A CRITICAL STUDY OF PUBLIC SCHOOL COSTS IN KANSAS FROM 1896 TO 1925

A THESIS

SUBMITTED TO THE DEPARTMENT OF EDUCATION AND THE GRADUATE COUNCIL OF THE KANSAS STATE TEACHERS COLLEGE OF EMPORIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

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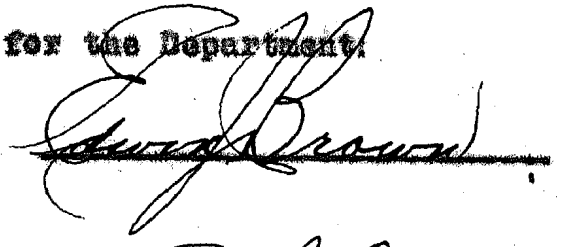

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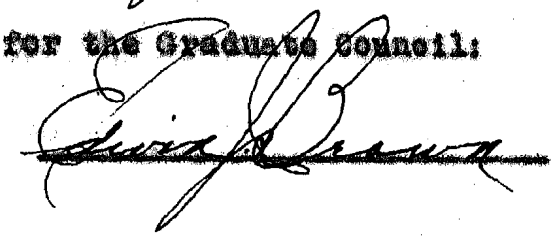

FOREWORD

Acknowledgement is due Dr. Edwin J. Brown, under whose direction this study was completed. Dr. Brown not only suggested the possibilities of a study of this kind, but rendered valuable assistance in guiding the study and correcting the manuscript.

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INTRODUCTION

The people of Kansas have always taken a great interest in education. Early in Kansas history, schools had been established. Shawnee Mission, in Johnson county, was established when the entire white population of the territory was less than one thousand. One of the first, if not the first school districts in Kansas had its schoolhouse near the present town of Marion, and the district extended from thence south to the state line, and west to the state line. In 1860, the territorial population had increased to seven thousand of school age, and the annual school expenditure was $20,000. Today, there are close to five hundred fifty thousand children of school age and almost twenty thousand teachers. The yearly expenditure has been conservatively fixed at forty-one million dollars.

The evolution of education in Kansas, as in most other states, has been marvelous. The school today has been elevated to somewhat the same position that the churches enjoyed in the middle ages. Education is regarded with a certain religious zeal and fervor, which tends to make the school the treasure-house of civilization. Majestic school buildings, splendidly equipped, are the pride of every progressive community. Highly trained teachers carry on the instruction under increasingly competent supervision. Communities seem to vie with each other to provide the most modern and complete educational facilities.

All of this has come about through the willingness of the public to spend more and more of its money for educational purposes. School expenditures have increased so rapidly, however, that during the last quarter century, and particularly since 1918, the problem of providing the funds for school maintenance has become increasingly acute.

The sudden rise in school costs is so startling that the first impulse is to conclude, immediately, that the cost of schooling in Kansas must be clearly out of proportion to the service rendered and without justification. The tax-payer is certain that educational costs must come down to reason. The casual observer will not stop to consider the factors involved in producing the increase in costs, nor will he attempt to analyze a possible increase in the service rendered. It is more certain that he will not consider the amount spent for education in relation to the amounts spent for other purposes. The bare fact that there has been a huge increase in costs will be sufficient evidence of the need to call a halt on school expenditures.

The purpose of this study, therefore, is, (1) to show the mounting costs of education in Kansas during the thirty year period, 1898 to 1928; (2) to show the various factors involved in producing that increase; (3) to show evidences of a greater educational service being rendered, and to point out possibilities of waste and inefficiency in school expenditures; (4) to show the relation of teachers' salaries to increased costs; and (5) to show whether or not school expenditures in Kansas are out of proportion to its ability to pay.

The statistics upon which this study is based are taken from the biennial reports of the state superintendent of public instruction from 1898 to 1928. Special emphasis is laid upon the reports of 1898, 1908, 1913, 1918 and 1928 in order that the thirty year period may be broken up into ten and fifteen year periods for comparison and contrast.

Unfortunately, the statistics for the school year ending in 1930 were not available, and it was impossible to bring the study up to the present date. In view of the fact that the cost of living materially decreased after 1928, it would have been decidedly interesting to have traced the effect, if any, of this decrease upon school costs. To have determined whether or not the tremendous increase in expenditures during the last decade has improved the educational ranking of Kansas in relation to other states likewise would have been worthy of study. The glaring inequalities in the distribution of the expenditures with consequent failure to provide equal educational opportunity have not been presented. Limitation in the nature of the data available made a complete analysis of school costs an impossibility. School costs are not sufficiently itemized for this purpose; high school costs are not separated from elementary school costs; variation in the form of presenting data from year to year sometimes rendered pertinent material inaccessible.

Many studies have been made of the problem of financing education, most notable of which for the state of Kansas perhaps, are presented in the Complete Report of the State School Code Commission, January 15, 1929. This report presents a proposed codification of school laws for Kansas, with an abundance of

data to sustain the necessity of some of the proposed changes which are designed to bring about a more equitable distribution not only of taxes, but of school expenditures.

The problem of financing education is closely related to, but not a part of the problem of the study of school costs. As school costs increase, the problem of providing the funds naturally becomes more serious, particularly when the source of revenue remains unchanged; but the purpose of the study of school costs is not to show the way for a more equitable distribution of the tax burden, nor to uncover nor discover new means of financial support. A study of the nature of this one is rather concerned with the causes back of increased school costs, with an attempt to show where the increased costs are being distributed. If it is known for what reasons more and more money is being spent; if it is known whether or not the increase in costs has been inevitable or unjustified; and if educational expenditures are seen in relation to expenditures for other purposes, the problem of providing the funds is quite obviously clarified.

It is this information which the study presumes to set forth.

Chapter I

THE MOUNTING COSTS OF EDUCATION

Probably no two facts concerning the school systems of the state are more evident to the public in general, and educators in particular, than first, the steadily growing numbers who are taking advantage of the educational opportunities offered to them, and second, the rapidly increasing sums of money being expended for making those opportunities possible. Although these two facts go hand in hand, each being affected by the other, the item of expenditures commonly receives the widest publicity and evokes the most general comment.

The figures showing the number of children in average daily attendance in the public schools of Kansas, by years from 1898 to 1928 are given in Table I (page 6), which also shows the total expenditures for the support of schools each year. These data are taken from the Twenty-sixth Biennial Report of the State Superintendent of Public Instruction in Kansas.

During the thirty year period 1898 to 1928, the number of children in average daily attendance in the common schools of Kansas increased from 256,934 to 357,029, a gain of 38.9%. In the same period, the population of the state had increased from 1,390,969 to 1,828,425, or 31.4%. The gain in school attendance, therefore, exceeded the gain in population. It is also noteworthy that this gain in the school attendance figures had been made despite the fact that the proportion of school children to the whole population had been falling off slowly but steadily during the thirty year period. In 1898, the number of

TABLE I.--AVERAGE DAILY ATTENDANCE AND ANNUAL EXPENDITURE IN PUBLIC SCHOOLS OF KANSAS. 1898 to 1928.

Year	The number of children in average attendance*	Dollars expended for education*
1898	256,934	3,760,426
1899	252,136	4,360,472
1900	261,785	4,622,365
1901	259,039	4,566,209
1902	273,197	4,804,562
1903	288,197	5,812,708
1904	258,493	5,604,578
1905	206,634	5,829,515
1906	280,879	6,309,808
1907	276,713	6,873,704
1908	290,904	7,335,443
1909	289,674	8,336,352
1910	291,329	9,800,070
1911	295,776	10,209,954
1912	298,129	11,158,255
1913	299,368	11,309,136
1914	310,803	12,210,174
1915	308,892	12,573,540
1916	311,267	13,603,925
1917	318,463	18,593,740
1918	288,236	17,070,394
1919	300,713	18,451,856
1920	309,505	22,512,308
1921	319,690	30,962,494
1922	339,769	33,819,376
1923	347,242	35,738,641
1924	363,840	34,993,030
1925	353,503	35,753,141
1926	357,041	38,303,036
1927	349,293	40,979,360
1928	357,029	39,409,848

Read table thus: In 1898, there were 256,934 children in average daily attendance in the public schools of Kansas, and the total school expenditures was $3,760,426. In 1899, etc.

*All figures in connection with this study are for elementary and secondary schools only.

school children listed in the annual school census represented 35% of the entire population of the state; in 1928, the figure was 29%.

Figure 1 (page 8) pictures graphically the increase in the number of pupils by ten year periods from 1898 to 1928.

Another significant factor to be noted is that while the school census for 1928 found but 45,575 more children of school age in the state than there were in 1898, the schools had enrolled 85,180 more children, and the average daily attendance had increased 100,185. These figures would indicate greater efficiency upon the part of the schools in enrolling eligible pupils, and in enforcing compulsory attendance laws.

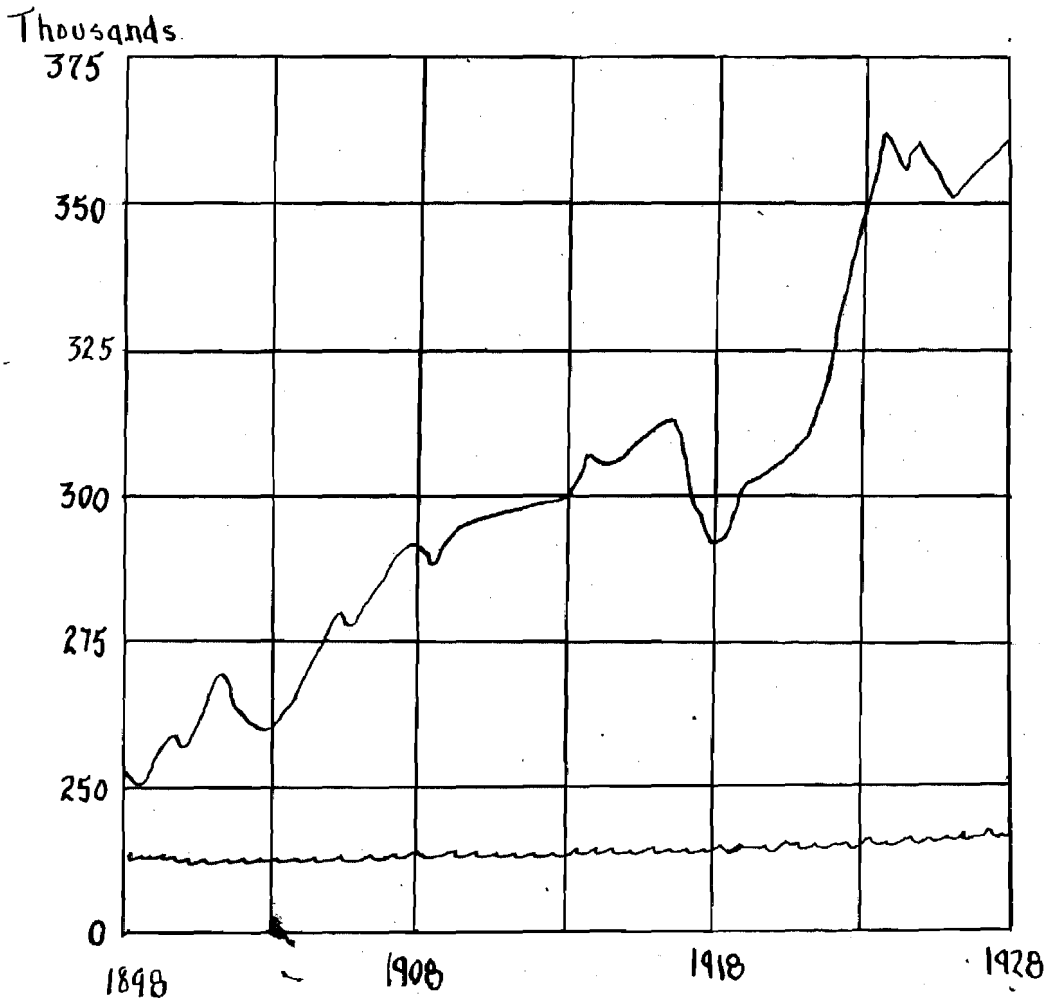
Figure 2 (page 9) is a graphical representation of these three factors, showing the per cent the school enrollment is of the census, and the per cent the average daily attendance is of the enrollment at intervals of ten years throughout the thirty year period.

The greatest increase in each of the three factors, census, enrollment and attendance, occurred during the last ten year period, 1918 to 1928. In those ten years, the census increased 33,533, and the enrollment 30,105, while the average daily attendance jumped 68,793, almost three times as fast as the census, and over twice as much as the enrollment.

While the growth in school attendance is in itself remarkable, the rise in school expenditures is astounding. In the third column of Table I (page 6) are figures showing the total cost of education in the public schools of the state each year. The fact is at once apparent that school expenses have increased

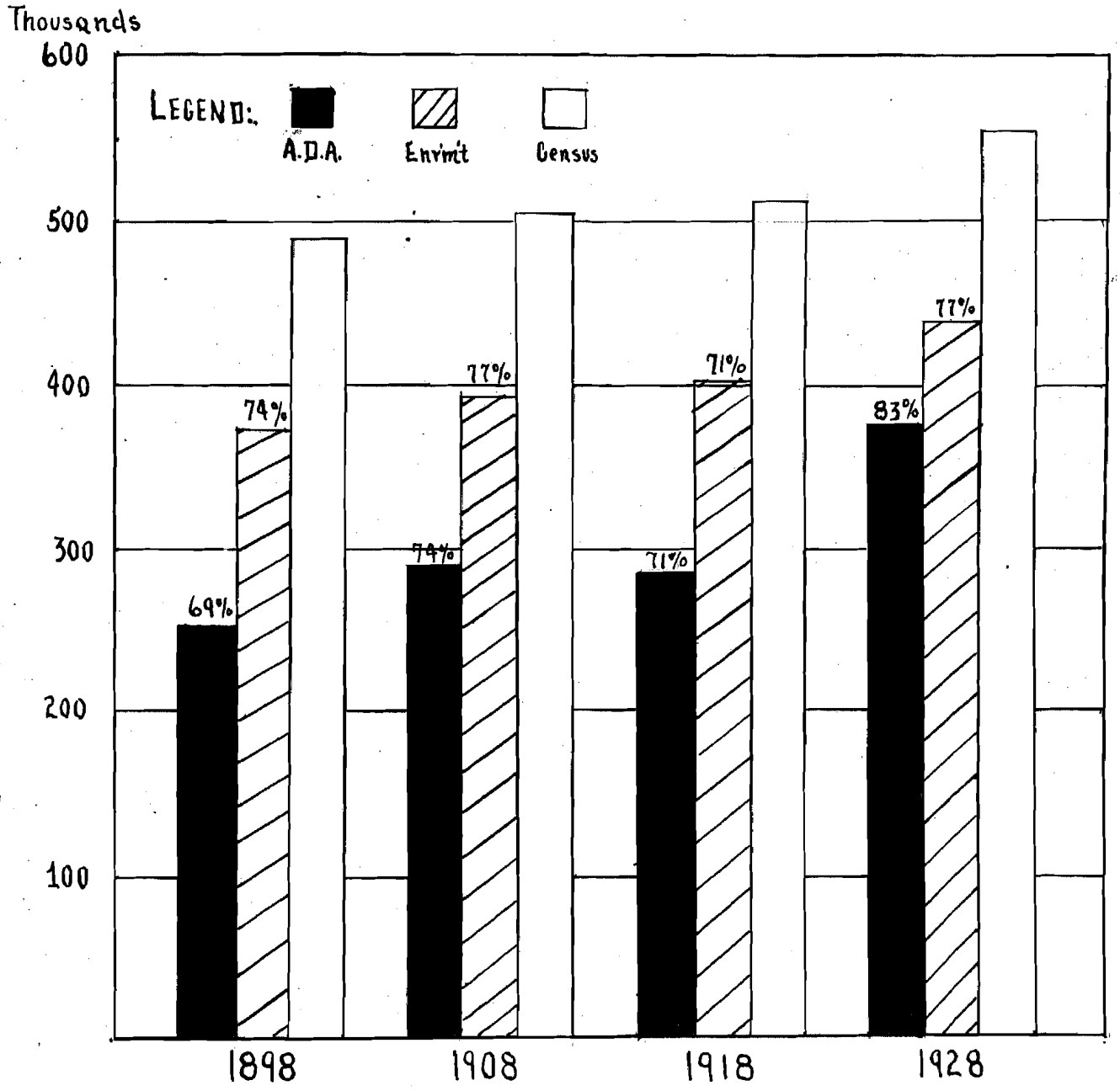
Figure

~~DIAGRAM~~ 1.--AVERAGE DAILY ATTENDANCE AT PUBLIC SCHOOLS IN KANSAS. 1898 to 1928.



Read figure thus: In 1898, the average daily attendance in the public schools of Kansas was 256,000. In 1908, 290,000, etc.

FIGURE 2.--SHOWING RELATION OF ENROLLMENT TO CENSUS, AND AVERAGE DAILY ATTENDANCE TO ENROLLMENT AT TEN YEAR INTERVALS DURING THE THIRTY YEAR PERIOD, 1898 to 1928.



Read figure thus: In 1898, the average daily attendance was 256,934, 69% of the enrollment which was 370,340. The enrollment, in turn, was 74% of the census, which was 495,949. Read in like manner for 1908, 1918, 1928.

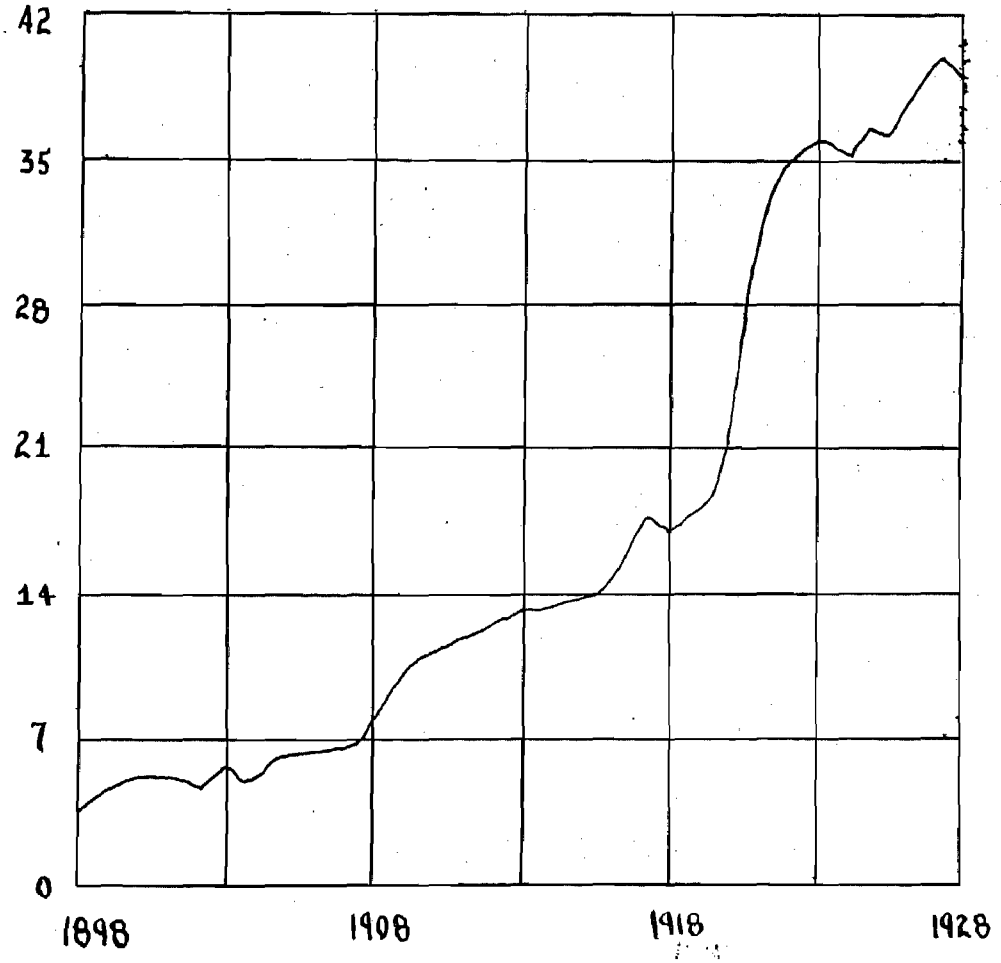
much more rapidly than the number of children in attendance at schools. While the number of pupils was increasing from 256,954 to 357,029, the expenditures went from $3,760,426 to $39,409,848.86. This represents an increase of 937%; the increase in attendance, 38.9%. At the beginning of the period, 1898, schooling cost $14.63 per child in attendance, but at the end of the period it cost $110.38, almost seven and one-half times as much.

Figure 3 (page 11) shows graphically the rise in school costs from 1898 to 1928. Again, the period of greatest increase is the period 1918 to 1928. Up to 1918 the rise in expenditures had been steady and gradual, but from that date the costs zoomed upward rapidly until about 1922, when the curve leveled out somewhat for about five years, and then rose rapidly again in 1922.

Figure 4 (page 12) shows in comparison the trend in attendance and the trend in costs. They both start in the year 1898 and this point is arbitrarily taken as 100%. The figures for 1908, 1918 and 1928 are then computed in relation to their percentages of the 1898 figure, respectively. For instance, in 1908 the expenditure was $7,355,443. This amount is 192% of the school expenditure for 1898, $3,760,426, which has been taken as the base. The figures for the years 1918 and 1928 have been computed likewise, and located upon the graph accordingly.

