the last ten or fifteen years, it is likely that those used at Marion cannot be classed among the best of the available textbooks at the present time. The superintendent has already recognized the need for better texts, and mentioned that he was looking forward to a change not only in reading, arithmetic, and spelling but in certain other subjects as well.

Supplementary reading texts. Marion has not supplied adequate supplementary reading material. In no grade do the children read more than two books. A number of sets of supplementary readers should be available for each teacher, and the children, especially in the first six grades, should have this opportunity to read suitable books. Under present conditions undue emphasis is placed upon oral reading. More attention should be given silent reading but this cannot be done satisfactorily until more generous provision is made for supplementary reading material.

A few teachers had sensed this need for additional reading material; one was encouraging her children to bring books from home which they would lend to their classmates. Such practices are commendable but the responsibility for providing sufficient supplementary reading material should rest with the school authorities and not with the individual teacher.

CHAPTER VI

ACHIEVEMENTS OF SCHOOL CHILDREN

Testing program. The following standardized tests were used in Marion for measuring the capacities of the school children and their achievements.

The Burgess Picture Supplement Scale, Grades II and III.

Pressey Primary Classification Test, Grades II and III.

Pressey Intermediate Classification Test, Grades IV, V, and VI.

Pressey Senior Classification Test, Grades VII and VIII.

Illinois General Intelligence Scale, Grades IV to VIII.

Monroe's General Survey Scale in Arithmetic, Grades IV to VIII.

Monroe's Standardized Silent Reading Test, Grades IV to VIII.

Stanford Achievement Test, Grades VI to VIII.

All of these tests were given during the week, October 22 to October 26, under the direction of Ruth Streitz. The tests were administered by the teachers who had been instructed by Miss Streitz in regard to the procedure to be followed. With the exception of the Stanford Achievement Test, the test papers were scored by the teachers. This scoring, however, was sampled by a trained assistant and when a teacher was found to have followed a wrong method, the test papers were re-scored. The scoring of the Stanford Achievement Test and all of the tabulations were done at the Bureau of Educational Research under the immediate direction of a member of the Bureau Staff.

Quality of pupil material. The quality of the pupil material was measured by means of the Illinois General Intelligence Scale and the Pressey Classification Tests. The average quality of the pupil material, as revealed by the Illinois General Intelligence Scale in the several grades, is shown by the median mental ages which are given in Table XIV. A comparison of these median scores with the norms¹ which are also given in the table show that grade for grade the

¹These norms are based upon scores obtained by giving the Illinois General Intelligence Scale in cities during the month of October.

Monroe, Walter S. "The Illinois Examination." University of Illinois Bulletin, Vol. 19, No. 6, Bureau of Educational Research Bulletin No. 4. Urbana: University of Illinois, 1921, p. 66.

TABLE XIV. MEDIAN MENTAL AGES, ILLINOIS GENERAL INTELLIGENCE SCALE

Grade	Marion	Norms
VIII	14- 0	14-4
VII	12- 2	13-1
VI	11- 0	12-0
V	10- 0	10-8
IV	8-11	9-5

quality of the pupil material is below standard. The difference between the median scores for Marion and the norms varies from almost a year in the sixth grade to only four months in the eighth grade. It is possible that a constant error was introduced in the Marion scores in some unknown way, but it is not thought that this error can be very large. This belief is corroborated by the results of the Pressey Classification Tests (see Table XV), although these results are not entirely consistent with those secured by means of the Illinois General Intelligence Scale. The median scores for the Pressey Primary Classification Test in Grades II and III are almost identical with the grade norms. As the Illinois General Intelligence Scale was not given in these two grades no comparison is possible. Above the third grade the median score for Marion is in each case below the norm although the difference in certain grades is relatively small. This corroborates the results of the Illinois General Intelligence Scale. It appears therefore that at least above the third grade the quality of the pupil material in the Marion city schools is below that found in the corresponding grades in other cities.

The mental age status of the pupils assembled in any grade depends upon the native intelligence of the pupils, and also upon the average age entrance and the general policy of promotion. If the average age at entrance is low and if a liberal policy is followed in promoting pupils we may expect to find the average mental age of the pupils in the several grades below the average for other cities.