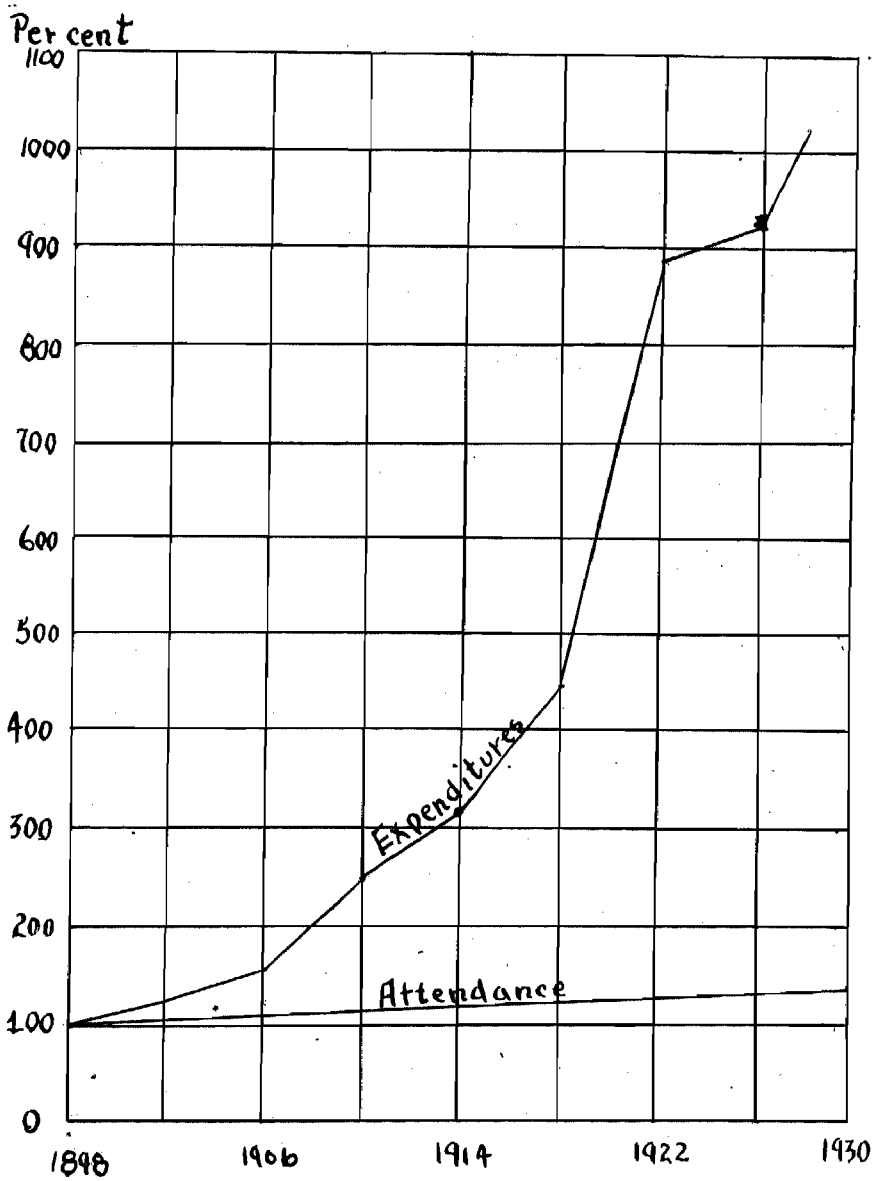
While the increase in attendance is best illustrated by a straight line on the graph, the trend of the school costs is

FIGURE 3.--ANNUAL EXPENDITURES FOR EDUCATION IN KANSAS. 1898 TO 1928.



Read figure thus: In 1898, the total expenditure for education in Kansas was $3,760,426; in 1908, the amount had increased to $7,335,443; in 1918, etc.

FIGURE 4.--AVERAGE DAILY ATTENDANCE AND EXPENDITURES, 1898 TO 1928, IN PER CENTS OF FIGURES FOR 1898.



Read figure thus: With the year 1898 as a starting point, expenditures increased 166% by 1906, 321% by 1914, etc. Read attendance figures in like manner.

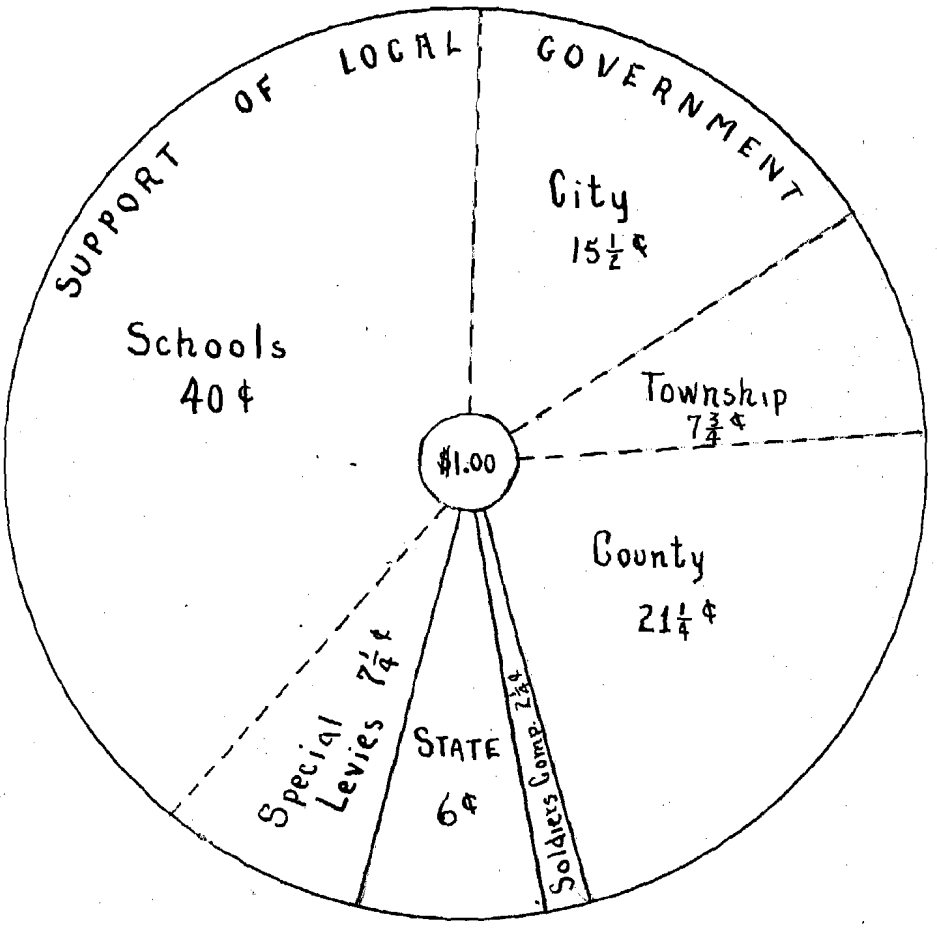
clearly a curve, with the rise more rapid as the years go by. The number of children attending school increased in arithmetical progression, but the expense of schooling them increased in geometrical progression.

In a way, these conditions are somewhat similar to what happens in financial practice. The number of children in attendance increased as would a sum of money at simple interest in which the annual increase is a fixed percentage of the original amount. The expenditures increased at compound interest and the annual increment was a percentage of all the previous increments plus the base.

In other words, the average increase in the number of children each year has been a fixed percentage of the original number in 1890, while the average increase in the expenditures each year has been a fixed percentage of the year previous. It is not meant that it is an inherent property of increases in attendance and costs to gain in such a manner, but it is the actual occurrence in this instance, as would be seen if regression lines were computed for each factor.

Since the American people decided early that there should be as nearly as possible equal educational opportunity for all; and that, therfore, the schools should be free and open to every person who should come; and, in addition, enacted compulsory attendance laws making schooling mandatory for the children of their several states, the rising cost of education has been quite naturally reflected in a corresponding rise in the size of the public tax bill. That the cost of education

FIGURE 5.--THE TAX DOLLAR--WHERE IT GOES. STATE OF KANSAS, TAX YEAR 1923. (Read figure thus: For every dollar collected in taxes, 40¢ goes for school puppposes, 15½¢ for city government, etc.)



Read figure thus: Forty cents out of every tax dollar was spent for schools; 15½¢ for the support of city government; 7 3/4¢ for township government; etc.,

is responsible for the entire increase is claimed by no one, but the fact remains that the cost of maintaining the common schools of the state does consume a considerable portion of the tax dollar in Kansas.

Figure 5 (page 14) shows how the tax dollar in the State of Kansas was spent for the tax year, 1922. Schools, then, used forty cents out of every tax dollar; or, in other words, two-fifths of the entire tax bill was given over to educational purposes.

It is noteworthy that practically the entire amount of this school tax is local in source. That is, it is a bill which each school district votes upon itself; the amount received from the state is negligible in comparison. The tremendous rise in school expenditures, hence, has not come about except by and with the sanction of the patrons of the schools. This fact is significant in that it reflects in some measure the respect which the citizenry of Kansas hold for the power and purpose of education in the welfare of the state.

SUMMARY

1. The average daily attendance in the public schools of Kansas has increased 39% from 1898 to 1928.

2. School expenditures in the state were over ten times as much in 1928 as in 1898.

3. Attendance figures have increased much more rapidly than either the census or enrollment figures.

4. Two fifths of the total tax bill in 1928 was being absorbed by the school expenditures of the state.

5. The period of greatest expansion occurred during the last ten years, 1918 to 1928.

6. Fully ninety per cent of the school tax is raised locally, that is within each school district.

CHAPTER II

AN ANALYSIS OF SCHOOL COSTS

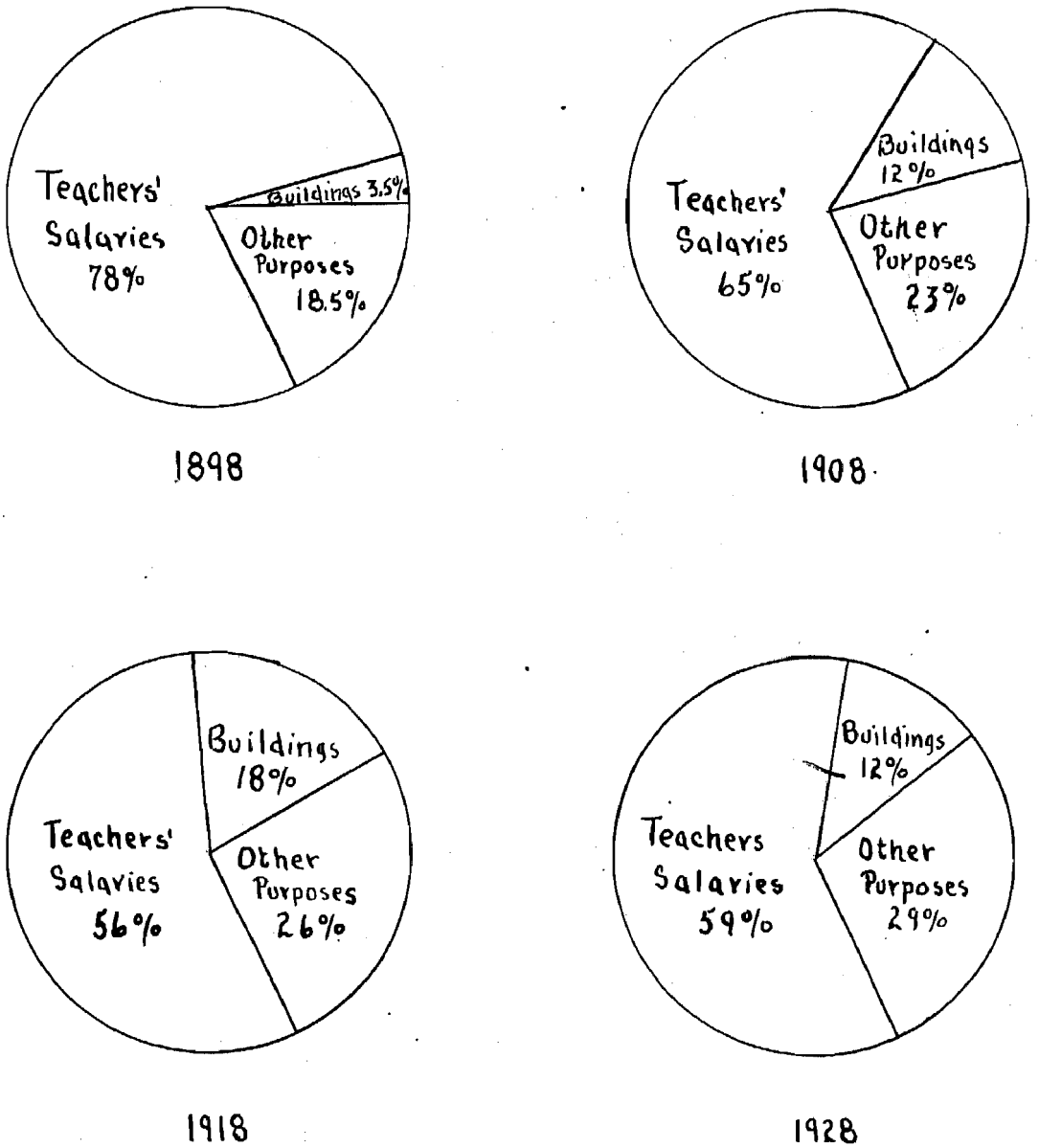
An analysis of the expenditures for the maintenance of the public schools of the state shows that considerably more than one-half of the entire amount goes to pay the salaries of teachers and other school officers. Of the $39,409,848 spent for school purposes in Kansas during the school year ending June 30, 1928, the sum of $23,265,511.35, or 59% of the total, was paid for salaries to superintendents, principals and teachers.

Next to teachers' salaries, the largest single item of expense was new buildings and equipment designated as "outlays", involving $5,765,744.80, an amount equal to nearly 15% of the total expenditure for all purposes. Taken together, these two items, salaries and outlays, constituted nearly three-fourths of the school budget for the state. No other single item approached them in size.

Figure 6 (page 19) shows the division of school expenditures at ten year intervals from 1898 to 1930. "Other purposes", as noted in this diagram applies to such items as repairs, fuel, lights, rent, library, etc., none of which is significant enough in itself to warrant a separate division.

The amount of money expended for teachers' salaries increased rapidly along with the advance in total expenditures. The total increase was 776%, or from $2,985,012.61 in 1898 to

FIGURE 6.--THE DIVISION OF SCHOOL EXPENDITURES BY TEN YEAR PERIODS FROM 1898 to 1928.



Read figure thus: In 1898, 78% of the total school costs were for teachers' salaries; 3.5% for buildings; 18.5% for other purposes. Read in like manner for 1908, 1918, 1928.

$23,865,511.35 in 1928. While this increase has been startling, Figure 5 (page 18) shows that the amount expended for salaries in 1928 does not represent so large a portion of the entire amount, as did the similar figure for 1898; it declined, in fact, from 78% to 59%. This proportion dropped as low as 54% in 1923, but gained steadily again until 1928.

The loss in the percentage of the total sum devoted to salaries was absorbed, therefore, by the increasing amounts allotted to buildings and equipment, and to expenditures for miscellaneous purposes. In 1898, the expenditures for sites, buildings and furniture came to $135,010.90, or 3.5% of the total school bill. In 1928, this amount had leaped to $5,765,744.80, 12% of the total school costs, and a sum equal to one and one-half times as much as the state expended for all school purposes ($3,760,426) at the beginning of the period. The amount spent for this purpose in 1928 represented an increase of 4270.5% over the corresponding figure for 1898.

A comparison in which yearly expenditures of this nature are used may be erroneous, however, if unusual conditions, such as serious damage to buildings from storms or fire, necessitate an extraordinarily large building program for the year which is used. Or, perhaps, construction activities during a previous year may have caused an inordinately low expenditure for building purposes during a year which is chosen for comparison. In these instances, the sum of expenditures over a long period of years would be more valid for purposes of contrast or comparison. Neither of these conditions apply to the situation in Kansas during this thirty year period.

Miscellaneous expenditures increased during this same period from 16.5% to 29% of the total cost, a gain even more appreciable than the increase in building expenditures.

The significant fact, then, is that the State of Kansas spent over ten times as much money for school purposes as it did in 1898, but of that amount it was spending more and more proportionately, for buildings and miscellaneous purposes, and less and less, proportionately, for teachers.

Figure 7 (page 22) accompanied by Table II (page 21), shows the relation of the amount expended for teacher's salaries to the total school cost throughout the entire thirty year period.

It is noticeable that the period of rapid rise in expenditures for teachers' salaries was from 1918 to 1928, jumping from $9,514,587.42 to $23,265,511.35, a gain of 244%. This percentage gain is just slightly greater than the per cent of gain of the total expenditures for the same ten years, which was 232%. The greatest gain for any single two year period was from 1920 to 1922, when the amount jumped $6,016,304. The remaining twenty-eight years of the thirty year period portray the gain in a slowly rising curve, smooth in nature. Only once in the whole period did the amount expended for teachers' salaries fail to gain over the year previous. In this instance, 1915, the loss was but $24,999.

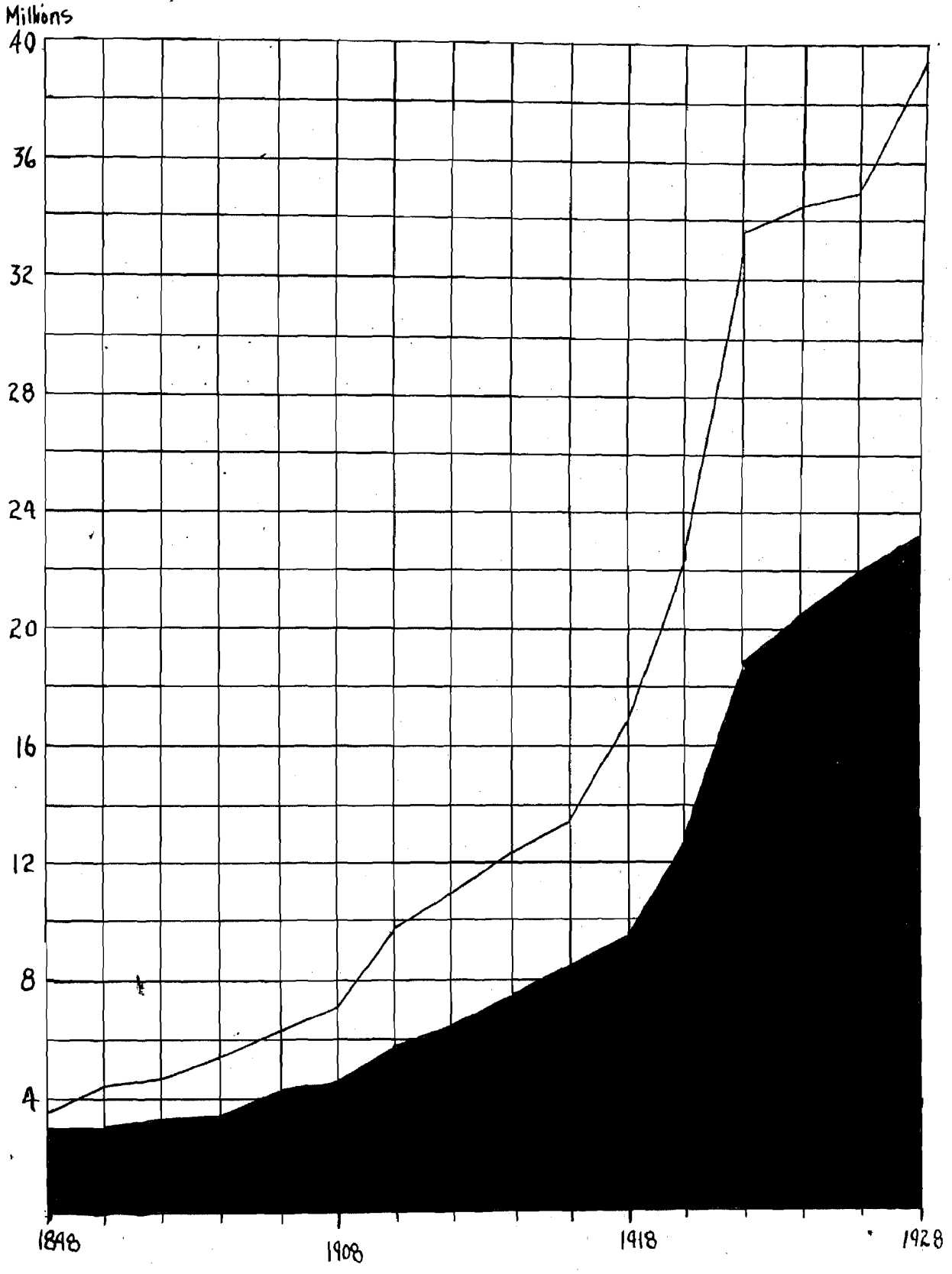
Part of the tremendous gain in amounts expended for teachers' salaries can not be attributed to actual increases in the monthly salaries of teachers. In the figures previously quoted, no mention has been made of the increase in the number of teachers

TABLE II.--ANNUAL EXPENDITURES FOR EDUCATION IN KANSAS AND AMOUNTS PAID FOR TEACHERS' SALARIES BY TWO YEAR PERIODS FROM 1898 TO 1928. (Read Table thus, In 1898, $3,760,426 were spent on education in Kansas, of which amount $2,985,012 were spent for teachers' salaries.)

Year	Amount paid for all purposes	Amount paid for salaries.
1898	$3,760,426	$2,985,012
1900	4,622,363	3,173,062
1902	4,894,522	3,311,004
1904	5,684,578	3,663,395
1906	6,309,808	4,117,274
1908	7,355,443	4,758,881
1910	9,800,070	5,773,342
1912	11,158,255	6,833,130
1914	12,210,174	7,933,519
1916	13,683,925	8,430,984
1918	17,070,394	9,514,587
1920	22,513,308	12,991,852
1922	33,819,376	19,007,136
1924	34,993,030	20,535,568
1926	35,303,036	21,979,729
1928	39,409,848	23,265,511

Read table thus: In 1898, the total school costs were $3,760,426, of which $2,985,012 went for teachers' salaries. In 1899, etc.,

FIGURE 7.--A GRAPHICAL ILLUSTRATION OF TABLE II, SHOWING PROPORTION OF SCHOOL EXPENDITURES SPENT FOR TEACHERS' SALARIES. (Read figure thus: Upper line represents total expenditures; shaded portion represents amount spent for teacher' salaries.)



throughout the state. In 1898, there were employed in the schools, 12,513 teachers; in 1928, this number had increased to 19,202. In other words, there were 6,689 more teachers to pay in 1928 than there were at the beginning of the period, a fact which accounts for a considerable part of the gain in expenditures for teachers' salaries.

The same procedure applied to the school buildings is not so significant, since the number of school buildings in 1928 was but 108 more than the number in 1898. At the beginning of the thirty year period there were 9,188 school buildings in the state, and at the close of the period there were 9,296.* In this instance, unlike that of the teachers, the number is not the significant factor in the cost. The size and character of the buildings erected are significant. For example, the estimated value of the 9,188 buildings and their grounds in 1898 was $9,504,961. In 1928, the value of the 9,296 buildings and their grounds was estimated at $86,355,515.28, an increase of over 900% on approximately the same number of buildings.

SUMMARY

1. Salaries and buildings absorbed almost three-fourths of all school expenditures. Other costs were scattered among many minor items.

* The figures for the number of school buildings in 1898 and 1928 were taken from the Eleventh and Twenty-Sixth Biennial Reports of the State Superintendent of Public Instruction of Kansas submitted December 1, 1898 and December 1,1928 respectively.

2. While the amounts of money expended for teachers' salaries increased rapidly, the percentage of the total expenditure devoted to this purpose steadily declined.

3. The amount of money expended for building purposes steadily increased.

4. Salaries increased more rapidly in the period from 1918 to 1928 than during any other ten year period.

5. Part of the increase in expenditures for salaries may be attributed to the growing number of teachers employed.

6. Although there were very few more school buildings in 1928 than in 1893, the value of the buildings increased over 900%.

CHAPTER III

FACTORS INVOLVED IN INCREASED SCHOOL COSTS

The astounding increase in school costs in Kansas quite naturally prompts an inquiry into the reasons or causes involved. Why education in 1928 should cost over ten times as much as it did in 1898 is not always clear. The tax-payer sometimes places the blame upon the school administrator, charging extravagance, unnecessary expansion, or inefficient management. The administrator is certain that he is faced with a combination of factors which make the yearly expenditure of larger and larger sums of money not only necessary but inevitable. No one should be, and, perhaps, is more intelligently interested in the efficient spending of the educational dollar than is the educator. It is his task to render the greatest educational service at the lowest public cost. Yet, the public finds itself confronted with a school bill, the trend of which, like a snowball, has been to increase steadily in size with each yearly revolution, not only during the last thirty years, but ever since 1863, two years after the admission of the state into the Union.

What are the factors which have operated to produce this phenomenal increase in school costs? Dr. Elmer H. Staffelbach, Director of Research, California Teachers Association, states:*

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*Elmer H. Staffelbach, "Thirty Years of California School Costs", in RESEARCH BULLETIN, California Teachers Association, July, 1930, pages 3-9.

"There are five, and only five, possible reasons for increases in school costs, namely:

1. Decreased purchasing power of the dollar
2. Increased attendance
3. Lengthening of the school year
4. New forms of school service
5. Waste and inefficiency

The first three of these factors can be accurately measured in dollars and cents; the fourth can be only partially determined; the fifth is beyond statistical computation.

The following paragraphs will set forth the effects of the first three factors, viz., decreased purchasing power of the dollar, increased attendance, and the lengthening of the school year, upon Kansas school costs during the period from 1898 to 1928.

The fact that prices did rise considerably from 1898 to 1928 is known to all; and when prices, it follows naturally that the dollar must be growing cheaper. In fact, it is the dollar which fluctuates in value rather than the commodity which the dollar buys. What is not known to all, perhaps, is that the dollar was steadily decreasing in value long before the World War, that event only serving to accelerate the decline. Nor is it known by all just how much the value of the dollar did change during the thirty year period 1898 to 1928.

The fluctuating value of the dollar during any period of years is perhaps best reflected in the rise and fall of the cost of living during the same length of time. The United States Bureau of Labor compiles annually the cost of living throughout the United States, which is published in the form of index numbers. The index number is a well established

statistical device which is constructed by securing each month the prices of a uniform list of commodities at a selected and unchanging list of establishments, and then computing the average price for the whole list for each month. Such numbers are then reduced to percentages and the number for a given month is stated as so many per cent of the figure for some previous month.

Two sets of such index numbers are used in connection with this study: an index of construction costs, and an index of the cost of living. Both sets of index numbers are taken from the Statistical Abstract for the United States for 1930. The numbers were originally expressed with the year 1913 as the base. These have been reconverted so as to be stated in per cents of the 1898 number.

Table III (page 28) gives the yearly index numbers for the cost of living and construction costs from 1898 to 1928. In addition, the total expenditures for schools in Kansas have been converted into index numbers for comparative purposes.

It is noteworthy that the period of greatest increase in both the cost of living and construction costs was from 1915 to 1920, a few years previous to the period of greatest increase in school costs, 1918 to 1923. During the thirty year period, the cost of living rose 155%, the costs of construction 228%, and total school costs 937%. School costs increased over six times as rapidly as the cost of living, and over four times as fast as construction costs.

The school costs for this period, 1898 to 1928, will be

TABLE III.--SHOWING INDEX NUMBERS BY YEARS FOR COST OF LIVING CONSTRUCTION COSTS AND TOTAL SCHOOL EXPENDITURES. 1898 TO 1928.

Year	Cost of Living	Construction costs	School Costs
1898	100	100	100
1899	101	111	116
1900	103	120	121
1901	107	122	121
1902	112	124	126
1903	112	127	152
1904	113	128	150
1905	113	133	152
1906	118	146	166
1907	122	154	181
1908	125	140	192
1909	133	144	218
1910	139	160	258
1911	137	157	268
1912	146	155	294
1913	149	157	297
1914	153	139	297
1915	156	147	331
1916	176	233	360
1917	212	287	489
1918	260	300	450
1919	297	314	487
1920	299	400	592
1921	260	320	816
1922	253	292	889
1923	258	340	939
1924	251	341	921
1925	265	328	941
1926	262	329	929
1927	257	327	1078
1928	255	328	1037

Read table thus: In 1899, the cost of living was 101% of the 1898 cost of living; construction costs were 111% of 1898 construction costs; and school costs were 116% of 1898 school costs. In 1900, etc.

divided into: first, expenditures for buildings, and second, expenditures for all other purposes; hence, the necessity for two index numbers. The building costs will be affected by the index numbers for construction costs, and all other costs by the index numbers for the cost of living.

Figures 8 and 9 (page 30) portray graphically the decreasing purchasing power of the dollar from 1898 to 1928 in terms of the cost of living and construction costs respectively. The 1928 cost of living dollar was worth only .39 as much as the 1898 dollar; or, vice versa, the 1898 dollar was worth only 39¢ in 1928. In other words, a dollar's worth of education of the type offered in 1898 would have cost $2.55 in 1928. The 1928 dollar in terms of construction costs was worth only .304 as much as the 1898 dollar, and a $10,000 building erected in 1898 would have cost $32,800 in 1928.

It can be seen, then, that the decreased purchasing power of the educational dollar will account for a generous share of the increased school costs. The state had to spend $2.55 or $3.28, varying with the type of expenditure, for every dollar spent in 1898 in order to provide the same type of education that was offered in 1898 to the same number of pupils and the same length of school year.

Therefore, the $135,101.90 spent for buildings in 1898 would have cost $441,154.23 in 1928, and the $5,625,324.10 expended for all other purposes would have amounted to $9,244,576.46. The total school costs for 1898, $5,760,426, would have cost in 1928 dollars, $9,687,710.69.

Thus, $5,927,284.69 of the increase in costs between 1898

FIGURE 8.--SHOWING THE DECREASING PURCHASING POWER OF THE DOLLARS IN TERMS OF THE COST OF LIVING. 1898 TO 1928

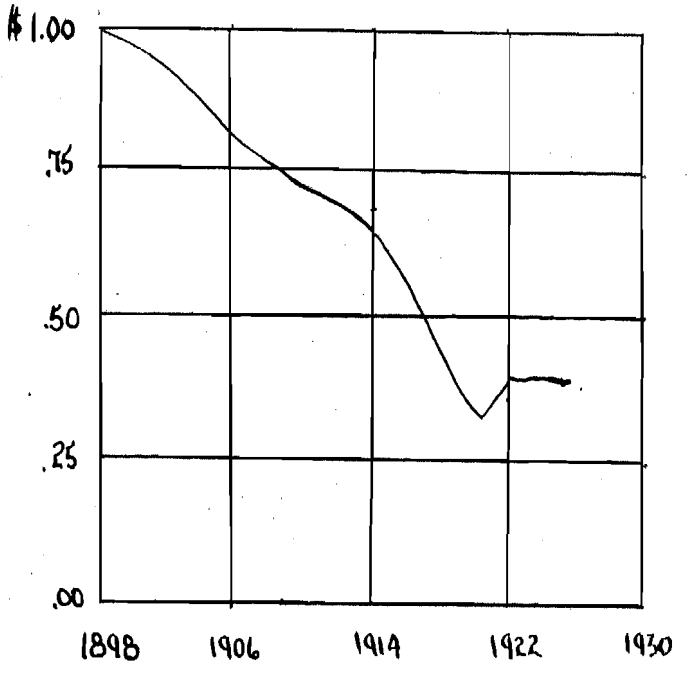
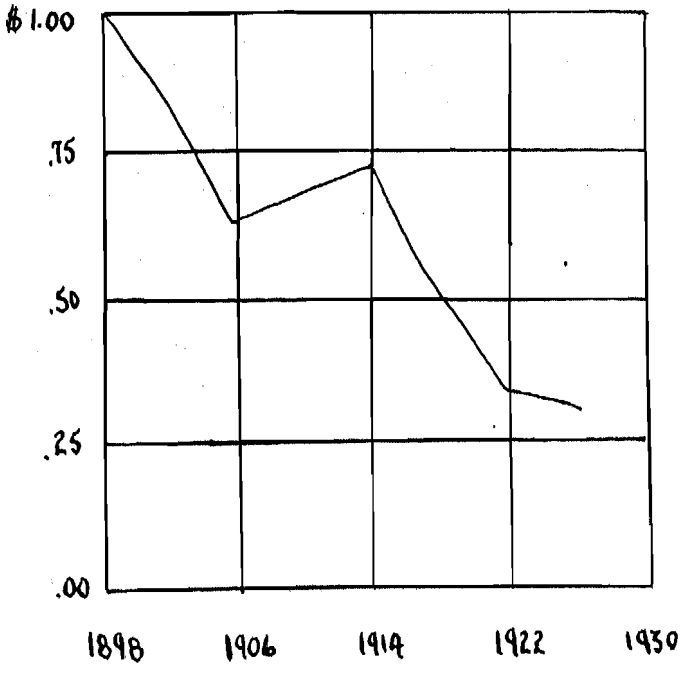


FIGURE 9.--SHOWING THE DECREASING PURCHASING POWER OF THE DOLLAR IN TERMS OF CONSTRUCTION COSTS. 1898 TO 1928.



and 1923 has been accounted for without considering the additional factors of the increase in the number of pupils in attendance, and the lengthening school year.

Table IV (page 32) presents the total costs, expenditures for buildings, expenditures for all other purposes, the average daily attendance, and the average number of days taught in the Kansas public schools for the years 1898, 1908, 1918 and 1928. These data are taken from the respective biennial reports of the state superintendent of public instruction.

This table shows that there were 256,934 pupils in average daily attendance in 1898, and that the number had increased to 357,029 in 1928. This means that the schools were providing educational facilities for 100,095 more pupils at the end of the thirty year period than at the beginning. This increase represents a gain of 39%. The cost of providing schooling for these 100,095 additional children was, therefore, an additional burden for the schools of 1928, and 39% of the 1898 cost of education in 1928 dollars must be added to account for this increase in attendance. When this is done, the total cost of 1898 education in 1928 dollars and for the 1928 average daily attendance is $13,465,617.86.

Table IV (page 32) likewise reveals that the number of days taught in 1928 was greater than the number of days taught in 1898. In fact, school was in session 51 days longer. This is a 41% increase in the lenght of the school year, and the longer the year, the greater the costs of maintenance. Hence, an additional 41% must be added to the figure obtained in the

TABLE IV.--SHOWING TOTAL SCHOOL COSTS; DIVISION OF EXPENDITURES, AVERAGE DAILY ATTENDANCE, AND NUMBER OF DAYS TAUGHT, AT TEN YEAR INTERVALS FROM 1898 TO 1928.

Total School Costs	1898	$3,760,426.00
	1908	$7,355,443.54
	1918	$17,070,394.12
	1928	$39,409,848.86
Expenditures for Buildings	1898	135,101.90
	1908	893,096.48
	1918	3,073,714.42
	1928	4,623,394.70
Expenditures for Other Purposes	1898	3,625,324.10
	1908	6,442,347.06
	1918	13,996,679.70
	1928	34,786,454.16
Average Daily Attendance	1898	256,934
	1908	290,904
	1918	298,236
	1928	357,029
Number of Days Taught	1898	124
	1908	142
	1918	171.5
	1928	175

Read table thus: The total school costs in Kansas in 1898 were $3,760,426; in 1908, $7,355,443.54; in 1918, etc. Read in the same manner for other items.

preceding paragraph to take care of the lengthening of the school year. The $13,465,817.86 multiplied by 1.41, then, will give the amount which represents the 1898 costs in 1928 dollars for the 1928 average daily attendance during the 1928 school year. This product is $18,986,803.18.

In other words, had the dollar been of the same value in 1898 as it was in 1928; had the same number of students been attending school; and had the school year been of the same length, the total school costs in 1898 would have been $18,986,803.18, instead of the $3,760,426 actually spent. Thus, a total of $15,226,377.18 of the increase in school costs during this period is a direct result of the three factors: decreased purchasing power of the dollar, increased attendance, and a longer school year. Any expenditures over and above this amount can be attributed to either or both of the remaining two possible causes, new forms of service or waste and inefficiency.

This is the procedure which has been followed in preparing the series of charts and tables which accompany this discussion. These charts and tables are practically self-explanatory. The thirty year period has been broken into decades, and charts prepared to compare the costs for each ten year period. Another chart and table compares the costs for the entire period, 1898 to 1928. Table X (page 41), then, analyzes the increased school costs, showing the exact amount which can be attributed to each factor involved in the increase.

Figure 10 and Table V (page 34) reveal that after the change in the value of the dollar, and the factors of increased

FIGURE 10.--SCHOOL COSTS IN KANSAS, 1898 to 1928. (Elementary and secondary public schools)

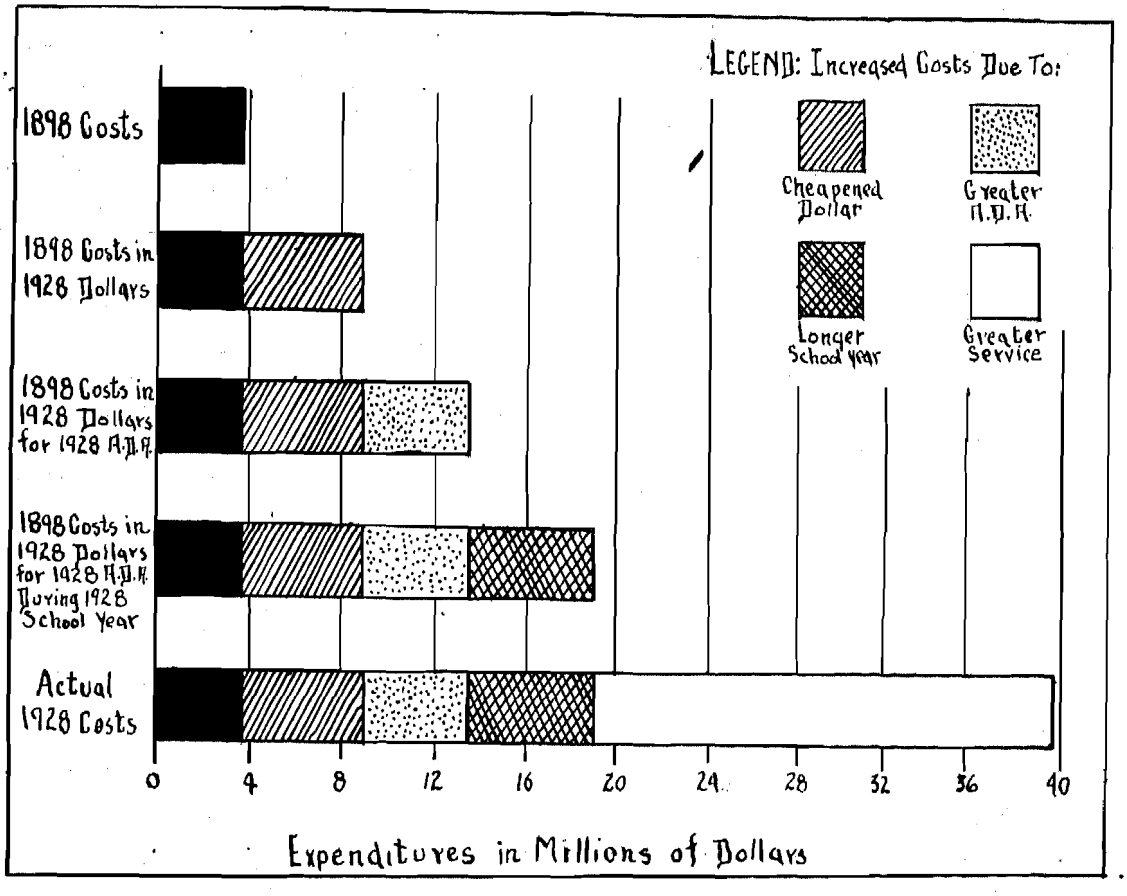


TABLE V.--SCHOOL COSTS IN KANSAS, 1898 to 1928, (Elementary and secondary public schools)

Total Costs for	1898--$3,760,426	1928--39,409,848.26
1898 costs in 1928 dollars	$9,697,710	Building costs x 3.28 Other costs x 2.55
1898 costs in 1928 dollars for 1928 A.D.A.	$13,465,817	A.D.A. ratio is 1.39
1898 costs in 1928 dollars for 1928 A.D.A. during 1928 school term	$18,986,803	41% increase in the number of days taught

attendance and a longer school year have been taken into consideration, the school costs in 1928 would still exceed the 1898 costs by $20,423,045.09. This sum of money represents the amount expended for newer forms of service and for greater educational facilities than were offered in 1898. Educational advantages to the children of Kansas in 1928 were, in terms of money, twenty million dollars better than the educational advantages offered to the children in 1898.

A similar comparison for the decade, 1898 to 1908, in Figure 11 and Table VI (page 36) shows that the educational advantages of 1908 were comparatively little better than the advantages of 1898. The cost of living had increased 25%; construction costs, 40%; the average daily attendance was 13% greater; and the school year was 14% longer. The residue in increase costs after these factors had been given consideration, was $1,254,111.29. If educational service was improved in 1908 over 1898, this last figure represents the total amount of money expended in the state to bring about that improvement.