Progress of pupils through the school. In another study² by

²Odell, Charles W. "The progress and elimination of school children in Illinois." University of Illinois Bulletin, Vol. 21, No. 38, Bureau of Educational Research Bulletin No. 19. Urbana: University of Illinois, 1924.

The data for this study were collected during the autumn of 1922. Hence they may not truthfully represent conditions at the time of the survey, although it is very unlikely that marked changes have taken place.

TABLE XV. MEDIAN SCORES FOR THE PRESSEY CLASSIFICATION TESTS

	GRADES						
	II	III	IV	V	VI	VII	VIII
Marion.....	47.7	57.4	26.9	50.9	64.0	21.7	30.9
Grade Norm.....	47.8	57.0	34.6	52.3	66.8	24.2	31.2

the Bureau of Educational Research the amount of retardation in the Marion schools is shown to be slightly greater than that for the state as a whole. The average rate of progress for Marion was found to be .83 while the average for a group of twenty cities similar to Marion in population was .88. This means that in Marion the pupils progress through the school system at a rate which on the average will require almost half of a year more to complete the eighth grade than is required in other Illinois cities. The pupils of Marion at the present rate of progress would require more than nine and one-half years to complete the work of the eighth grade provided all pupils remained in school. Only 1 percent of the pupils were found to be making fast progress and 33 percent had made slow progress. The average over-ageness for Marion was found to be .5 of a year; that for other Illinois cities .4 of a year. For Marion, 40 percent of the children are over-age for their grade as against 36 percent for other cities.

The retardation of pupils in the Marion schools should serve to increase rather than decrease the median general intelligence in the several grades. Hence it is likely that the quality of pupil material is somewhat less than that found in cities in other sections of Illinois.

Overlapping in quality of pupil material. The distributions of the point scores of the Illinois General Intelligence Scale for the several grades are given in Table XVI. The most conspicuous feature of this table is the large amount of overlapping in the quality of the pupil material between the several grades. There is one pupil in the fourth grade who made as high a score as the best pupil in the eighth grade. On the other hand, there are a few eighth-grade pupils whose general intelligence as measured by this scale is only slightly above the median for the fourth grade. A large amount of overlapping indicates that the pupils are not well classified with

TABLE XVI. DISTRIBUTION OF SCORES FOR ILLINOIS GENERAL INTELLIGENCE SCALE

Grade	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	Total	Median
IV	6	30	98	87	54	36	19	7	2		1	2		1								343	34.3
V		12	45	68	65	70	37	14	8	2	1	2	2	1								327	45.6
VI		2	6	25	64	79	68	36	9	1												290	55.8
VII			1	4	28	55	48	46	30	17	5	1	1									236	66.2
VIII				3	6	14	28	35	48	35	18	23	5	2								217	84.7

TABLE XVII. SUMMARY OF MEDIAN SCORES FOR SILENT READING

TEST	GRADES						
	II	III	IV	V	VI	VII	VIII
Monroe, Rate							
Marion			116.3	129.8	156.9	175.6	179.1
Grade Norms.....			125.5	145.5	161.6	171.3	188.6
A. Q.							
Marion			102	102	101	102	110
Grade Norms.....			102	102	101	101	106
Monroe, Comprehension							
Marion			6.1	8.7	10.6	11.8	13.7
Grade Norms.....			8.5	10.5	11.5	12.8	14.0
A. Q.							
Marion			104	108	104	103	101
Grade Norms.....			103	108	104	101	100
Burgess							
Marion73	2.26					
Grade Norms.....	2.0	4.0					
Stanford							
Marion					131		185
Grade Norms.....				123	152	172	188

reference to the work of the school. It appears that there are a number of pupils in each of the grades who are attempting studies which are too difficult for them, and also that there are a number of bright pupils who are not being given educational opportunities commensurate with their capacities. In this connection it should be noted that in the grades represented there has been a somewhat systematic attempt to divide the classes into sections according to their capacity to do the work of the school. Thus, the range of intelligence for any group is probably much less than might be supposed from an examination of Table XVI. This plan of adjusting the school to the pupil should be continued. It probably should be supplemented by a reclassification of pupils; some should be allowed extra promotions, and a few possibly should be demoted until they have demonstrated their ability to do the work of the advanced grade.