Figure 12 and Table VII (page 37) show that the ten year period, 1908 to 1918, was the period of least improvement in the entire thirty years. This decade saw a sudden and rapid rise in the cost of living and in building costs; the cost of living increased 106%; building costs, 140%. The school year had increased in length 29.5 days, or 20.7%. In the meantime, the average daily attendance had slightly decreased from 290,904 to 288,236, or.0096%. With these factors accounted for, the 1918 costs represented an expenditure of $1,226,547.22 less than it would have taken to provide the same type of edu-

FIGURE 11.--SCHOOL COSTS IN KANSAS, 1898 TO 1908. (Elementary and secondary public schools)

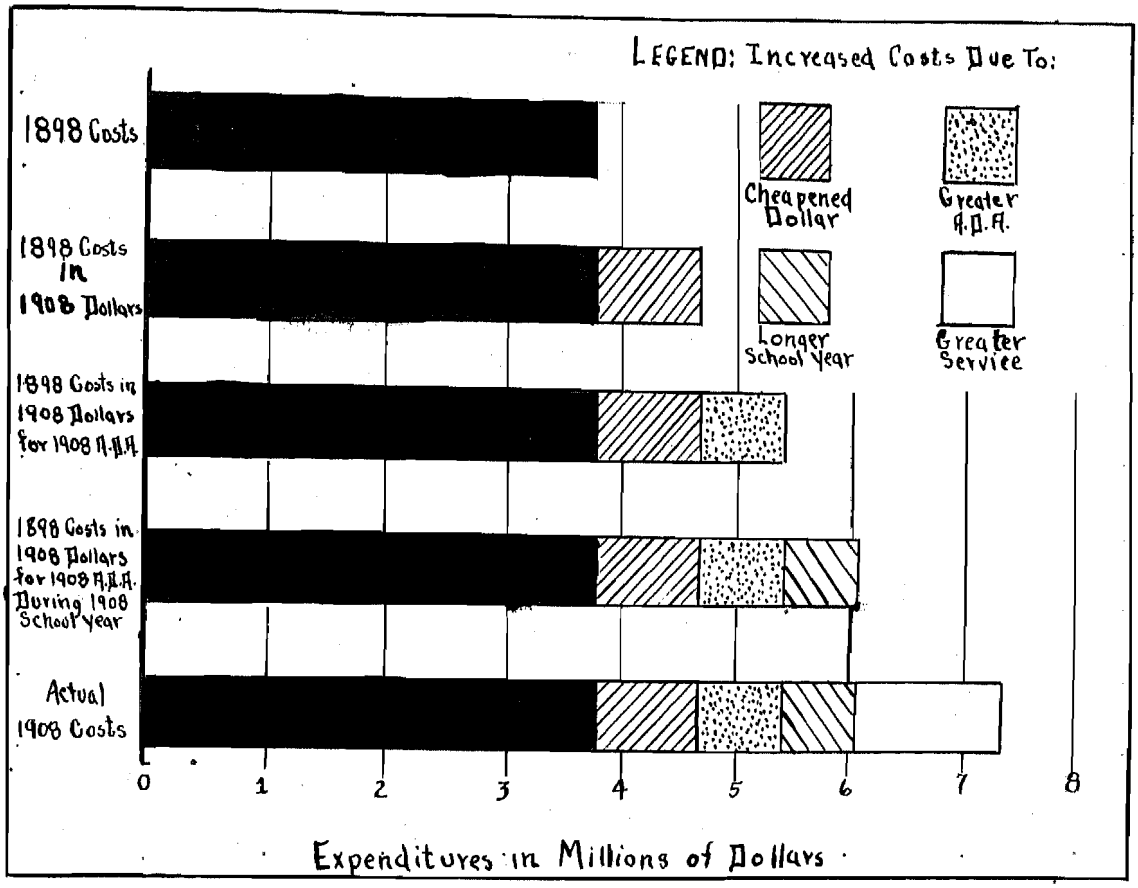


TABLE VI.--SCHOOL COSTS IN KANSAS, 1898 TO 1908. (Elementary and secondary public schools)

Total costs for	1898--$3,760,426	1908--$7,336,443
1898 costs in 1908 dollars	$9,687,710	Building costs x 1.40 Other costs x 1.25
1898 costs in 1908 dollars for 1908 A.D.A.	$5,354,501	A.D.A. ratio is 1.13
1898 costs in 1908 dollars for 1908 A.D.A. during 1908 school term	$6,081,351	14% increase in the number of days taught

FIGURE 12.--SCHOOL COSTS IN KANSAS. 1908 TO 1918. (Elementary and secondary public schools)

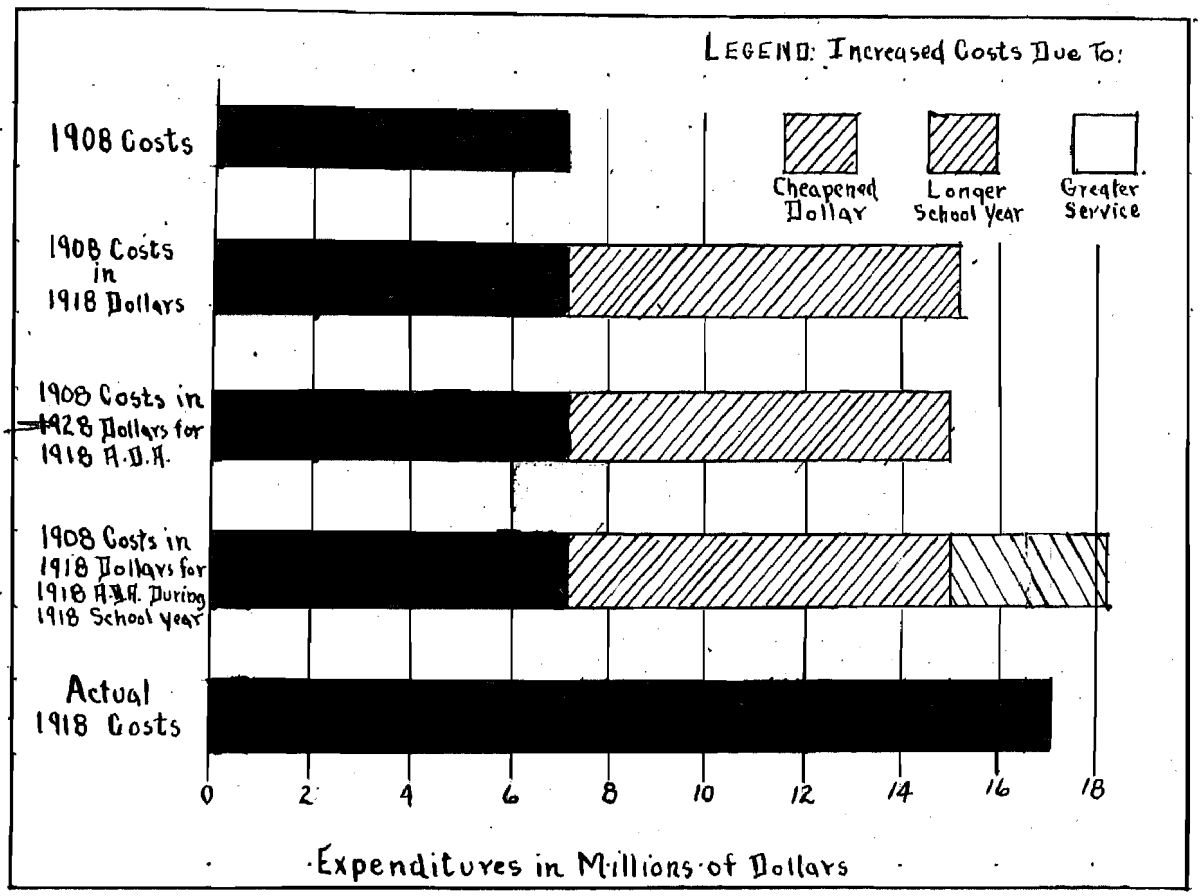


TABLE VII.--SCHOOL COSTS IN KANSAS. 1908 TO 1918. (Elementary and secondary public schools)

Total costs for	1908--$7,538,443	1918--$17,070,394.12
1908 costs in 1918 dollars	$15,311,508	Building costs x 2.14 Other costs x 2.08
1908 costs in 1918 dollars for 1918 A.D.A.	$15,158,195	A.D.A. ratio is .99
1908 costs in 1918 dollars for 1918 A.D.A. during 1918 school term	$18,295,914	20% increase in the number of days taught

cation as had been offered in 1898. In other words, the schools in 1918 were spending almost a million and a quarter less, proportionately, than were the schools of 1908.

This fact is characteristic of a period such as the state was experiencing at that time. Education has usually suffered during periods of unrest. That the World War curbed expenditures of this nature is therefore quite probable.

Another unusual factor appears in this period, in that during 1918 the flu epidemic was ravaging the country. This probably accounts for the decrease in average daily attendance for this year, since there were many absences, and in numerous instances a complete shut down of schools for many days resulted. That the decrease was temporary is seen by the fact that the attendance for the years directly preceding and succeeding 1918 were 318,463 and 300,715, respectively. Naturally, the schools were prepared to provide schooling for a larger daily attendance, and the costs were slightly out of proportion for this reason.

Not only was the second decade one of slow improvement, but a comparison of costs in 1898 and 1918 shows that the first two decades saw very little change in the quality of educational services rendered. The actual increase in school between these two dates, after the three contributory factors had been accounted for, amounted to $1,875,371.22. This fact is portrayed in Figure 15 and Table VIII (page 39).

In contrast to the conditions which characterized the first two decades of the thirty year period, the last ten years, 1918 to 1928, saw a tremendous increase in school costs, an

FIGURE 13.--SCHOOL COSTS IN KANSAS. 1898 TO 1918. (Elementary and secondary public schools)

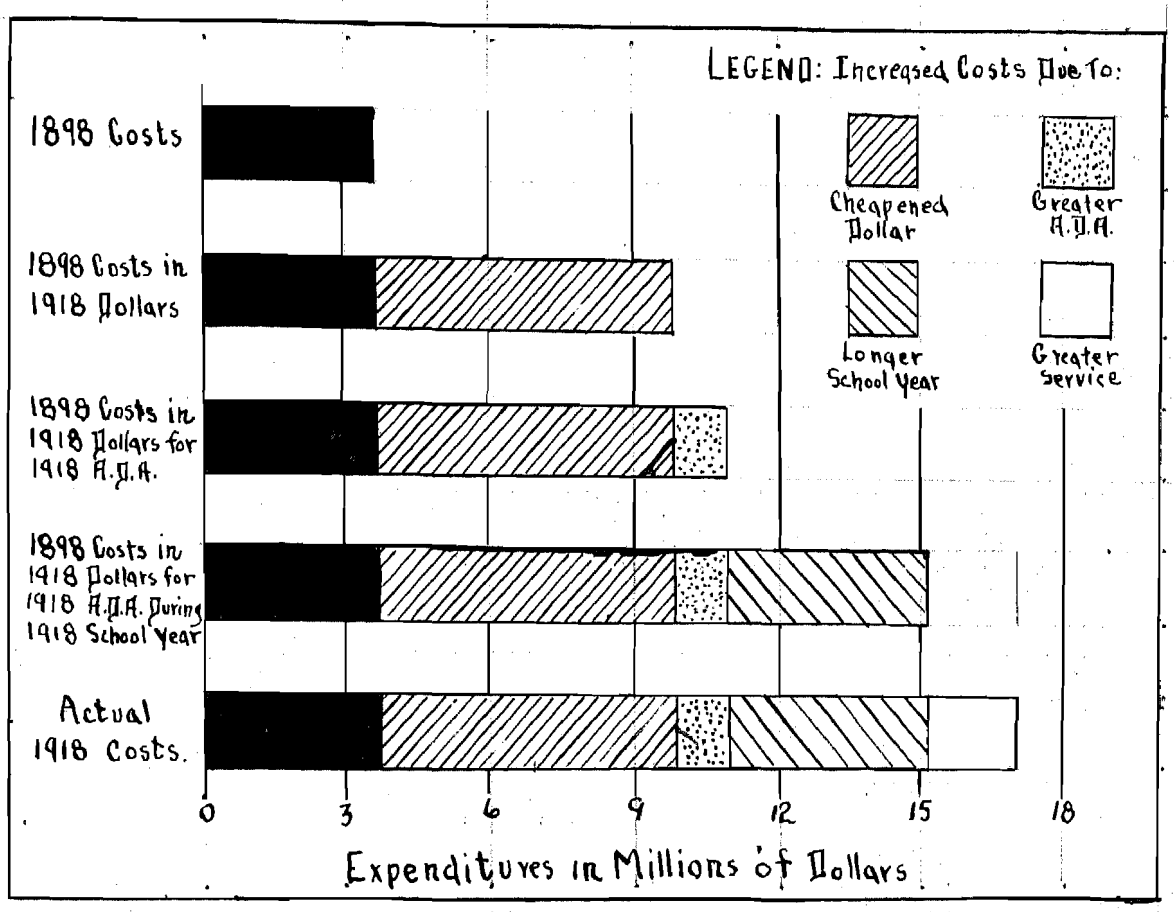


TABLE VIII.--SCHOOL COSTS IN KANSAS. 1898 TO 1918. (Elementary and secondary public schools)

Total costs for	1898--$3,760,426	1918--$17,070,394.12
1898 costs in 1918 dollars	$9,831,148	Building costs x 3 Other costs x 2.6
1898 costs in 1918 dollars for 1918 A.D.A.	$11,010,686	A.D.A. ratio is 1.12
1898 costs in 1918 dollars for 1918 A.D.A. during 1918 school term	$15,195,022	38% increase in the number of days taught

FIGURE 14.--SCHOOL COSTS IN KANSAS. 1918 TO 1928. (Elementary and secondary public schools)

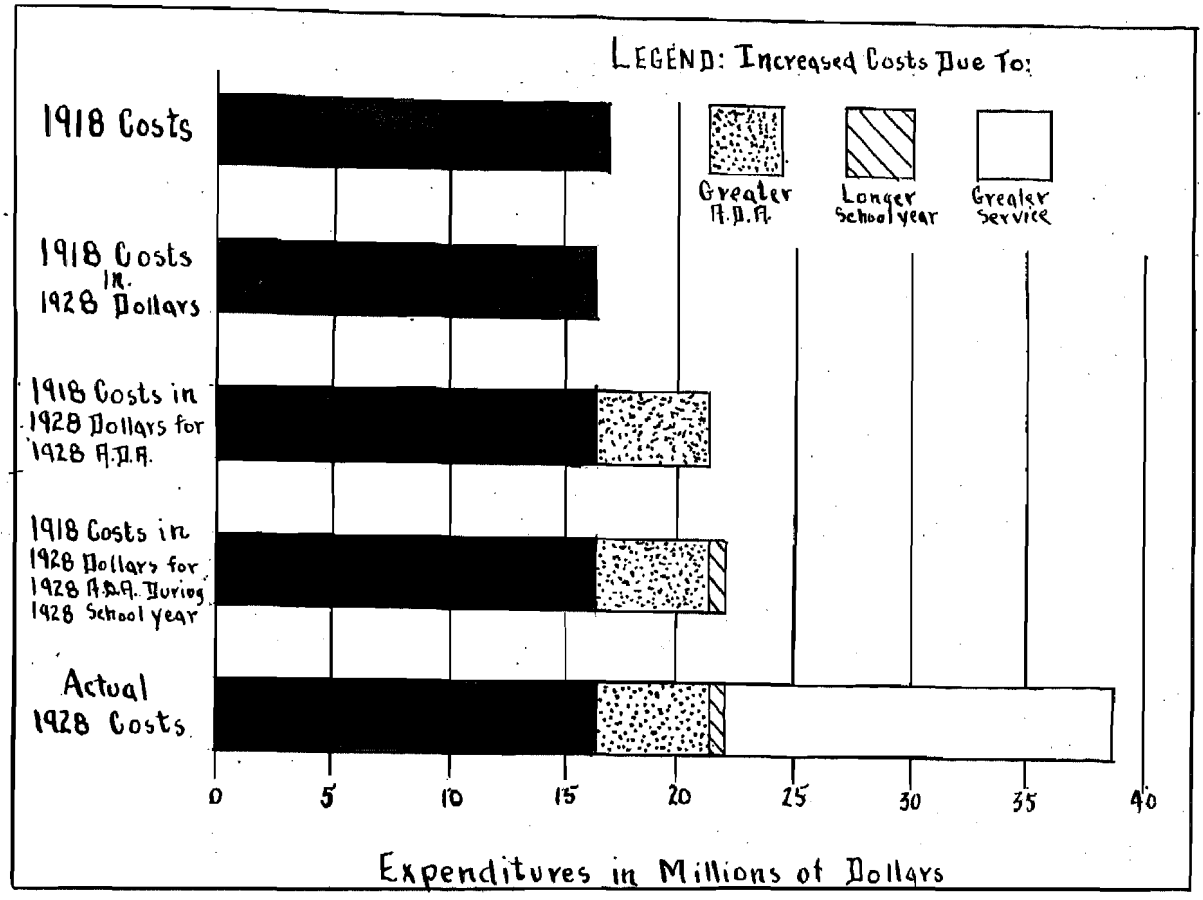


TABLE IX.--SCHOOL COSTS IN KANSAS. 1918 to 1928. (Elementary and secondary public schools)

Total costs for	1918--$17,070,894	1928--$39,409,848.86
1918 costs in 1928 dollars	$17,067,094	Building costs x 1.09 Other costs x .98
1918 costs in 1928 dollars for 1928 A.D.A.	$21,333,868	A.D.A. ratio is 1.25
1918 costs in 1928 dollars for 1928 A.D.A. during 1928 school term	$21,760,545	2% increase in the number of days taught

TABLE X.--AN ANALYSIS OF INCREASED SCHOOL COSTS FROM 1898 TO 1928, SHOWING THE AMOUNTS CHARGEABLE TO THE VARIOUS FACTORS INVOLVED IN THE INCREASE.

Year	Cost of Education	Increase over 1898
1898	$3,760,426.00	. . . . .
1908	$7,335,443.54	$3,575,017.54
1918	$17,070,394.12	$13,319,968.12
1928	$39,409,848.86	$35,649,422.86

Year	AMOUNT OF INCREASE CHARGEABLE TO: Increased Attendance	Cheapened Dollar	Longer Year	Greater Service
1908	$613,687.18	$960,244.39	$746,810.06	$1,256,276
1918	$1,179,738.80	$6,070,728.36	$4,185,156.72	$1,884,350
1928	$3,778,801.65	$5,928,811.34	$5,531,895.99	$20,420,913

Read table thus: School costs in 1908 were $7,335,443.54, which was $3,575,017.54 more than the 1898 costs. Of this increase, $613,687.18 was chargeable to an increased attendance; $960,244.39 was chargeable to a cheapened dollar; etc., Read in the same manner for other years.

amount totaling $22,339,504.74. See Figure 14 and Table IX (page 40). Seventy-nine per cent of this figure represents an increase which cannot be attributed to the rise in the cost of living or construction costs, increased attendance, or a longer school year. In fact, the cost of living had decreased two per cent, and construction costs had increased but nine per cent. The school year was but two per cent longer. There was however, a marked gain in the number of children in attendance, increasing from 388,236 to 557,029, or 25%. These factors would have increased the 1918 school costs from $17,070,394.12 to $21,750,545.91, but the remaining $17,649,352.05 must be accounted for either by a marvelous expansion in the buildings and equipment, increases in teachers' salaries, and other types of greater educational service, or by waste and inefficiency in administration.

SUMMARY

1. Five factors operate to cause increased school costs; (1) decreased purchasing power of the dollar; (2) increased attendance; (3) longer school year; (4) new forms of school service; (5) waste and inefficiency.

2. Index numbers compiled annually by the United States Bureau of Labor reflect the decreasing purchasing power of the dollar.

3. The dollar steddily decreased in value from 1898 to 1923, after which date it fluctuated slightly until 1928. The 1898 dollar in terms of the cost of living was worth 39¢ in 1928; in terms of construction costs, 30¢.

4. Comparison of school costs for any two years is best obtained by making the situations equal with respect to the value of the dollar, the number of children in attendance, and the lenght of the school year.

5. The first twenty years of the thirty year period, 1898 to 1928, showed very slight increases in the real amounts of money spent for educational purposes.

6. The greatest increase in school costs occurred during the last decade, 1918 to 1928, when school costs advanced $22,559,504.74.

7. Only 21%, or $4,690,151.79, of the tremendous increase in the last decade can be accounted for by the changing value of the dollar, the increased attendance, or a longer school year.

8. The residue of the increase in costs from 1918 to 1928 must be attributed to greater educational service, or to waste and inefficiency. The same holds true for any other period.

CHAPTER IV

SCHOOL COSTS IN DIFFERENT CLASSES OF SCHOOLS

There were in the State of Kansas in 1928, 8,757 school districts. Of these districts, 8,557 maintained schools. One-teacher schools numbered 7,177; 1,269 were two (or more) teacher schools; 76 were schools in cities of the second class; 11 were first class city schools. Twenty-four districts maintained community high schools.

This is the classification of schools that has been used by the state superintendents of public instruction in their respective biennial reports. Unfortunately, this classification has not persisted from the start of the thirty year period used in this study. There is, however, sufficiently complete data to show the rise in costs for these classes of schools, with the exception of community high schools, from 1913, the middle year of the period, until 1928. This period, 1913 to 1928, as pointed out in the preceding chapters, is the one during which the greatest increase in school costs took place.

Table XI (page 45) shows the total costs, expenditures for buildings, expenditures for all other purposes, average daily attendance, and the length of the school year for each class of schools during the years 1913 and 1928.

The numbers for the last fifteen years of the yearly index numbers shown in Table III (page 28) have been reconverted in Table XII (page 46) so as to be stated in per cents of the 1913 figure. From this table (XII), it is seen that the cost

TABLE XI.--SHOWING TOTAL SCHOOL COSTS, DIVISION OF EXPENDITURES, AVERAGE DAILY ATTENDANCE AND NUMBER OF DAYS TAUGHT FOR VARIOUS CLASSES OF SCHOOLS IN 1913 AND 1928.

Item	Class of School	1913	1928
Expenditures for Buildings	One-teacher	$151,115.21	$426,271.58
	Two teacher	489,438.23	1,584,331.56
	2nd Cl.Cities	316,956.18	1,262,839.95
	1st Cl.Cities	403,063.11	1,293,632.25
Expenditures for Other Purposes	One-teacher	$3,700,262.34	$7,138,443.10
	Two-teacher	2,548,811.38	11,804,530.54
	2nd Cl.Cities	1,699,518.43	7,297,166.52
	1st Cl.cities	1,604,486.51	7,662,998.74
Average Daily Attendance	One-teacher	133,709	93,694
	Two teacher	81,843	113,215
	2nd Cl.Cities	52,770	73,742
	1st Cl.Cities	41,729	72,172
Number of Days Taught	One-teacher	127.5	158.55
	Two teacher	166.0	175.95
	2nd Cl.Cities	180.0	180.00
	1st Cl.Cities	180.0	180.00
Total School Costs	One-teacher	$3,067,060.16	$7,564,714.68
	Two teacher	3,038,249.61	13,388,862.10
	2nd Cl.Cities	2,016,454.61	8,560,006.47
	1st Cl.Cities	2,007,549.62	8,956,630.99

Read table thus: Expenditures for buildings for one-teacher schools were $151,115.21 in 1913, and 426,271.58 in 1928; for two teacher schools, etc., Read in the same manner for other items.

TABLE XII.--SHOWING YEARLY INDEX NUMBERS FOR THE COST OF LIVING AND CONSTRUCTION COSTS BASED ON 1913 FIGURES. 1913 TO 1928.

Year	Cost of Living	Construction Costs
1913	100	100
1914	103	89
1915	105	93
1916	118	147
1917	142	171
1918	174	189
1919	199	198
1920	200	251
1921	174	202
1922	169	174
1923	173	214
1924	172	215
1925	177	207
1926	175	208
1927	172	206
1928	171	207

*

Read table thus: In 1914, the cost of living was 103% of the 1913 cost of living, and construction costs were 89% of 1915 construction costs. In 1915, etc.,

of living rose 71% and construction costs 107% between 1913 and 1928.

The series of charts and tables that follow show the school costs for each class of school during the years 1913 and 1928. The same procedure that was used in presenting the costs for the various periods in the preceding chapter has been followed here. All of the charts and tables are based upon the data presented in Table XI (page 46).

Figure 15 and Table XIII,(page 48) show that school costs for one-teacher schools almost doubled during the fifteen year period. The increase in costs was 92%, a little greater than the rise in cost of living (71%), and a little smaller than the rise in construction costs (107%). Table XIII (page 48) shows that the 1913 one-teacher school costs, $3,933,833.11, measured in 1928 dollars would have amounted to $6,822,040.88. In other words, if the average daily attendance and the length of the school year had remained the same, it would have taken $2,888,207.77 (the difference between the actual 1913 costs and 1913 costs in 1928 dollars) more in 1928 to pay the school bill for one-teachers schools than it took in 1913.

The average daily attendance, however, did not remain the same; it decreased from 119,661 to 93,649, or 22%. It is obvious, therefore, that no part of the increase in school costs between 1913 and 1928 was due to a larger number of children attending this class of schools. In fact, had the number of children in attendance in 1913 been the same as in 1928, the 1913 cost would have been 22% less. Hence, the 1913 costs in 1928 dollars ($6,822,040.88) must be multiplied

FIGURE 15.--ONE-TEACHER SCHOOL COSTS IN KANSAS. 1913 TO 1928.

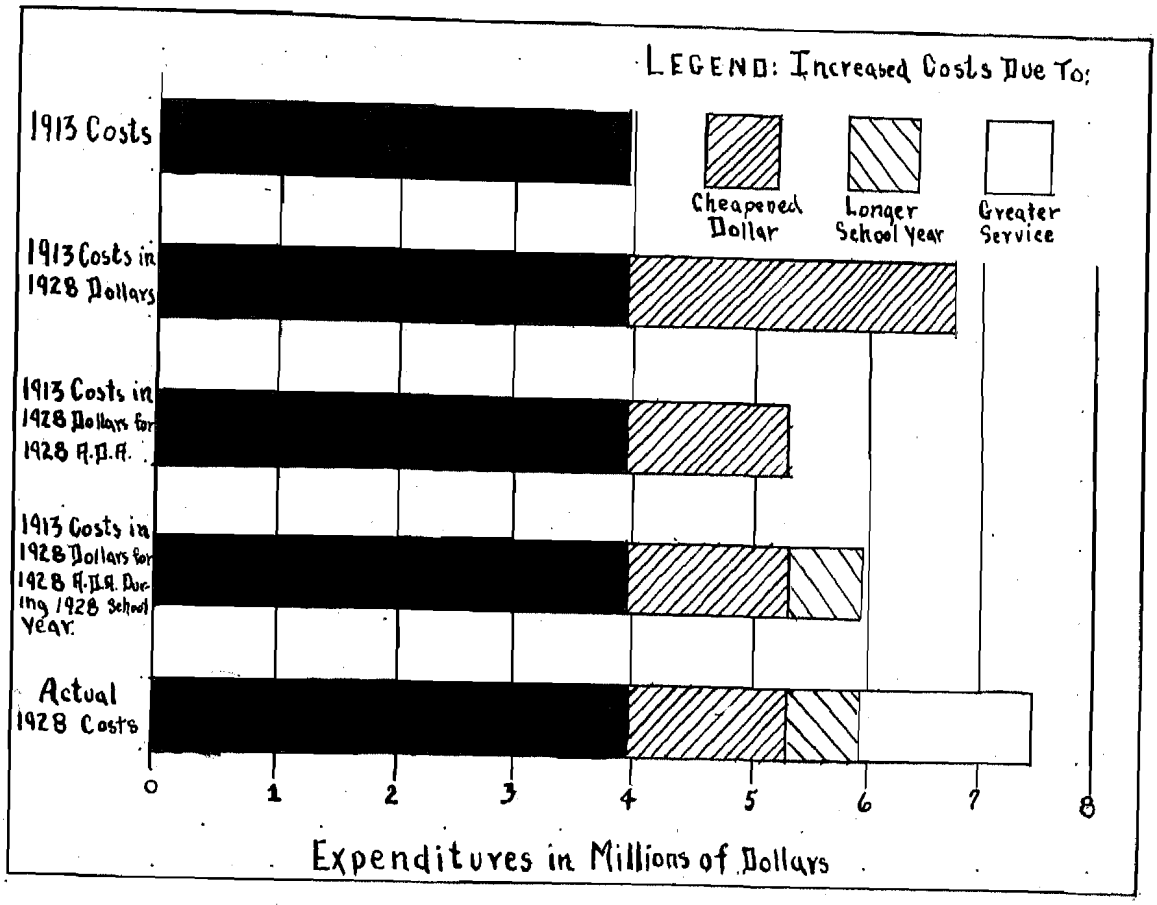


TABLE XIII.--ONE-TEACHER SCHOOL COSTS IN KANSAS. 1913 TO 1928

Total costs for	1913--$3,933,833.11	1928--$7,554,714.68
1913 costs in 1928 dollars	$6,822,040.88	Building costs x 2.07 Other costs x 1.71
1913 costs in 1928 dollars for 1928 A.D.A.	$5,321,191.89	A.D.A. ratio is .78 (22% decrease)
1913 costs in 1928 dollars for 1928 school year	$5,906,523.00	11% increase in the number of days taught

by .73 to account for this decrease in attendance. This brings the total 1913 costs in 1928 dollars for the 1928 average daily attendance to $5,321,191.89.

There was an increase in the number of days taught, from 143 to 158.6, or 11%. This means that the teachers were paid for fifteen days more work, and the general maintenance costs were increased similarly. That is, if the schools in 1913 had run as long as the schools in 1928, they would have cost 11% more than they did. Hence, 11% must be added to the total 1913 costs in 1928 dollars for the 1928 average daily attendance to account for the fact that the school year was longer. This would bring the total amount to $5,906,525, which represents the amount that the 1913 costs for one-teacher schools would have been during the year 1928.

One-teacher schools actually cost in 1928, $7,564,714.68. This is $1,658,191.66 more than the amount that the 1913 schools would have cost in the same year. Therefore, this amount ($1,658,191.66) must be charged either to greater service or to waste and inefficiency. That is to say, the 7,177 one-teacher schools in the state in 1928 had $1,658,191.66 at their disposal with which to improve their educational service over the type of education offered in the same schools in 1913. It represents the <u>real</u> increase in the costs between 1913 and 1928.

The increase in one-teacher school costs, truly considered, therefore, was not 92%, but 42%. It is worth noting, in passing, that by 1913 the total expenditures for one-teacher schools

alone ($3,933,833.11) had exceeded the total school costs for all classes of schools in 1898 ($3,760,426).

The division of expenditures for one-teacher schools is interesting. In 1913, 72.5% of the expenditures were for teachers' salaries; 5.8% for buildings; and 21.7% for all other purposes. In 1928, the division was little changed: 69% for salaries; and 5.5% and 25.5% for building and other purposes, respectively.

The costs for two (or more) teacher schools are shown in Figure 16 and Table XIV (page 51). A glance at Table XI (page 45) shows that costs for this class of schools increased from $3,038,249.61 in 1913 to $13,388,862.10 in 1928, an increase of $10,350,612.49, or 340%. The question is, however, how much would the 1913 costs have been for the two (or more) teacher schools, if these schools had had the same number of pupils, and had run the same number of days as the same class of schools did in 1928? How much would the costs have been if 1928 dollars had been used? After these questions are answered, the costs for the two years are much more comparable.

Table XIV, graphically pictured in Figure 16 (page 51), answers the second question by showing that the 1913 costs in 1928 dollars would have amounted to $5,379,251.03. This was derived from the sum of the products of 1913 building costs times 2.07, and all other costs times 1.71.*

The average daily attendance increased from 81,843 to 113,215, or 39%, creating a corresponding increase in the

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*See Table XII (page 46)

FIGURE 16.--TWO (OR MORE) TEACHER SCHOOL COSTS IN KANSAS, 1913 TO 1928.

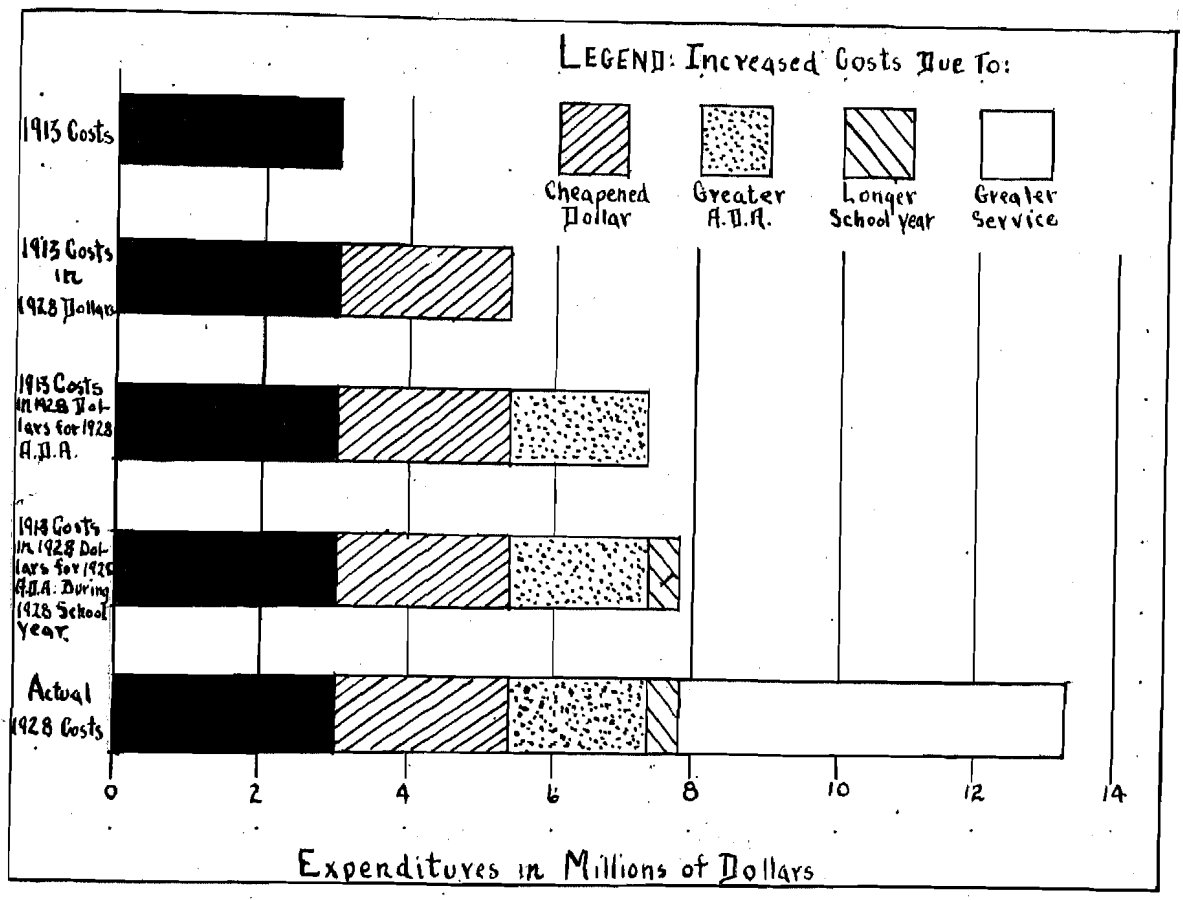

TABLE XIV.--TWO (OR MORE) TEACHER SCHOOL COSTS IN KANSAS, 1913 TO 1928.

Total costs for	1913--$5,038,249.61	1928--$13,388,862.10
1913 costs in 1928 dollars	$5,379,251.03	Building costs x 2.07 Other costs x 1.71
1913 costs in 1928 dollars for 1928 A.D.A.	$7,477,156.93	A.D.A. ratio is 1.39
1913 costs in 1928 dollars for 1928 A.D.A. during 1928 school year	$7,925,788.46	6% increase in the number of days taught

costs of schooling. This increase would bring the total 1913 costs in 1928 dollars to $7,477,158.93.

The school year was 9.95 days, or 6%, longer. The amount of money that it would take to run the schools this much longer, consequently, must be added. When this has been done, the total cost is $7,925,788.46, which is the amount of money it would have taken to maintain the 1913 schools in the year 1928.

The costs of two (or more) teacher schools for 1913 and 1928 are now comparable. The situations have been equalized as far as possible. Instead of an increase of $10,350,612.14, or 340%, as is obtained by taking the difference between 1913 actual costs and 1928 actual costs, the <u>real</u> increase is $5,463,073.64, or 179%. This represents the amount of money which, it is assumed, the two (or more) teacher schools used to offer a greater educational service than was offered in 1913.

The division of expenditures for the two years are: In 1913, 61% for teachers' salaries, 16% for buildings, and 23% for all other purposes. In 1928, the figures were 59.7%, 11.7% and 28.6% respectively, very little change having taken place.

Figure 17 and Table XV (page 53) paint a similar picture for the costs of the schools in the seventy-six second class cities. The total school costs in the fifteen years increased $6,543,551.86, or 324%. The 1913 costs measured in 1928 dollars measured $3,567,332.96. There were 20,972, or 40%, more pupils in attendance in 1928 than in 1913, hence, the costs would again increase, this time to $4,994,266.14. Since the length of the school year was the same in both years, no reckon-

FIGURE 17.--SCHOOL COSTS OF SECOND CLASS CITIES IN KANSAS. 1913 TO 1928.

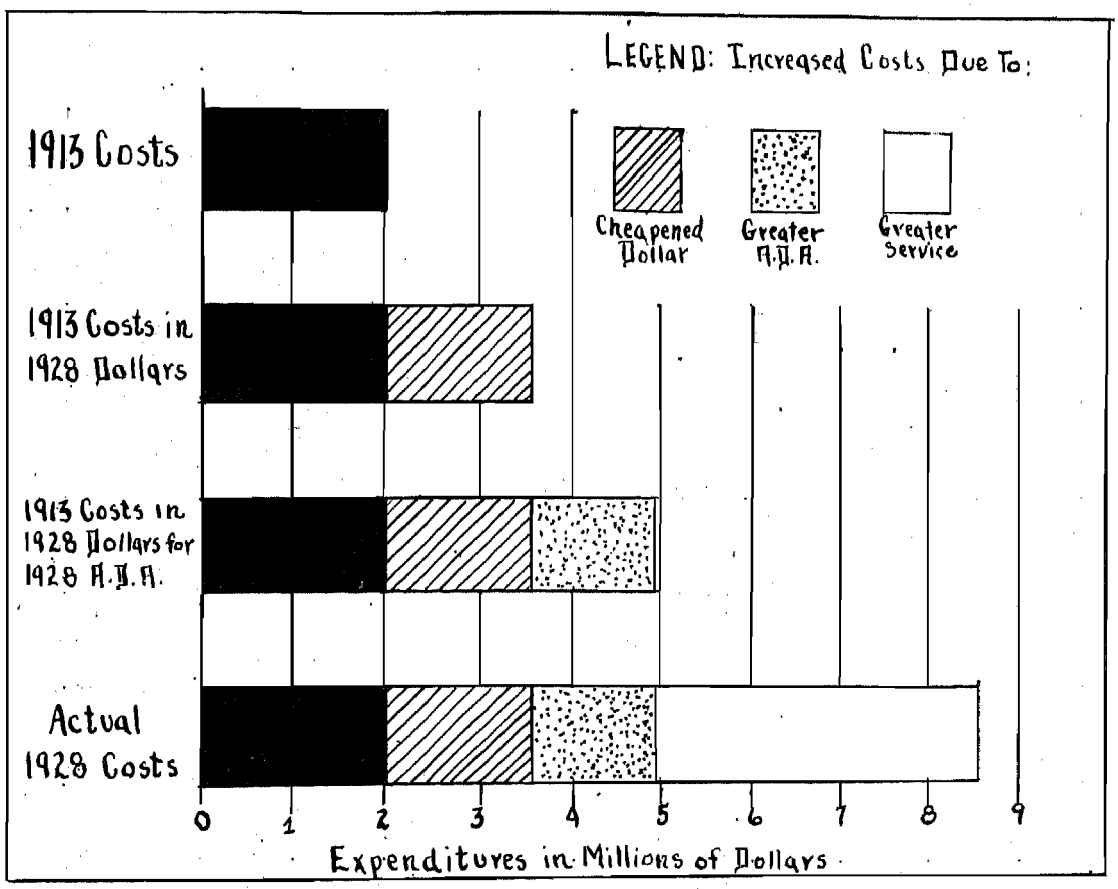

TABLE XV.--SCHOOL COSTS OF SECOND CLASS CITIES IN KANSAS. 1913 TO 1928.

Total costs for	1913--$2,016,454.61	1928--$8,560,006.47
1913 costs in 1928 dollars	$3,567,332.96	Building costs x 2.07 Other costs x 1.71
1913 costs in 1928 dollars for 1928 A.D.A.	$4,994,866.14	A.D.A. ratio is 1.40

ing must be made of this factor. The difference between the $4,994,266.14 (1913 costs in 128 dollars for 1928 attendance) and $8,560,006.47 (actual 1928 costs) is $3,565,740.33. This difference represents the real increase in school costs of second class cities between 1913 and 1928. In other words, it is the amount of money that this class of schools spent over and above what it would have cost to provide a type of education equal to that offered in 1913. This, in Figure 17 (page 53) is shown as greater service.

The expenditures for schools of second class cities were divided as follows: In 1913, 56% for teachers' salaries; 15.7% for buildings, and 28.3% for all other purposes. In 1928, they were 54%, 14.8% and 31.2%, respectively.

Cities of the first class whose schools are included in the 19th Biennial Report of the State Superintendent of Public Instruction for 1913 were: Atchison, Coffeyville, Fort Scott, Hutchinson, Kansas City, Leavenworth, Parsons, Pittsburg, Topeka and Wichita. In 1928, Salina had been added to the list, making a total of eleven first class cities, the costs of whose schools will be considered.

Figure 18 and Table XVI (page 55) shows the costs of these schools for 1913 and 1928. School costs increased $6,949,081.37 or 346%. The 1913 costs measured in 1928 dollars would have been $3,532,826.03. If the average daily attendance had been as large in 1913 as it was in 1928, the costs would have jumped to $6,198,289.03 in 1928 dollars. The large increase in the average daily attendance for schools of this class was surprising. There were 30,443 more pupils in average daily attendance

FIGURE 16.--SCHOOL COSTS OF FIRST CLASS CITIES IN KANSAS. 1913 TO 1928.

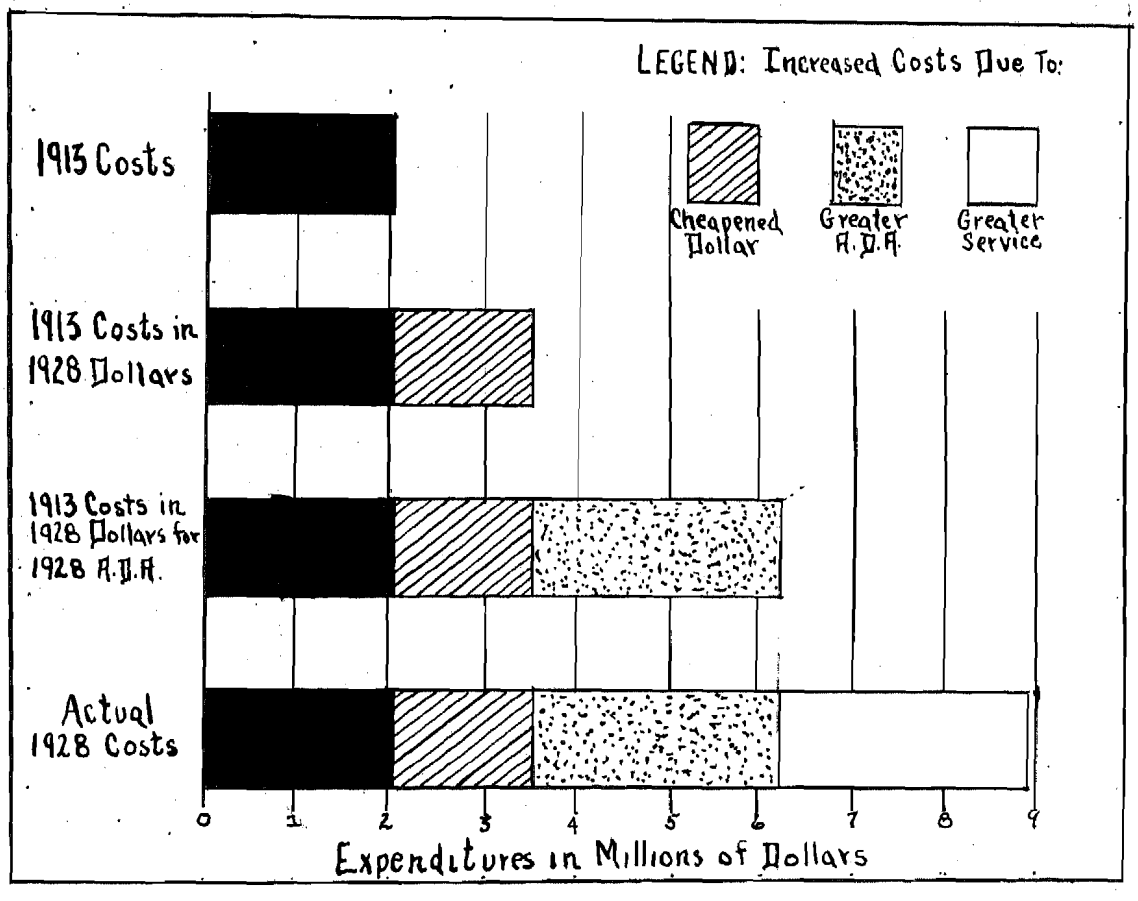

TABLE XVI.--SCHOOL COSTS OF FIRST CLASS CITIES IN KANSAS. 1913 TO 1928.