Achievement in silent reading. The achievement in silent reading was measured by means of the Monroe Standardized Silent Reading Test, Revised, in Grades IV to VIII and by the Burgess Picture Supplement Scale in Grades II and III. It was measured also in

Grades VI and VIII by three sub-tests of the Stanford Achievement Test. The median point scores together with the grade norms are given in Table XVII. The point scores represent the absolute achievement of the pupils. However, the quality of pupil material at Marion has been shown to be below the average for other cities and it is very important that we take this fact into consideration in interpreting measures of achievement. The Achievement Quotient (A.Q.) is a device for such a procedure. It is obtained by dividing the achievement (expressed in terms of achievement age) by the mental age, and represents the ratio of a pupil's achievement to his capacity to achieve. For the measures of achievement measured by Monroe's Standardized Silent Reading Test, the A.Q.'s also are given in Table XVII. A comparison of these with the grade norms shows that, when the quality of the pupil material is considered, the achievement of the pupils in Marion, as measured by this test, is up to or above the norms. The median scores for the Burgess Picture Supplement Scale are conspicuously below the grade norms. The test proved to be unsuitable for pupils in the second grade, many of whom were unable to do a single exercise. The Pressey Primary Classification Test (Table XV) shows that the quality of the pupil material in the second grade was up to standard. It therefore appears that the pupils in the second and third grades have not received sufficient instruction upon the type of reading measured by the Burgess Picture Supplement Scale. The three reading tests included in the Stanford Achievement Test are designed to measure "power" in silent reading rather than "skill." In this respect their function is different from the Monroe Standardized Silent Reading Test, Revised. Hence, the measures of achievement obtained by means of these tests are not comparable with those obtained by other tests. A comparison of the median score for Grades VI and VIII with the norm indicates that, when allowance is made for the quality of pupil material, the children of these grades are on the average up to standard in the type of silent reading ability measured by the Stanford Achievement Test.

Achievement in arithmetic. Achievement in arithmetic was measured by means of Monroe's General Survey Scale and by two of the sub-tests of the Stanford Achievement Test. The median point scores and the grade norms for these two tests are assembled in Table XVIII. A comparison of the median point scores with the

TABLE XVIII. SUMMARY OF MEDIAN SCORES FOR ARITHMETIC

TEST	GRADES				
	IV	V	VI	VII	VIII
Monroe General Survey					
Marion.....	13.6	18.9	35.9	39.8	46.6
Grade Norms.....	21.3	35.3	46.0	56.0	62.6
A. Q.					
Marion.....	87	88	99	98	87
Grade Norms.....	97	102	102	102	100
Stanford Arithmetic					
Marion.....			139		207
Grade Norms.....		138	174	198	221

grade norms shows that in general the pupils in Marion are distinctly below the norms. They are found to be deficient in skill in performing the operations of arithmetic even when the quality of the pupil material is considered by use of the A.Q. When the instruction was being observed an apparent lack of training in rapid work was noted (see page 38), and this may account for the low scores made on Monroe's General Survey Scale in Arithmetic, which is a timed test. The median scores for the Stanford Achievement Test, which measures power rather than skill, are below the grade norms by approximately the amounts that would be expected from the measurement of general intelligence. It, therefore, appears that the pupils at Marion are more proficient in "power" than in "skill" but it is doubtful if the existing conditions should be viewed with complacency.

A comprehensive survey of achievements in Grades VI and VIII. The Stanford Achievement Test includes three sub-tests in silent reading, two in arithmetic and one each in the following subjects: nature study, history, language, and spelling. This elaborate battery of tests was given to all pupils in Grades VI and VIII in order to secure a comprehensive survey of the achievements of the pupils in these grades. The median scores together with the grade norms³ are assembled in Table XIX.

³The norms are taken from the revised list issued April, 1924. These are for the end of the second month of school.