Total costs for	1913--$2,007,549.62	1928--$8,956,630.99
1913 costs in 1928 dollars	$3,582,826.03	Building costs x 2.07 Other costs x 1.71
1913 costs in 1928 dollars for 1928 school year	$6,198,269.03	A.D.A. ratio is 1.73

in the schools of cities of the first class in 1928, than there were in 1913. The increase was 73%. The length of the school year did not change. The real increase in costs, then, was $2,757,341.96, or 137%. This, in Figure 18 (page 55), is shown as greater service.

In 1913, 53.6% of the total costs of this class of schools was spent for teachers' salaries, 20% for buildings, and 26.4% for all other purposes. In 1928, 54.5% went for salaries, 14.4% for buildings, and 31.1% for all other purposes.

Figure 19 and Table XVII (page 57) has been prepared to portray the increased costs of all schools during the same period. The state spent $28,100,712.86 more on its public schools in 1928 than it did in 1913, but of this increase, $12,649,240.91 is the real increase in terms of educational service. The residue of the increase was absorbed by a decreased purchasing power of the educational dollar, a growing attendance, and a lengthening school year.

Table XVIII (page 58) gives an analysis of the increases for each type of school, showing the amounts of the increases which may be attributed to each of the various factors involved.

SUMMARY

1. In 1928, there were 7,177 one-teacher schools and 1,269 two (or more) teacher schools. Other classifications are: the schools of second class cities of which there were 76; the schools of eleven first class cities; and twenty-four

FIGURE 19.--COSTS OF ALL SCHOOLS IN KANSAS. 1913 TO 1928.

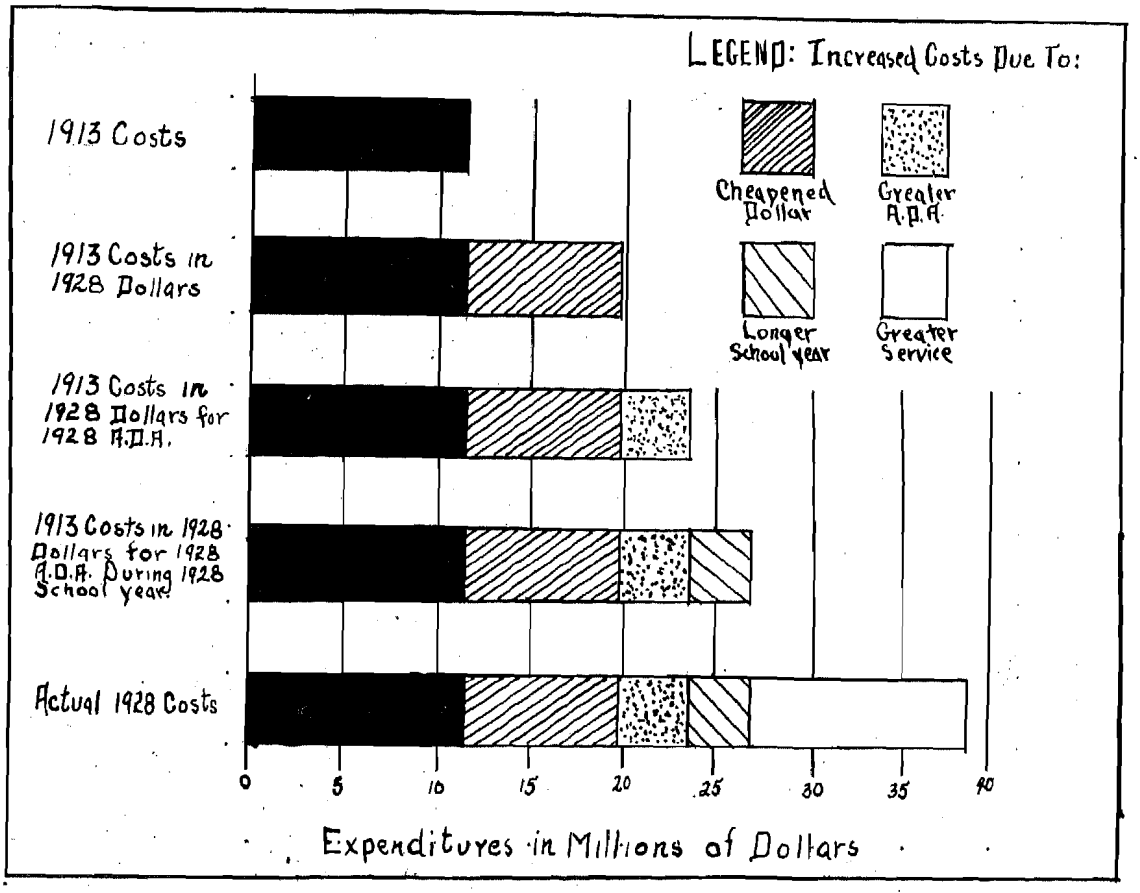

TABLE XVII.--COSTS OF ALL SCHOOLS IN KANSAS. 1913 TO 1928.

Total costs for	1913--$11,309,136.00	1928--$39,409,848.86
1913 costs in 1928 dollars	$19,900,801.63	Building costs x 2.07 Other costs x 1.71
1913 costs in 1928 dollars for 1928 A.D.A.	$23,681,953.94	A.D.A. ratio is 1.19
1913 costs in 1928 dollars for 1928 A.D.A. during 1928 school year	$26,760,607.95	13% increase in the number of days taught

TABLE XVIII.--AN ANALYSIS OF INCREASED SCHOOL COSTS IN THE DIFFERENT SCHOOLS, SHOWING THE AMOUNTS CHARGEABLE TO THE VARIOUS FACTORS INVOLVED IN THE INCREASE.

CLASS OF SCHOOL	COST OF EDUCATION	
	1913	1928
1. One-teacher	$3,933,833.11	$7,564,714.66
2. Two (or more) teacher	$3,038,249.61	$13,388,862.10
3. Second class cities	$2,016,454.61	$8,560,006.47
4. First class cities	$2,007,549.62	$8,956,630.99
5. All schools	$11,309,136.00	$39,409,848.66

AMOUNT OF INCREASE CHARGEABLE TO:

	Increased Attendance	Cheapened Dollar	Longer Year	Greater Service
1.	$1,500,848.99	$2,888,207.77	$585,331.11	$1,658,191.66
2.	$2,097,907.90	$2,341,001.42	$448,629.53	$5,463,073.64
3.	$1,550,878.35	$1,426,933.18	None	$3,565,740.33
4.	$2,615,465.00	$1,575,276.41	None	$2,757,341.96
5.	$8,761,152.31	$8,691,665.63	$3,078,654.01	12,649,240.91

Read table thus: One-teacher schools in 1913 cost $3,933,833.11, and in 1928 $7,564,714.66. Of the increase in costs between these two years, $1,500,848.99 was due to an increased attendance; $2,888,207.77 was due to the cheapened dollar; etc. Read in the same manner for other schools.

community high schools.

2. Between 1913 and 1928 the cost of living rose 71% and construction costs 107%.

3. The average daily attendance in one-teacher schools decreased 22% between 1913 and 1928. The costs of maintaining one-teacher schools increased in real amounts 42%.

4. One-teacher schools in 1913 were costing as much as all of the schools cost in 1898.

5. Two or more teacher school costs showed a real increase of 179%.

6. The costs of schools in second class cities showed a real increase of 176%.

7. The costs of schools in cities of the first class showed a real increase of 137%. The average daily attendance of this class of schools increased 73% during the fifteen years.

8. Over fifteen million dollars of the twenty-eight million dollar increase in all public school costs in Kansas between 1913 and 1928 was due to the decreased purchasing power of the dollar, a growing attendance, and a lengthening school year.

9. The increase in costs between 1913 and 1928 was borne proportionately by all classes of schools. The increase in the cost of two (or more) teacher schools was the greatest.

CHAPTER V

EVIDENCES OF GREATER EDUCATIONAL SERVICE

One important factor which has not been considered in the phenomenal increase in school costs was the growth of the high school movement. The high school, itself, is one of the outstanding evidences of the greater educational service being offered by the school systems of the state in 1928.

Complete high school statistics for 1898 are not available, but William Stryker, State Superintendent of Public Instruction at that time, states, "Statistics show that between seven and eight per cent of the population are young people in their fifteenth, sixteenth, seventeenth and eighteenth years, or of high school age. Not to exceed ten per cent of the young people in the state of those ages attend school."* Reckoning roughly, the number of students in high school in 1898, then, could not have exceeded ten thousand.

Contrast this figure with the 70,528 pupils in average daily attendance in senior high schools, and the 26,741 pupils attending junior high schools thirty years later. This tremendous advance in the number of children affording themselves a high school education is ipso facto evidence of a greater educational service being rendered. Table XIX (page 61) shows the average daily attendance, by sexes, in the high schools of the state for the years 1908, 1918 and 1928. Between 1908 and 1928 the number of students in average daily attendance increased 515%.

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*Eleventh Biennial Report, page 36.

TABLE XIX.--SHOWING AVERAGE DAILY ATTENDANCE IN THE HIGH SCHOOLS OF KANSAS BY SEXES FOR THE YEARS 1908, 1918 AND 1928.

Year	Average daily attendance		
	Male	Female	Total
1908	6,701	10,261	16,962
1918	17,659	26,750	44,409
1928*	32,706	37,822	70,528

*Junior high school attendance not included.

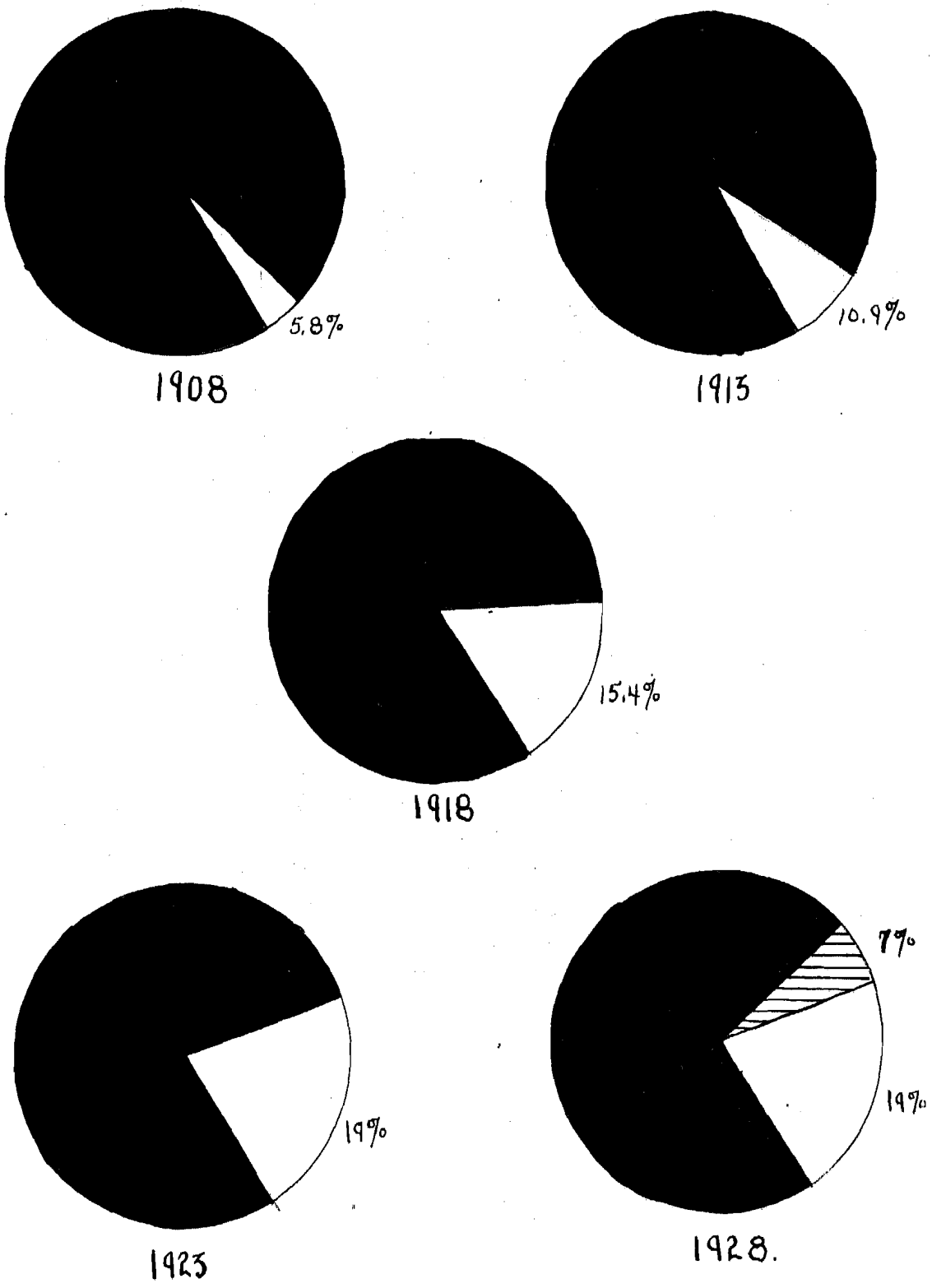
Read table thus: In 1908, there were 16,962 pupils in attendance at high schools, of whom 6,701 were boys and 10,261 were girls; In 1918, etc.

Particularly noteworthy is the fact that the proportion of boys to the total number in attendance increased from 39.6% in 1908 to 46.4% in the senior high school, and 48.7% in the junior high school in 1928. In both years the school census had shown the number of boys of school age to be about the same per cent of the total school population. To be exact, 57% of the school population in 1908 were boys. In 1928, the percentage was 58%.

Figure 20 (page 63) shows the relation of the high school attendance to school attendance as a whole by five year periods from 1908 to 1928. The proportion increased steadily from 5.7% in 1908 until in 1928, 19% of the total number of pupils in attendance at all schools were found in the three upper grades, now designated as the senior high school. In the meantime, the junior high school had made its appearance, and claimed 7% more of the total number of pupils.

The relation of these facts to the cost of providing education is apparent. Secondary education has naturally been more expensive than elementary education. In 1908, the average monthly cost per child in average daily attendance in the grade schools of Kansas was $2.81; in high schools, $4.51, or 1.53 times as much. In 1928, the average cost was $8.52 for grade schools, $9.75 for junior high schools, and $15.64 for senior high schools. Senior high schools cost 1.83 times as much per pupil in attendance as did grade schools. Grade school costs increased 203% during the twenty year period, and high school costs, 363%. Thus, when a larger and larger proportion of the

FIGURE 20.--SHOWING THE RELATION OF HIGH SCHOOL ATTENDANCE TO ATTENDANCE AS A WHOLE BY FIVE YEAR PERIOD FROM 1908 TO 1928.



Read figure thus: Unshaded portion represents high school attendance. Barred portion in 1928, Junior H.S.

total number of pupils can be located in the high schools, the costs, necessarily, must be greater and greater. Analyzing the situation further, of the 357,029 pupils in attendance at all of the public schools in Kansas in 1928, 19%, or 70,528, were costing $15.64 each per month. Seven per cent, or 26,741, more of the pupils were costing $9.75 each per month. The remaining 259,760 pupils secured their education at an expense of $8.52 eadh per month.

Suppose that 19% of the average daily attendance in 1908 had been high school attendance, instead of the 5.8%, as Figure 20 (page 65) shows. What would have been the effect upon school costs?

In 1908, 16,962 of the pupils cost on the average $4.31 each per month, and the remaining 273,942 were educated at the rate of $2.81 per month. Had the percentage of high school attendance been 19%, there would have been 55,272 pupils who would have cost the higher rate of $4.31, and 235,632 who would have cost $2.81. The difference in total school costs for these two situationswould have been $109,332.84 per month. In other words, if the same proportion of students had been attending high school in 1908 that there was in 1928, the schooling costs would have been $109,332.24 per month greater. This, measured in 1928 dollars, would have been $223,017.36 per month, since the purchasing power of the dollar had decreased 104% in the twenty years. For a school year of nine months, this amount would total $2,007,156.24, which would represent the increase in school costs between 1908 and 1928

which can be attributed to the fact that a much greater proportion of students were attending high schools in 1928.

Unfortunately, high school costs are not separately itemized in the biennial reports of the state superintendent of public instruction, and a complete analysis of these costs, therefore, cannot be made.

Figure 21 (page 66), however, shows the growth in proportion of high school attendance in the various classes of schools for 1913 and 1928.

Table XX (page 67) shows the average monthly cost per pupil of each class of school in the grades and in the high schools for 1913 and 1928.

The fact to be noted here is that from 1908 to 1928 the schools were providing secondary education to a steadily increasing number of pupils, a number which grew faster than the number of pupils in both elementary and secondary schools. The number of pupils attending high school increased 315% between 1908 and 1928; the number of pupils attending all schools increased 22.7% during the same twenty years. A second fact to be noted is that high school education was from one and one-half to one and five-sixths times as expensive to provide.

The number of pupils in attendance at high schools is not the only noteworthy factor. The number of pupils being graduated is also notable. In 1898, 952 pupils were reported as being graduated from the high schools of the state. The number of graduates in 1927* was 14,648, over fifteen times

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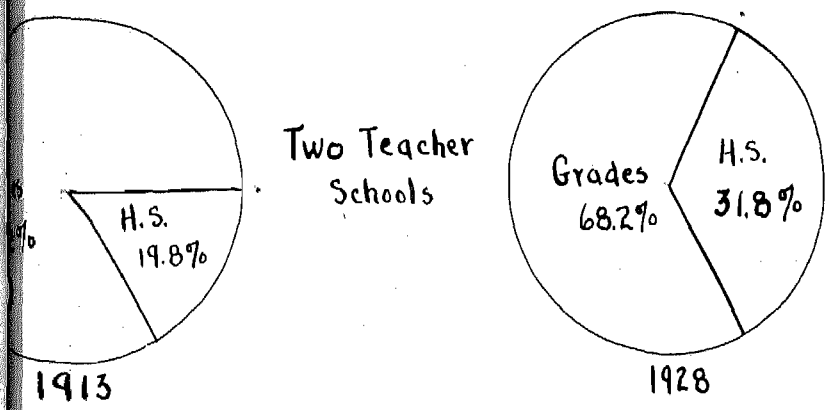
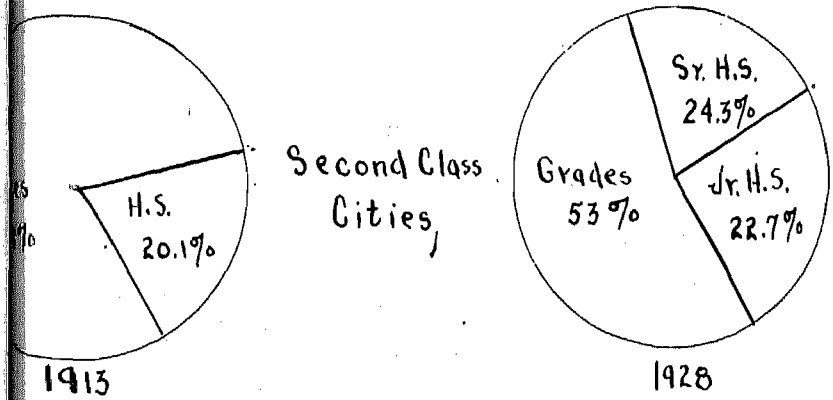
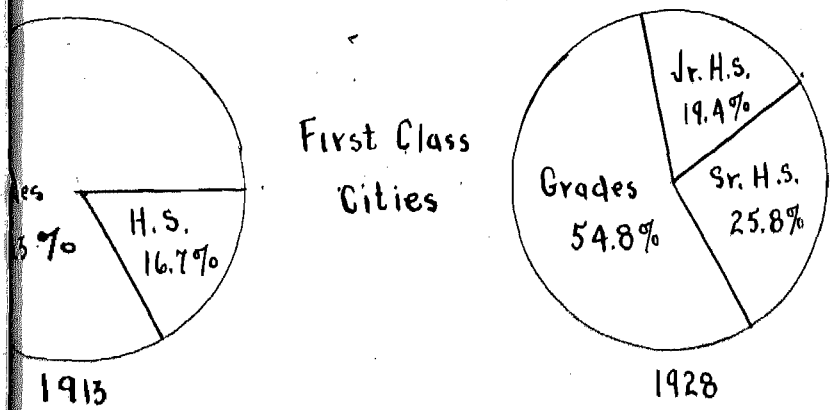
*Figures for 1928 are incomplete.

FIGURE SHOWING THE GROWTH IN PROPORTION OF HIGH SCHOOL ATTENDANCE IN THE VARIOUS CLASSES OF SCHOOLS FOR 1913 AND 1928







Read figure thus: In 1913, high school attendance in two-teacher schools was 19.8% of the enrollment; in 1928, 31.8%. Read in same manner other schools.

TABLE XX.--SHOWING THE AVERAGE MONTHLY COST PER PUPIL OF EACH CLASS OF SCHOOLS IN THE GRADES AND IN THE HIGH SCHOOLS FOR 1913 AND 1928.

Class of School	1913 Average cost per pupil per mo. on A.D.A.		1928 Average cost per pupil per mo. on A.D.A.	
	Grades	H.S.	Grades	H.S.*
One-teacher	$4.25	. . . .	$9.95	. . . .
Two-teacher	$3.02	$6.05	10.05	$13.16
2nd Cl. cities	$2.77	$5.57	$6.56	$12.69
1st Cl. cities	$3.41	$6.80	$7.51	$12.67

*High school figures for 1928 do not include junior high schools

Read table thus: The average cost per pupil per month on the average daily attendance was $4.25 in 1913 and $9.95 in 1928 for one-teacher schools. Read in a similar manner for other schools.

as many. Not only were a greater per cent of the pupils attending high school, but a far greater per cent of them were completing their secondary education.

The next evidence of greater educational service in 1928 is one that quite naturally follows the vast increase in high school attendance, namely, better buildings and equipment. One of the most striking instances of the public's growing regard for the power of education in the welfare of the state is reflected in the modern school building, particularly the high school. The one pride of every village, town or city is its hall of education.

Expenditures for buildings and equipment in 1928 was over forty-two times as much as in 1898. Indicative of the trend to provide increasingly better educational facilities are the figures showing the annual estimated valuation of school property from 1898 to 1928. Column (1) of Table XXI (page 69) shows the annual estimated value of school property in the state during the thirty year period. Column (2) has converted the amounts of column (1) into yearly index numbers stated in per cents of 1898. Column (3) shows the index numbers of total school costs. This table shows that the rise in school costs is almost paralleled by the rise in value of school property. Just as the schools were costing more than ten times as much in 1928 as in 1898, the school buildings and equipment were worth more than nine times as much.

Large expenditures for buildings and equipment, of course, does not always imply a greater educational service. No doubt, in some instances, where the buildings and equipment

TABLE XXI.--SHOWING YEARLY ESTIMATED VALUATION AND INDEX NUMBERS OF SCHOOL PROPERTY IN KANSAS, AND INDEX NUMBERS FOR TOTAL SCHOOL COSTS FROM 1898 TO 1928.

Year	(1) Estimated Valuation	(2) School Property	(3) School Costs
1898	$9,504,961	100	100
1899	10,315,260	108	116
1900	10,417,592	109	121
1901	11,173,393	117	121
1902	11,660,470	122	126
1903	9,181,249	97	152
1904	9,296,387	98	150
1905	10,524,767	110	152
1906	12,893,944	136	166
1907	14,243,540	149	181
1908	16,114,725	169	192
1909	17,077,180	180	218
1910	29,891,590	314	258
1911	22,298,103	234	268
1912	25,685,905	249	294
1913	25,301,755	266	297
1914	26,860,957	282	321
1915	27,927,740	294	331
1916	31,168,762	329	360
1917	32,702,468	345	489
1918	36,251,557	382	450
1919	38,648,821	406	487
1920	46,225,422	486	592
1921	53,726,728	565	816
1922	60,111,872	632	889
1923	67,358,328	709	959
1924	72,348,432	761	921
1925	72,652,900	765	941
1926	74,382,427	782	929
1927	102,650,489	1081	1078
1928	86,355,515	909	1037

Read table thus: In 1898, the stimated valuation of school property was $9,504,961, which figure is taken as 100%. In 1899, the valuation was $10,315,260, which is 108% of the 1898 figure. Likewise, in 1899, school costs were 116% of the 1898 school costs. Read in a like manner for other years.

provided far exceeded the present or future needs of particular situations, a part of the expenditures could be charged to waste and inefficiency. Likewise, failure to provide in new buildings for the future needs of the schools has caused considerable expense to some communities. Nor is there any proof that fine buildings and excellent equipment will insure a superior quality of instruction. Nevertheless, the fact that schooling facilities are better with each year does mean that the opportunities for a greater educational service are at hand.

Changes in the curricula have also affected the building program. In 1898, the high school curricula were almost entirely of the book-study type, and all of the students took practically the same course. Since then, subjects such as manual training, home economics, physical education, and physical and biological sciences have been added, each demanding its own special shop, laboratory, gymnasium, and the attending equipment. Instead of a single course of study, several courses are offered, to suit the varying needs of the pupils, and to meet the increasing complexity of modern life. A large number of elective courses supplemented or superseded the rigid, narrow curricula of the earlier period. To meet these demands, the buildings, necessarily, have been larger and more complex, and the equipment has become an item of no small amount. Modern buildings spare no expense to provide the best in sanitation and safety.

The improvement of library facilities is another tangible evidence of the greater educational service being rendered

in 1928. Table XXII (page 72) shows the number of school libraries, with their respective total number of volumes for the years 1908, 1918, 1928. The number of school libraries increased 78%, and the number of volumes, 439%. In 1908, 44% of the schools had no libraries at all, but in 1928, the proportion of schools without libraries had dropped to 8%. Modern methods of teaching and study demand much reference work, and adequate library facilities are essential to educational efficiency. Any improvement of this nature must render a distinct educational service. The tendency to provide larger and more complete libraries must share part of the increased school costs between 1908 and 1928.

Nothing has been said of the improvement in teaching efficiency. There were in 1908, 12,985 teachers. Of these teachers, 9,510 were not even graduates from high school. Three hundred sixty were graduates from a college or university; 407 had been graduated from a normal school; and the remaining 2,709 were high school graduates. Fifteen years later, 1923, there were 17,971 teachers, 2,878 of whom were graduates of a college or university; 1,313 were graduates of a normal school; and 3,050 more had completed one or more years at a college or university. Of the remaining 10,730 teachers, 7,241 had finished high school. Stricter requirements for the teachers' certificates contributed largely to the improvement of the teaching staff. The increased professional training of the teachers has been of inestimable value to the children of the state.

TABLE XXII.—SHOWING THE NUMBER OF SCHOOL LIBRARIES AND THE NUMBER OF VOLUMES IN THE LIBRARIES FOR THE YEARS 1908, 1918, AND 1928.

Year	Number of libraries	Number of volumes
1908	4,932	274,795
1918	7,293	766,155
1928	7,881	1,435,228

Read table thus: In 1908, there were 4,932 school libraries in which there were 274,795 volumes. In 1918, etc.

Naturally, the value can not be reduced to dollars and cents, but it is obvious that "richer and better preparation of teachers means richer and better education for the children of the state." This item, alone, goes far to offset the increase in school costs which has been charged to greater educational service.

The growing number of standard and superior rural and grade schools throughout the state is another indication of increased school efficiency. The rankings, standard and superior schools, were established by the state department of education in 1916, and by 1928 there were 1,100 schools that merited one or the other of these rankings. Standard schools must maintain a nine months term and employ two or more teachers. Superior schools must maintain a nine months term and have four or more superior teachers. The school buildings are inspected for sanitation, safety, seating arrangement, heating, lighting, ventilation, etc. Provisions must be made for play equipment, and adequate instructional equipment must be at hand.

Similarly, the number of accredited high schools in the state has grown. In 1915, there were 365 accredited high schools. In 1928, the number had more than doubled, there being 743 high schools accredited. Accredited standing was gained by meeting certain standards laid down by the state department of education with respect to the building and equipment, library, course of study, number of teachers, teacher preparation, teacher load, teacher-pupil ratio, length of year, length of recitation periods, size of classes, etc.

The fulfillment of these requirements by a steadily growing number of high schools is indicative of a greater educational efficiency.

Thus far, only the factors contributing to greater educational service have been presented. Was the tremendous increase in costs between 1898 and 1928, all of it, an inevitable one? Was there no waste nor inefficiency in the expenditure of school funds?

As stated elsewhere in this study, the amounts that may be due to these reasons are hidden from statistical computation. Costs resulting from maladministration, unwise expenditures, or other errors in judgment do not find their way into public records. Such costs, by their nature, cannot by measured.

One factor which may be considered under the head of inefficiency, perhaps, is the continued maintenance of a large number of one-teacher schools. In 1928, there were just 742 fewer teachers in one-teacher schools than there were in 1898, the actual number of teachers being 7,937 in 1898, and 7,195 in 1928. In the meantime, the average daily attendance in these schools dropped from 133,709 to 93,649, a decrease of 40,060. In other words, one-teacher schools did not drop a teacher until 54 pupils had failed to attend. This is reflected by the fact that the teacher-pupil ratio in 1908 was 1:16.4, and in 1928, 1:12.57.

Table XXIII (page 75) shows the average daily attendance per teacher and the cost per month per pupil in average daily attendance for the grade schools of the different classes of

TABLE XXIII.---SHOWING THE AVERAGE DAILY ATTENDANCE PER TEACHER AND COST PER PUPIL PER MONTH FOR THE GRADE SCHOOLS OF VARIOUS CLASSES OF SCHOOLS IN 1928.

1928 Grade Schools

Class of School	A.D.A. per teacher	Cost per pupil per mo.
One-teacher	13.57	$9.95
Two-teacher	21.20	$10.05
2nd Cl. Cities	28.58	$6.56
1st Cl. Cities	29.00	$7.51

Read table thus: For every teacher in one-teacher schools, there were 13.57 pupils in attendance, each of whom cost $9.95 per month. Read in the same manner for other schools

schools in 1928. It will be noted that the cost of providing grade school education in the first and second class cities of the state was considerably less than the cost in one-teacher schools, and the cost was but ten cents per pupil greater in two (or more) teacher schools; this, in spite of the larger salaries and better equipment of city schools.

The average daily attendance per teacher is over twice as large in the city schools as in the rural schools. Hence, it can be deducted that the one-teacher schools could reduce their teaching force by one-half without impairing their educational efficiency. Cutting the teaching force in two would bring about a 37.4% decrease in the costs of this type of school. In 1928, this would have meant a saving of well over two million dollars. It seems feasible, that, in the present era of good roads and facile transportation, a considerable number of the one-teacher schools could be either abandoned, or consolidated, at a large saving to the tax-payer.

The Complete Report of the State School Code Commission of Kansas, published January 15, 1929, sets forth a startling array of facts regarding this class of schools, showing glaring inequalities in the educational opportunities offered in different sections of the state, and a general waste and inefficiency in the continued maintenance of a large number of one-teacher schools.

For instance, in 1928 there were six one-teacher schools in session with no pupils in attendance; fifteen had one pupil each; thirty-four had two pupils; sixty-eight had three; one hundred thirty-two had four; and one hundred fourteen had

five; a total of three hundred sixty-three schools had five pupils or fewer. Two of the schoolhouses were sod schoolhouses, and in five schoolrooms, the children were compelled to sit below the surface of the earth.

SUMMARY

1. The proportion of high school pupils to the total number in average daily attendance increased from 5.7% in 1890 to 19% in 1923.

2. High school education consistently cost more than one and one-half times as much as elementary education.

3. A considerable part of the increased school costs from 1898 to 1923 is chargeable to the growing numbers attending high school.

4. The fact that such a large number of pupils were affording themselves a high school education in 1923 is evidence of a greater educational service being rendered by the school systems of the state.

5. School property in 1926 was estimated as worth more than nine times as much as school property in 1895. This is evidence of better housing facilities, finer equipment, and ultimately greater educational service.

6. Changes in the curricula have necessitated a wide expansion both in buildings and equipment and in teaching force.

7. Library facilities, if measured by the number of volumes available for use, were over five times better. Eight per cent of the schools in 1923 had no libraries.

SUMMARY (CONT'D)

In 1908, the number of schools without libraries was 44% of the total.

8. A large increase in the number of teachers holding university, college, or normal school degrees, and stricter requirements for teacher certification are evidences of better trained teachers, and, consequently, better teaching.

9. More and more rural and grade schools are meeting the state requirements for classification as standard or superior schools.

10. The number of accredited high schools in the state more than doubled between 1915 and 1928.

11. The continued maintenance of a large number of one-teacher schools, in the face of a rapidly declining attendance, is the one outstanding evidence of waste and inefficiency in school expenditures.

CHAPTER VI

TEACHERS' SALARIES AND SCHOOL COSTS

The public school teachers of Kansas in 1928 were paid salaries over four times as high as the salaries of the teachers in 1898. The average salary of the women teachers in 1898 was $32.01 per month; for men, $39.03. In 1928, the salaries had mounted to $139.81 and $164.97, respectively. This fact, in conjunction with the fact that the number of teachers had also increased from 12,513 to 19,202 during the same thirty years, accounts for not a small part of the increase in school costs.

Figure 7 (page 22) depicted the relation of the amount spent for teachers' salaries to the total school expenditures, and Figure 6 (page 18) showed that the amount spent for teachers' salaries, in proportion to the total school costs, grew smaller from 1898 to 1928; this, in spite of the fact that teachers' salaries had increased over three hundred per cent.

Table XXIV (page 80) states these facts in index numbers based on the 1898 figures. From this table, it is seen that while total school costs increased 937% from 1898 to 1928, the amount spent for teachers' salaries increased but 676%. Salaries for men increased 325% and salaries for women, 337%. It should be noted here that although the total expenditures for teachers' salaries increased 676%, this figure does not represent the actual per cent increase in salaries. The difference between the 676%, the increase in total expenditures

TABLE XXIV.--SHOWING YEARLY INDEX NUMBERS FOR TOTAL SCHOOL COSTS, AMOUNT SPENT FOR ALL TEACHERS' SALARIES, AND FOR MEN'S SALARIES AND WOMEN'S SALARIES .

Year	Total School Costs	Am't for Salaries	Salaries for Men	Salaries for Women
1898	100	100	100	100
1899	101	103	103	106
1900	103	106	108	103
1901	107	106	110	112
1902	112	110	113	116
1903	112	116	118	112
1904	115	123	125	122
1905	115	130	131	125
1906	118	136	133	131
1907	112	146	154	137
1908	125	156	170	146
1909	133	176	174	164
1910	139	193	197	167
1911	137	206	208	203
1912	146	226	210	209
1913	149	240	213	215
1914	153	263	218	225
1915	156	263	218	225
1916	176	280	223	226
1917	218	300	241	228
1918	260	316	260	247
1919	297	365	310	254
1920	299	433	405	265
1921	260	573	400	344
1922	253	653	420	347
1923	258	646	420	422
1924	251	693	413	425
1925	265	706	415	425
1926	262	733	418	422
1927	257	763	423	434
1928	255	776	425	437

Read table thus: In 1899, total school costs were 101% of the 1898 costs; the amount expended for salaries was 103% of the 1898 amount; salaries for men were 103% of 1898 salaries; salaries for women, 106% of 1898 salaries. Read in the same manner for other years.

for teachers' salaries, and the 325% or 337%, the actual per cents of increase in salaries for men and women respectively, was absorbed by the fact that there were 6,689 more teachers employed in 1928 than in 1898.

It is to be noted that salaries, both for men and for women, increased somewhat more than did the cost of living. Table XXV (page 82) shows the average monthly salary for men and women teachers in Kansas for the years 1898, 1908, 1918, and 1928. Figure 22 (page 83) portrays graphically the increase in salaries and the cost of living for the same period of years, showing the increases in per cents of 1898.

Men's salaries have been consistently higher than salaries for women, and the difference between the two salaries grew steadily wider for the entire thirty years. Figure 22 (page 83), however, shows that in spite of the fact that men teachers were paid $7.02 more per month than women teachers in 1898, and $25.16 more in 1928, the salaries for women had made a greater per cent of gain.

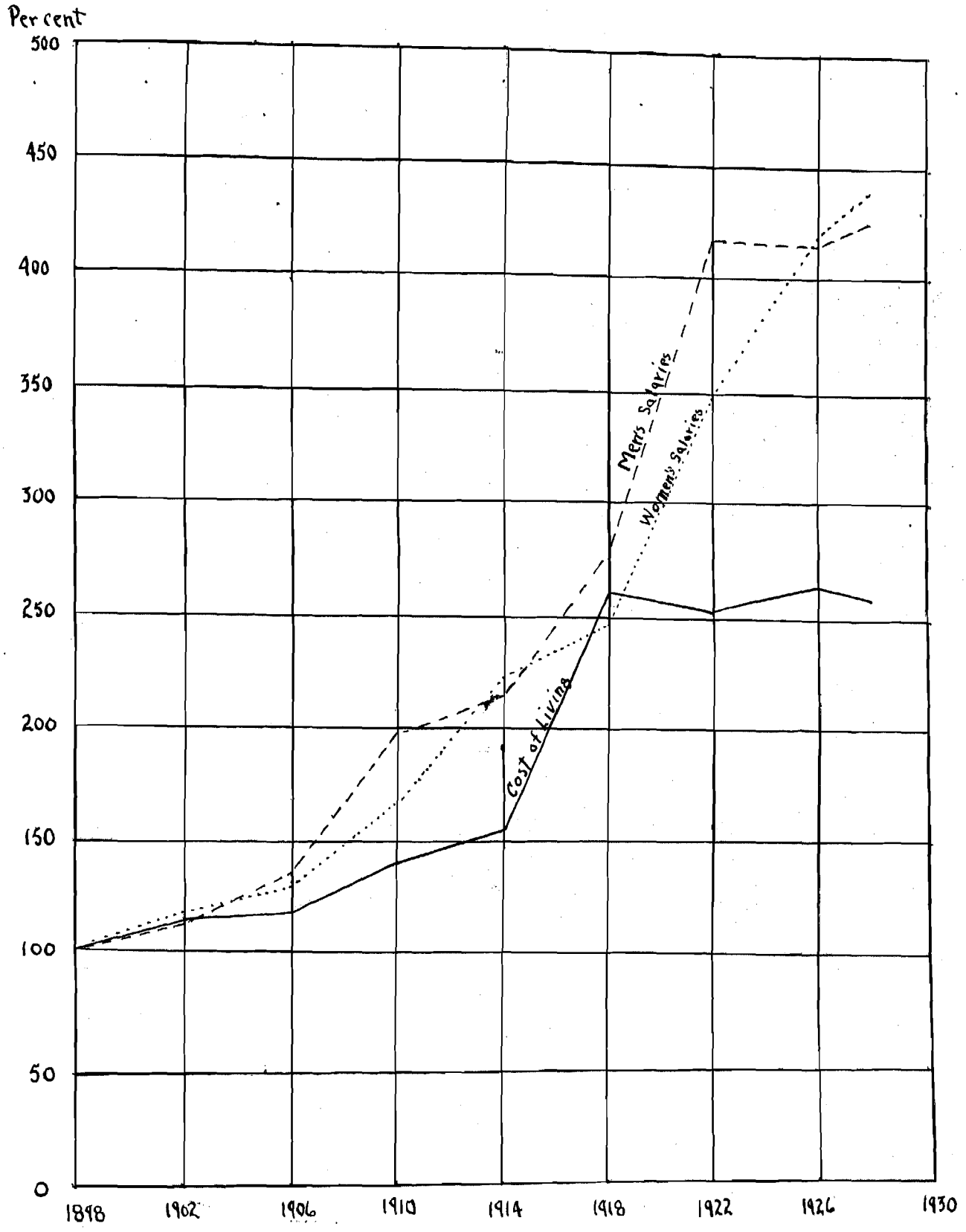
Although teachers in 1928 were paid over four times as much as the teachers in 1898, it is obvious that the 1928 teachers were not paid four times as well. While teachers' salaries were increasing 325% and 337% for men and women respectively, the cost of living rose 155%. In other words, the dollar with which the teacher in 1928 was paid was worth only .39 as much as the dollar with which the 1898 teacher was paid. It took 2.55 of the 1928 dollars to equal one 1898 dollar. Thus, part of the rise in salaries was not due to bona fide increases, but to increases made in response to the

TABLE XXV.--SHOWING THE AVERAGE MONTHLY SALARIES FOR MEN AND WOMEN TEACHERS IN KANSAS FOR 1898, 1908, 1918 AND 1928.

Year	Men	Women
1898	$39.05	$32.01
1908	$60.48	$46.70
1918	$94.52	$78.54
1928	$164.97	$139.81

Read table thus: In 1898, the average monthly salary for men teachers was $39.05; for women, $32.01. In 1908, etc.

FIGURE 22.--SHOWING THE INCREASE IN SALARIES AND THE COST OF LIVING IN PER CENTS OF THE 1898 FIGURES.



fact that it took more money to live. For example, the women teachers in Kansas in 1898 were paid $32.01 per month. The women teachers in 1928, to be paid equally as well as the 1898 teachers, would have to be paid 2.55 times that amount, or $81.63. Men teachers would have to be paid $99.53. The per cents of real increase in teachers' salaries, then, were not 325% and 337% for men and for women, respectively, but 66% and 71%.

Table XXV (page 82) and Figure 22 (page 83) show also that salaries increased more rapidly than did the cost of living during the first decade of the thirty year period, men's salaries increasing 70% and women's salaries, 47%; the cost of living increased but 25%. The 1908 teachers, then, were better paid than the teachers of 1898.