TABLE XIX. MEDIAN SCORES ON THE STANFORD ACHIEVEMENT TESTS

TEST	Marion Grade VI	Norms		Marion Grade VIII	Norms	
		Grade V	Grade VI		Grade VII	Grade VIII
Reading.....	131	123	152	185	172	188
Arithmetic.....	139	138	174	207	198	221
Nature Study.....	33	31	43	58	54	63
History.....	19	12	18	44	24	32
Language.....	18	18	23	33	29	34
Spelling.....	96	88	110	157	133	152
Composite Score....	43	41	52	67	61	69

Table XIX shows that in the sixth grade the median scores for Marion are distinctly below the norms. In fact, with the exception of history, the median scores are nearer the scores for the fifth grade than for the sixth. This means that, as measured by this battery of tests, the sixth-grade pupils in Marion are over one-half year behind those in other schools.

The eighth grade showing is somewhat more favorable to Marion. In history and spelling, the median scores are above the norms for the grade. With the exception of arithmetic and nature study, the median scores in the other subjects are nearer the norms for the eighth grade than for the seventh. These more favorable results are probably partially accounted for by the fact that a large number of children have dropped out of school by the time the eighth grade is reached. Table XX shows that the enrollment in the sixth grade is 287 and in the eighth grade, 204.

It should be remembered that in this interpretation of Table XIX no reference has been made to the quality of pupil material. In Table XIV it was shown that in the sixth grade the median mental age was one year below the standard, and in the eighth grade it was four months below. When these facts are taken into consideration, it is evident from the Stanford Achievement Test that the pupils in Marion have achieved as well if not better than pupils of corresponding mental ages in other cities. This showing is somewhat more favorable than that indicated by the Illinois Examination.

TABLE XX. DISTRIBUTIONS OF THE COMPOSITE SCORES ON THE STANFORD ACHIEVEMENT TEST

Grade	0	10	20	30	40	50	60	70	80	90	100	Total	Median
VI		1	19	79	124	47	15	2				287	43
VIII				3	7	34	78	48	31	3		204	67

Overlapping of achievement. The distributions of the composite scores for the Stanford Achievement Test are given in Table XX. These distributions show much overlapping in achievement. There are a number of pupils in the eighth grade whose total achievement as measured by this elaborate battery of tests is below that of the sixth grade. In both grades there are a number of pupils whose achievements are so far below the norms for their grade, that their work cannot be considered at all satisfactory. This overlapping of achievement may, of course, be explained when we recall that a similar overlapping was shown in the quality of the pupil material.

Summary. The quality of the pupil material at least above the third grade, as shown by the results of the intelligence tests, is inferior to that found in other cities when pupils in the corresponding grades are considered. The median achievements of the pupils in silent reading are distinctly below the corresponding grade norms, but when the quality of the pupil material is considered, the achievement quotients (A.Q.'s) are either up to the norm or slightly above. In arithmetic, Marion is distinctly below standard even when the A. Q.'s are considered. In the other subjects in which the achievements of pupils were measured, the standing of Marion is less satisfactory than in silent reading and arithmetic. It seems fair to say that on the average the pupils at Marion are completing the eighth grade about one year behind the average of pupils in other schools.

If we take as our concept of the efficiency of the school system the quotient obtained by dividing the outcome or product of the system by the investment, it appears that the elementary schools of Marion compare favorably in efficiency with other systems in which the achievements of pupils are greater. In other words, the citizens of Marion appear to be securing a fair return for their educational investment. However, it is the judgment of the Survey Staff that this

condition should not be interpreted to mean that no increase in the educational investment is desirable. On the contrary, as indicated in other chapters of this report, it is believed that Marion might profitably make a larger educational investment. This should be accompanied by a corresponding increase in the achievements of the pupils. It is likely that the increase would be even larger and that the ratio of the output of the public schools to the investment would be greater than it is at the present time.

CHAPTER VII

RECOMMENDATIONS

The purpose of a survey. A survey of a school system fails in its fundamental purpose if as a result of the careful consideration of the actual conditions of the school system there cannot develop certain constructive recommendations which, if carried out, will result in improved conditions as to most of the specific items in which the system has been found to be unsatisfactory. An even stronger statement can be made; when a comparison with other school systems operating under approximately similar conditions reveals the fact that the school system surveyed ranks well below the average or median of the cities, it is pertinent to inquire whether such a condition is justifiable. It is true that occasionally a school system may, on account of a combination of financial and social conditions over which the board of education has and can have no control, find itself well below the average of similar school systems. It is also conceivable that school systems in general may as to certain points be spending a relatively too large amount. The contrary assumption, however, is probably in the vast majority of cases the correct one. Few boards of education can be charged with over-emphasizing education and with expending an unjustifiably large amount of money on their public school organizations. Comparisons as to the educational efficiency of the various systems are even more significant when the question of modifications of school conditions is under consideration. When a school system is found to be well below the average in the apparent educational efficiency of its students, the demand for modifications which will improve these conditions becomes almost imperative. The ability, however, of a community to furnish the funds necessary for improved conditions does vary greatly and sometimes actually prevents reorganizations as fundamental as desirable.

Increase in financial support for public schools. On the whole it is not unsafe to assume that few communities are so situated that educational improvement is financially impossible. Even where the legal limit of taxation has been reached it still becomes possible for a community to attempt at least to secure conditions making possible improvement through legislative enactment.

Despite these general statements concerning the ability or lack of ability of the community to improve its educational conditions it is true that boards of education not infrequently find themselves unable to cope with the financial demands of the situation. The electors of our school districts still retain certain fundamental powers with reference to the control of the schools. If, therefore, a community has not become convinced of the need for improvement, boards of education may be unable to secure the funds necessary for improvement. In order to adopt the recommendations contained in this chapter it will undoubtedly be necessary to convince the voters of Marion that more liberal financial support must be given to their school system. As a requisite preliminary to the actual adoption of the recommendations of this chapter the people will have to be convinced that the board of education should be empowered to levy, if necessary, the maximum amounts permissible under the present school law, both for maintenance and buildings. Those making the survey hope that, with proper publicity given in the community to the disadvantages under which the school system at present labors, authority to levy a maximum tax of \$4.00 on each \$100.00 of assessed valuation and authority to increase the bonded indebtedness of the district sufficiently to relieve the congested conditions of the school system may be assured through vote of the people. With this as a primary and absolutely essential preliminary recommendation the more specific suggestions follow.

Educational investment commensurate with educational needs. The survey points out clearly the fact that as compared with the group of cities of similar size in the State of Illinois the number of pupils enrolled in the elementary schools of Marion per one thousand of population is greater than that in any of the other cities. It follows, therefore, that Marion must accept the fact that she must have a relatively greater financial burden to assume in order that the children whose education is dependent upon her educational facilities shall not be at a disadvantage as compared with other cities. In spite of this unquestioned heavy burden the survey points out that when the seventeen cities are compared as to total current expenditures Marion spends less than fourteen of the seventeen, and that when the expenses for instruction are analyzed, only thirteen of sixteen cities compared spend more than Marion. The survey also indicates that as to general expenses for maintenance Marion is at the foot of the

list. These facts show without any chance for discussion that Marion should have available a larger amount of money for the actual maintenance of her schools. Good equipment cannot be secured without heavy expenditure, well-trained teachers cannot be engaged without a salary schedule which is comparable to that of other cities. Fundamentally, therefore, no real advantage can be taken of the specific facts indicated in the survey, without the securing by the community of increased funds for school maintenance.

An analysis of the tables presented as to total expenditures per pupil again shows that Marion is not meeting financially the needs for the education of its children as well as the average city of the state. On the other hand, it is true that when the population of the city or the wealth of the community, as indicated by the assessed valuation, is used as an index of valuation Marion is meeting these needs somewhat better than the average. This fact, however, cannot be accepted as justifying the continuance of present conditions. The outstanding fact is that the amount of money available for the education of the individual pupil in Marion is far less than in the average city. A similar study of all of the tables in regard to the financial condition of the district does not in any way modify the general conclusion.