This situation was reversed during the second ten year period, when the cost of living rose 100% and salaries but 64% and 68% respectively. The 1918 teachers, as a whole, were not as well paid as the teachers of 1908, and only the men teachers were better paid than the teachers of 1898.

It was the last decade, 1918 to 1928, which saw the remarkable improvement in the salaries of the teachers of the public schools. During these ten years the cost of living rose to a peak in 1920, then, with slight fluctuations, dropped until in 1928 the cost of living was even lower than in 1918. To be exact, the cost of living was just .98 as great. Teachers' salaries, however, increased during this same period 51% and 77% for men and women teachers, respectively. The improvement in salaries for women is especially noteworthy. It must be remembered that those entering the teaching profession during

those ten years were becoming steadily better trained for their positions, as was pointed out in the preceding chapter. Those teachers were investing considerable time and money in their preparation for the teaching profession, and it is only natural that their earning capacity and demands should be larger.

It is noteworthy that the increases in teachers' salaries lagged a year or more behind the increase in the cost of living. Quite recently, after a year or more decline in the cost of living, there has been a tendency to reduce teachers' salaries. Salaries respond slowly to the fluctuation in the value of the dollar.

It would be quite unfair to determine the salary or wages of any type of worker, solely by the changes in the cost of living. The cost of living covers only the bare necessities of life. There is need for just as close a scrutiny of changes in the standard of living. Not only has the cost of living affected the teacher's salary, but the demands he or she must meet to maintain the standard of living required of the teaching profession are increasing. It is not a hardship to have but one suit of clothes or one dress if other people are in like condition. If no person but the very wealthy owned an automobile or a radio, a wage that made ownership of an automobile or radio impossible would be no cause for complaint. However, if people generally dress well and assign to themselves some of the luxuries of life, the teacher must be permitted to do the same. As the standard of living in Kansas increases, the salaries for teachers must increase. The 1928

teacher, after ten years of constant improvement in salary in the face of a decline in the cost of living, was better paid than the 1918 teacher, and was able to maintain a higher standard of living than the teacher of any previous year. The fact that the 1928 teacher was better paid, however, does not necessarily mean that the standard of living which he could maintain was any higher or as high as the general average of the people of the state. This could be determined only by a comparison of the wages of teachers with salaries for other classes of wage earners throughout the state over a period of years.

Teachers' salaries throughout the entire thirty year period showed no tendency to decrease. However, the increase in men's salaries was very slight from 1922 to 1928; women's salaries, after a remarkable gain in 1923, rose quite slowly again until the end of the period.

Table XXVI (page 87) shows the increase in teachers' salaries in the different classes of schools from 1908 to 1928. Column (1) shows the actual 1908 monthly salary; column (2) shows the 1908 salary measured in 1928 dollars; (the cost of living rose 119% during the twenty years); column (3) shows the actual 1928 salaries; column (4) shows the difference between columns (2) and (3); this difference represents the <u>real</u> increase in teachers' salaries, or the amount by which the 1928 teachers were better paid than the 1908 teachers.

It is plain to be seen from this table that by far the greatest share of the increases in teachers' salaries was a result of the change in the purchasing power of the dollar, and not a recognition of increased efficiency in the teaching

TABLE XXVI.--SHOWING THE INCREASES IN TEACHERS' SALARIES FOR THE DIFFERENT CLASSES OF SCHOOLS. 1908 TO 1928.

(1) 1908 Average Monthly Salary	(2) 1908 Salary in 1928 Dollars	(3) 1928 Average Monthly Salary	(4) Real Increase in Salary
	One-teacher schools		
$46.04	$100.88	$95.72	None
	Two-teacher schools		
$61.14	$133.89	$115.23	None
	Second class cities: (grade)		
$50.00	$109.50	$126.16	$16.66
	First class cities: (grade)		
$68.76	$128.88	$143.43	$14.54
	Second class cities (high school)		
$82.30	$156.44	$184.09	$47.65
	First class cities (high school)		
$85.45	$182.76	$202.94	$20.18
	Second class cities: (principals)		
$768.00 (yearly)	$1,781.92	$2,600.00	$818.08
	First class cities: (principals)		
$1,370 (yearly)	$3,000.30	$3,765	$764.70
	Second class cities: (superintendents)		
$1,186 (yearly)	$2,597.34	$3,267	$1,329.64
	First class cities: (superintendents)		
$$2,111 (yearly)	$4,633.09	$5,491	$857.91

Read table thus: In 1908, teachers in one-teacher schools were paid $46.04. This salary, measured in 1928 dollars, would be $100.88. 1928 teachers in this class of schools were paid $95.72. Hence, there was no real increase in salaries for these teachers from 1908 to 1928. Read in the same manner for other schools.

personnel.

SUMMARY

1. Increases in the size and salaries of the teaching personnel account for a large share of the increased school costs.

2. The amount spent for teachers' salaries increased 676% from 1898 to 1928.

3. Salaries for men teachers increased 325%; for women, 337%. The remainder of the increase in the amount spent for salaries is due to the fact that there were 6,689 more teachers employed in 1928 than in 1898.

4. Men's salaries were consistently higher than salaries for women, but women's salaries made the greater per cent of increase during the thirty year period.

5. Changes in the purchasing power of the dollar affected teachers' salaries, but salaries were slow to respond to these changes.

6. Teachers in 1908 were better paid than 1898 teachers, but 1918 teachers were not paid as well as 1908 teachers. Teachers in 1928 were better paid than teachers of any previous year.

7. The standard of living should be as important a consideration in teachers' salaries as is the cost of living.

8. Teachers in one and two-teacher schools were not paid as well in 1928 as in 1908.

9. High school teachers received greater <u>real</u> increases in salaries than grade school teachers. Principals and superintendents received far greater increases than teachers.

CHAPTER VII

CAN KANSAS AFFORD TO EDUCATE ITS CHILDREN?

The investment of an increasingly huge sum of money in public education, not only in Kansas, but throughout the entire United States, is an amazing phenomenon of the twentieth century. Education, today, is one of the greatest, if not the greatest business in the country. In 1928, the United States invested $2,184,336,658 in public education. During that year, there were 25,179,696 pupils enrolled in the elementary and secondary schools of the nation. These pupils were taught by 831,954 teachers. To maintain the schools, it cost every man, woman and child in the United States $18.21. Education is truly a gigantic business.

The State of Kansas spent in 1928, $39,409,848.86 for the schooling of 357,029 children who were taught by 19,202 teachers. The per capita cost was $21.43. Compare these figures with those of any industry in the state, and the size and importance of the business of education in any state is apparent.

In the face of an increasingly heavy tax burden, and with no immediate prospect that school costs will decrease appreciably, it is well to consider the question of the state's ability to support its educational program.

There has been much publicity concerning the amounts expended for education. There seems to be a general feeling that public expenditures in general, and school costs in particular, are reaching the limit which can safely be expended; or,

that "more money is expended for education than the importance of this public interest justifies." Can Kansas afford to spend such a great amount for schools?

In order to answer this question it is only necessary to compare school expenditures with a number of indications of economic power in the state. Indications of economic power in the state are: (1) total accumulated tangible wealth; (2) average yearly current income; (3) payments for life insurance; (4) yearly expenditures for building construction; (5) estimated expenditures for articles in the luxury class; and (6) total taxes collected. A comparison of these items with public school expenditures offers a basis for determining whether or not the amount of financial support accorded the schools in Kansas is greater than its economic power justifies.

The wealth of the State of Kansas in 1928 was estimated by the National Industrial Conference Board to be $6,771,000,000. Wealth, it is understood, means the total value of the property in the state, whether owned by individuals or collectively. Of this amount $86,355,515.28, or 1.28% represented the value of the school property in the state. This means that $1.28 out of every $100 of the state's wealth exists in the form of school property. In thirty-one states in the United States, the value of public school property in relation to the total wealth is higher.

The National Bureau of Economic Research estimated the annual income for Kansas in 1928 at $1,162,447,000. School costs in the same year were $39,609,848.86, or 3.39% of the

state's annual income. Kansas, then, spent 3.39% of its income in 1928 on its public schools. For every $100 income in Kansas, $3.39 was spent for public education. Nineteen states had a larger estimated income than Kansas, and thirteen spent more for public education. The per cent of the income expended for schools, necessarily, must vary with states. Some states have five or six times as much income as others, and the less wealthy states must either offer inferior educational opportunities, or allot a higher per cent of their incomes to school support.

Figure 33 (page 92) shows graphically the per cent of wealth which exists in the form of school property in Kansas, and the per cent of the state's income which is spent for public schools.

How do school expenditures compare with expenditures for certain other purposes? The Insurance Yearbook for 1928 estimates that the State of Kansas spent $29,883,048 for life insurance payments in 1928. This represents 75% of the total school bill, and 2.57% of the income of the state. During the same year $53,658,300* or 136% of the school costs and 4.61% of the income, was spent for the construction of buildings in Kansas. Out of every $100 income in Kansas, then, $4.61 was spent for buildings, $2.57 for life insurance, and $3.39 for schools. For every dollar Kansas spent for schools, it spent 75¢ for life insurance and $1.36 for buildings.

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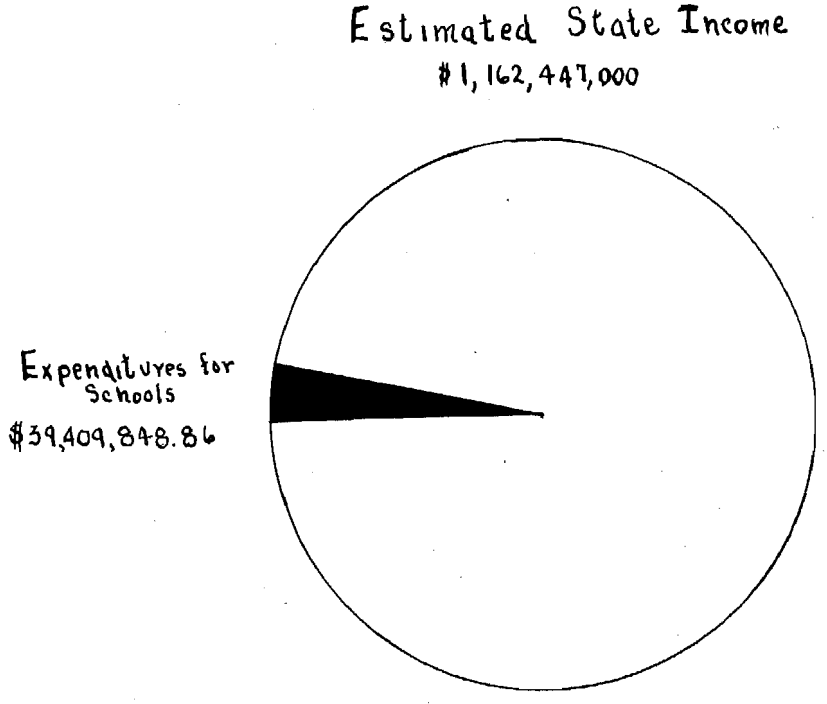
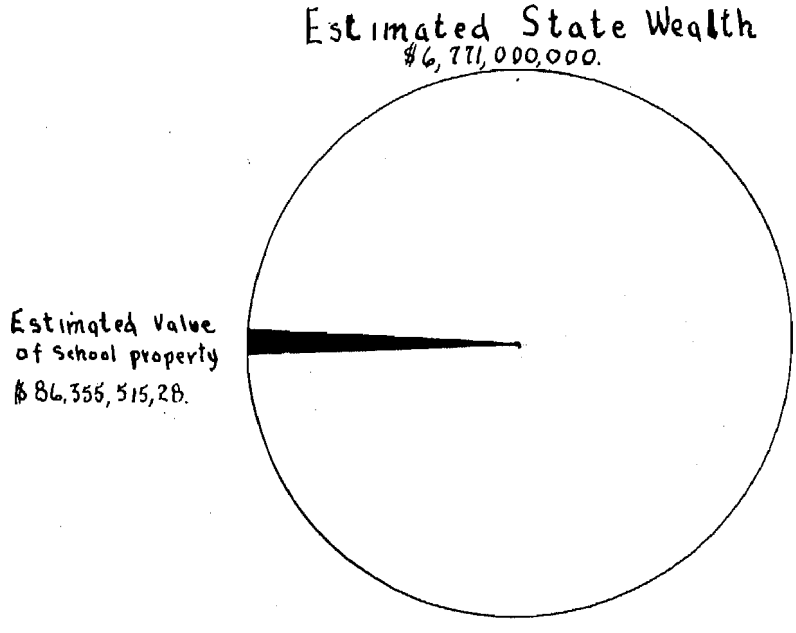
*"Investing in Public Education", in RESEARCH BULLETIN, National Education Association, September 1930. Pages 168-89.

FIGURE 23.--SHOWING THE PERCCENT OF THE STATE'S INCOME SPENT FOR PUBLIC SCHOOLS IN 1928, AND THE PER CENT OF THE STATE'S WEALTH WHICH EXISTS IN THE FORM OF SCHOOL PROPERTY.





The more startling facts follow. It is estimated that during the year 1928 the State of Kansas spent $263,360,800* for passenger automobiles. This is more than six times as much as the state spent for its schools. To be exact, it is 6.05 times as much. It is 22.2% of the state's 1928 income. It means that out of every $100 of the income of the state, $22.20 was spent for automobiles. For every dollar that the state spent for public education, it spent $6.05 for automobiles.

Furthermore, it is estimated that the State of Kansas in 1928 spent the following sums for luxuries of various types.**

Tobacco	$27,835,860
Soft drinks, candy, etc.,	24,053,130
Theatres, movies, etc.	14,076,270
Jewelry, cosmetics, etc.	10,760,270
Sporting goods	6,495,580
Total for luxuries	$83,221,450

For every dollar that the State of Kansas spent for the education of its children in 1928, it spent 70¢ for tobacco; 61¢ for soft drinks, candy, ice cream, etc.; 38¢ for movies and similar amusements; 26¢ for jewelry and cosmetics; and 16¢ for sporting goods. For every $1.00 that was spent for public schools, $2.11 was spent for these luxuries.

In 1928 the State of Kansas paid $126,400,137 in taxes. Of this sum, $26,765,720 was collected by the federal government, $19,776,417 by the state government, and $79,858,000 by the local governments.***

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* "Investing in Public Education", page 179. Figure includes cost of operation and maintenance, and depreciation.

** Ibid, page 181

*** Ibid, page 190.

What part of these taxes was allotted for the support of public schools? The school bill in 1928 was $39,409,848.86. This amount represents 147% of the federal taxes, 199% of the state taxes, and 49% of the local taxes. It is 31% of the total amount of taxes collected. In other words, the annual investment in public education in the State of Kansas in 1928 was 31% of the total amount of taxes collected for all public purposes.

SUMMARY

1. A state's ability to support its educational program may be determine by comparing the expenditures for schools with indications of the state's economic power.

2. The value of the school property in 1928 represented but 1.28% of the total wealth in the state.

3. The State of Kansas spent 3.39% of its annual income in 1928 for public education.

4. For every dollar spent for education in 1928, the state spent 75¢ for life insurance, and $1.36 for building construction.

5. The people of Kansas spent in 1928 over six times as much for automobiles as they did for the education of their children.

6. Expenditures for luxuries, such as tobacco, soft drinks, candy, ice cream, theatres, jewelry, cosmetics, and sporting goods were more than twice as great as the total school costs.

7. The State of Kansas invested 31% of the taxes col-

located by the federal, state, and local governments in education.

CHAPTER VIII

GENERAL SUMMARY AND CONCLUSIONS

In the thirty years from 1898 to 1928, public school costs in Kansas increased more than ten fold. Five factors operated to produce that increase: a decreased purchasing power of the dollar, a rapidly growing attendance, a lengthening school year, new forms of school service, and waste and inefficiency.

It took $2.55 in 1928 to equal $1.00 in 1898, the cost of living having increased that much. There were 100,195 more children attending school in 1928 than in 1898. Schools were in session fifty-one days longer than in 1898. When these factors are given consideration, the school costs in 1928 are seen to be not ten times as much, but 2.7 times as much.

The period of greatest expansion occurred during the decade, 1918 to 1928, when school costs increased rapidly in spite of a decline in the cost of living.

No one class of schools was responsible more than another for the increase in costs. One-teacher schools showed the smallest increase in the amount spent, and two-teacher schools, the greatest.

The growth of the high schools in the state is a remarkable development which has decidedly affected school costs. The number of pupils in attendance at high schools increased from ten thousand in 1898 to over seventy-thousand in the senior high schools and over twenty-six thousand in junior high schools in 1928. Since secondary education consistently cost over one and one-half times as much as elementary education,

the greater attendance at the secondary level caused a marked increase in school costs.

The valuation of school property in the state in 1928 was more than nine times as much as the valuation in 1898. This is evidence of better housing facilities, finer equipment, and general improvement of schooling situations.

Changes in the curricula, from courses of the book-study type to laboratory and shop courses have caused a demand for larger, more complicated buildings, and much more equipment.

Stricter requirements for teacher certification have brought about a noticeable improvement in the preparation of the teaching personnel. A steadily increasing number of the public school teachers are graduates of colleges or universities.

Library facilities improved tremendously during the thirty years, the number of school libraries increasing 78% and the number of volumes, 439%.

A growing number of rural and grade schools were meeting the requirements for the rating of standard or superior. The number of accredited high schools more than doubled from 1915 to 1928.

The one outstanding evidence of inefficiency in the expenditure of school funds is the continued maintenance of a large number of one-teacher schools. The average daily attendance in these schools dropped over forty thousand from 1908 to 1928, but the number of teachers was reduced by only seven hundred forty-two. The average daily attendance per teacher was less than half as great as in city schools, and the cost

per pupil was greater, notwithstanding the higher salaries and better equipment in the cities.

Nearly three-fourths of all school costs are absorbed by teachers' salaries and expenditures for buildings and equipment. The amount spent for teachers' salaries increased 676% between 1898 and 1928, and expenditures for buildings and equipment increased 4,720.5%. The proportion of the total school costs spent for teachers' salaries decreased during the thirty years. The salaries for men and for women, however, increased 325% and 337%, respectively. The remainder of the increase in the total amount spent for salaries was absorbed by the fact that there were 6,689 more teachers employed in 1928.

Since it took $2.55 in 1928 to equal $1.00 in 1898, the real increases in salaries for men and women were not 325% and 337% respectively, but 61% and 77%. High school teachers received greater increases than grade school teachers, and principals and superintendents received greater increases than any teachers. Teachers, as a whole, were paid better in 1928 than in any previous year.

The cost of living should not be the sole standard for setting teachers' salaries. The standard of living must be given equal consideration.

One dollar and twenty-eight cents out of every $100 of wealth in Kansas in 1928 existed in the form of school property. Kansas spent $3.39 out of every $100 of its 1928 income for public education. For every dollar that Kansas spent for education in 1928, it spent 75¢ for life insurance, and $1.36

for building construction.

More startling is the fact that Kansas spent $6.05 for automobiles for every $1.00 that it spent for its public schools; and for every $1.00 that Kansas spent for the education of its children, it spent $2.11 for luxuries of the type of tobacco, ice cream, candy, chewing gum, movies, jewelry, cosmetics, and sporting goods.

Thirty-one per cent of the taxes collected by the federal, state, and local governments for all public purposes was invested in public education in 1928.

CONCLUSIONS

1. The increase in school costs between 1898 and 1928 has been large, but nearly one-half of the increase was inevitable. That is, nearly one-half of the increase was due to the factors of an increased attendance, a longer school year, and a decreased purchasing power of the educational dollar.

2. There is no tendency for school costs to decrease; in fact, the trend is to increase still further.

3. The average daily attendance tends to increase faster than the school census or enrollment.

4. The present decline in the cost of living may be expected to cause a reduction in school costs within a year or two, unless higher prices return in the meantime.

5. The proportion of the total school costs expended for buildings and for miscellaneous purposes tends to increase; the proportion for teachers, to decrease.

6. The schools of 1928 were rendering far greater educational service than the schools of previous years.

7. There is need for a plan by which a large number of one-teacher schools may be either abandoned or consolidated.

8. The school teachers of the public schools of Kansas were better paid in 1928 than ever before, but there is need for a consideration of the standard of living required of the teaching profession. That is, were the teachers in 1928 better paid than the day-laborers, artisans, or other types of wage-earners?

9. When forty cents out of every tax dollar in Kansas goes to the support of schools, there is need for a careful consideration of the business of education, financially and educationally.

10. The amount of financial support Kansas accorded the public schools in 1928 was clearly not out of proportion to its ability to pay.

SUGGESTIONS FOR FURTHER STUDY

1. A study showing the educational ranking of Kansas in respect to that of other states might be done by bringing to date Ayres' study of "Index Numbers for State School Systems." This study ranks the states educationally for the years 1900, 1910 and 1930. By bringing the study to date, it would be shown whether or not the increased school expenditures in Kansas improved the state's educational ranking. It would also give equally as valuable information for any other state.

2. A study of the financing of education in Kansas would show the sources of revenue for school support, taxable valuation, tax levies, school bond indebtedness, variations in the

school tax burden, etc. This study would emphasize where the money comes from, rather than where it goes.

3. A study similar to the one suggested in the first suggestion might be done for the counties of the state, the first class cities, second class cities, or any other class of schools. A relative ranking of the various counties or cities on the Ayres' scale might prove interesting, if not valuable.

4. A study showing the distribution of the expenditures, bringing to light the variations in educational opportunities offered in different parts of the state, would be worthy of attention.

5. A study of teachers' salaries and the standard of living would be valuable. This would be done by comparing the salaries for teachers over a period of years with the salaries of other classes of workers.

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