Building program. The chapter which has to do with the buildings and equipment points out that while there are many buildings used in the cities of the United States no better or even worse than the buildings in Marion, on the whole their condition is not satisfactory. Many of the minor defects can easily be overcome by a more liberal expenditure on the maintenance and upkeep of the buildings. It would not be the part of wisdom to recommend the scrapping of any of these buildings. It is extremely difficult to convince a community that the abandonment of a school building is advisable unless it can be proved that it is unsafe or extremely insanitary. Neither statement can be made as to the school buildings of Marion. While in some cases the light is insufficient and while the ventilation is not up to accepted standards, yet a reasonable expenditure of money can make all of the buildings conform fairly satisfactorily to such standards. The statistics, however, do show distinctly that additional school facilities are necessary. Although the admittedly low efficiency of instruction is not by any means entirely due to the overcrowded conditions, an improved condition as to seating capacity with the

inevitable better opportunity for classification of pupils would result in improvement in the effectiveness of instruction.

In making specific recommendations as to increased building facilities, one must always take into consideration the location of the present buildings, the distances which children have to travel to reach the nearest school building, the present centers of population and the probable tendencies as to the future growth of the community. The school district of Marion is not especially large and even at present few pupils have to travel an unnecessarily long distance. Two or three specific methods of relieving the situation deserve consideration. One of these would be the abandonment of the Washington School and the erection of a reasonably large elementary school in approximately the same vicinity. The objection to this solution of the problem has already been suggested in the preceding paragraph. It would be difficult, even impossible, to convince a community that the sacrifice of one building not absolutely unfit for use is justifiable.

Another method of procuring relief is one which requires consideration inasmuch as certain neighborhoods have desired the erection of a small elementary school building which would be closer to the children of their section of the school district than any of the existing buildings. This argument is always made by localities. The board of education, however, needs to make its decisions not on the basis of the desires of certain communities but in harmony with generally accepted educational principles. One of these is that small school buildings are wasteful, unnecessarily expensive in administration and result in lessened educational efficiency. There are hundreds of school systems today suffering from a plethora of small elementary school buildings. If the school building has from eighteen to twenty-four rooms there can always be better organization, better classification of pupils and more efficient administration than where the same number of rooms is found in four or five separate buildings. The board of education, therefore, would err in accepting the desires of that section of the community for a small elementary building.

The third method of relieving the congestion would be through the construction of an addition to the Logan School. While this building as rated on the Strayer-Engelhardt Score Card is by no means satisfactory, as a matter of fact, it is well above the average school building of the country, both as to location and type of architecture, and could have an addition to good advantage. The character of the addition should depend somewhat upon the proposed

type of educational requirement. If what is commonly known as the platoon system or the work-study plan be adopted, the addition must of necessity include a small auditorium, a gymnasium, and the customary laboratories found in an up-to-date elementary school. If the superintendent and the board of education determine that the platoon system is not to be utilized, the chief argument for the inclusion in the addition of an auditorium is lessened. Whatever the system finally adopted may be, it is the judgment of the Survey Staff that an addition of this sort should include the gymnasium for proper physical instruction and the customary laboratories and shops of a modern school building.

A fourth suggestion while not coming within the supposed consideration of the Survey Staff should not be overlooked. There is a comparative unanimity of belief among educators that the so-called 8-4 plan, meaning eight years of elementary-school and four years of high-school training, is not destined permanently to remain the common form of public-school organization. All over the United States these traditional school systems are being organized on the basis of a six-year elementary school, a three-year junior high school and a three-year senior high school. This survey is not the place to go into a discussion of the advantages and disadvantages of this plan. The fact is that this change in organization has been going on for ten or twelve years and there is little doubt but that this trend will continue. The present conditions in Marion prevent the adoption of such a plan. If, however, the present township high school located in Marion were a part of the local school district the relief to the school congestion would be of a very decided character. In that event the community through its elected officials should determine whether it would not be better to relieve the elementary-school congestion through the taking over by the high school of the work of the seventh and eighth grades. Then, the high school could reorganize its work on the basis of the junior-senior high-school plan. This, of course, cannot be done under the legal limitations of Illinois. It does raise the question, however, whether it would not be wise for Marion to join with other cities in the state in an effort to change the school law in such a way that all township and community high schools could be organized to accept, when desirable, this additional educational responsibility.

If it is determined that the congestion of the elementary-school system of Marion must be taken care of by the elementary-school

district, it is the judgment of the Survey Staff that the third plan is the best and that competent architects should be employed to study the situation with reference to the possibility of an addition which would enable the Logan School to take care of the pupils at present in attendance, and, in addition, of the pupils of the seventh and eighth grades now housed in the Washington School. If this were done, through a careful redistricting of the rest of the city all of the schools could be relieved, and the departmental system of organization could be established in the Logan School, including the sixth, seventh, and eighth grades. This would make possible a reorganization with most of the advantages obtainable in the ordinary junior high school.

Salaries and teaching staff. The chapter which has to do with the teaching staff and quality of instruction brings out very clearly the fact that the school children of Marion are not securing as efficient instruction as they should. While part of this, as pointed out heretofore in this chapter, is due to the congested conditions and the disadvantages under which the teachers labor, in the judgment of the Survey Staff the major difficulty is due to the lower standards as to professional training which are in force. When it is realized that an ever increasing number of school systems fix, as the minimum of professional and academic preparation of its elementary teachers, graduation from a high school, with at least two years of professional training such as is given in the teachers' colleges of Illinois, the insufficient preparation of the great majority of the Marion teachers is obvious. The Staff recommends that the board of education, having secured authority for levying an increased tax-rate, adopt a schedule of salaries comparable to those in effect in the cities of the state where two years of professional training in addition to graduation from high school are required, and that in the selection of new teachers from year to year only teachers who meet this minimum standard be employed. It would obviously be unjust to penalize teachers now in the employ of the district for their failure to comply with these minimum qualifications. It would, however, be perfectly proper for the board of education to insist that within a reasonable time the professional training of these teachers be increased to the point that the minimum standards are met. Some districts, anxious to improve the efficiency of teachers in service, encourage attendance at summer schools through giving a slight bonus—fifty dollars, for instance—to teachers who have accom-

plished a minimum amount of work in a summer school of accepted standards. Another way, of course, is to insist, in the case of teachers where it is practicable, that leave of absence be secured to enable the teacher to obtain the necessary training. It is fundamentally clear that through some method or other the teaching corps of Marion should reach a considerably higher level of efficiency than exists at the present time. A study of the salaries paid the teachers of Marion as compared with those paid in the other cities listed in the tables shows quite clearly the need for a more liberal teachers' salary schedule than at present obtains, but with the increased salaries there should be attached higher standards of professional training and accomplishment.

Course of study. The chapter dealing with the course of study brings out quite clearly the desirability of a systematic investigation, conducted under the supervision and direction of the city superintendent, of the curriculum. Experience has shown that there is no better method for securing real increase in efficiency of teachers in service, save of course actual attendance at summer schools or teachers' colleges, than through a systematic effort to reorganize and prepare according to the modern principles of education the curriculum in use in the school system. There is a sufficient body of literature available to make it possible for genuinely efficient service to be rendered in the direction of improved curriculum construction. Proper consideration given by the teachers to the problems of the curriculum with due regard to the preparation and maturity of the pupil of each grade undoubtedly results in an attitude which is conducive to more effective teaching.

Summary. The recommendations of those making this survey are summarized as follows:

1. The securing, from the electorate, of the power to levy a tax of three mills for maintenance, and one mill for building.
2. The securing, from the electorate, of authority to issue bonds sufficient to construct an addition to the Logan School.
3. This addition should be in conformity with modern ideas as to efficient elementary school buildings, and should include, at least, in addition to a sufficient number of recitation rooms, a gymnasium; laboratories for cooking, general science and geography; manual training shops; and a library.

4. A revision of the salary schedule including the adoption of a minimum requirement that all new teachers employed in the Marion elementary schools shall be graduates of a high school and shall have had at least two years of professional training after graduation.

5. A plan by which teachers at present employed in the Marion schools shall within a reasonable period be able to meet the minimum qualifications for new teachers.

6. A systematic plan through which the teachers now in service may have an opportunity to make a thorough study of the problems of the elementary-school curriculum out of which there shall develop a definite course of study covering the work from the first to the eighth grade.

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