THE KANSAS RURAL HIGH SCHOOL IN TERMS OF FIVE CRITERIA

by

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Submitted to the Department of Education and the Faculty of the Graduate School of the University of Kansas in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

ACKNOWLEDGMENTS

The writer is indebted to the members of his committee, Professor R. H. Wheeler, Professor E. A. Nash and especially to Professor J. W. Twente for assistance and guidance given in the preparation of this study. He is under obligation to W. A. Stacey, Assistant State Superintendent of Public Instruction, to the county clerks for providing data, and to the members of the faculty in the department of education who have made numerous suggestions. Finally, he wishes to acknowledge appreciation to his wife, Madge Adams Lawson, for assistance and encouragement given throughout his graduate study.

F. D. L.

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THE KANSAS RURAL HIGH SCHOOL IN TERMS OF FIVE CRITERIA

CHAPTER I

THE ORIGIN AND DEVELOPMENT OF HIGH SCHOOLS IN KANSAS.

Introduction

The state constitution contains two provisions relating to the establishment of schools.

(1) Sec. 2. The legislature shall encourage the promotion of intellectual, moral, scientific and agricultural improvement by establishing a uniform system of common schools, and schools of a higher grade, embracing normal, preparatory, collegiate and university departments. (1)

(2) Sec. 7. Provision shall be made by law for the establishment, at some eligible and central point, of a state university, for the promotion of literature and the arts and sciences, including a normal and an agricultural department....(2)

According to section 2, it was the intent of the makers of the constitution to provide a graduated system of education from the elementary school to the university. Strange as it may seem, general provision was made for elementary schools and higher institutions but very little was done in regard to secondary education. A few high schools were established in cities at an early date but no provision was made for secondary education for the children outside of a few of the cities until the passage of "The County High School Law." (3)

The failure to provide for secondary education locally made it necessary for the university to establish a prepara-

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1. Constitution of the State of Kansas, Adopted at Wyandott, July 29, 1859, Article VI, Section 2.
2. Ibid., Article VI, Section 7.
3. Laws Of Kansas, 1886, Chapter 147, Sections 1-19, inclusive.

tory school in 1866. (4) This institution was criticised by those interested in educational progress (5) but it could not be abandoned until 1890 (6) when considerable progress had been made toward the establishment of high schools.

The First High School in Kansas

The first high school in Kansas is said to have been located at Mount Pleasant which was located 8 miles south of Atchison. From the Atchison County Clippings, the following excerpt has been selected in regard to the first high school in Kansas.

> Besides being an important trading point, Mount Pleasant was also an important school center during its early days. The first high school established in Kansas was opened in Mount Pleasant in the fall of 1859. G. C. Trapp and E. M. Stevens organized the school and were the only teachers for four years. Children rode long distances to attend that school. Stevens and Trapp were Southern men and in sympathy with the South. In 1862, the school was closed and the teachers were driven away by free state settlers. (7)

The conditions during territorial days were not conducive to the establishment of schools. Yet, it is significant that a high school was established during this period. It may be that some advanced work was given in isolated cases in some of the other early settlements.

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4. Fourth Biennial Report, State Superintendent of Public Instruction, 1883-1884, p. 136.
5. Fourth Biennial Report, State Superintendent of Public Instruction, 1883-1884, p. 136.
6. Nineteenth Biennial Report, State Superintendent of Public Instruction, 1913-1914, p. 18.
7. Atchison County Clippings, Vol. V., 1916-1930, Kansas Historical Society, p. 55.

THE ORIGIN AND DEVELOPMENT OF HIGH SCHOOLS IN THE CITIES AND TOWNS OF KANSAS.

The Law of 1861

The first high schools in Kansas after statehood were organized under the provisions of the law of 1861. The law provided for the organization of graded schools in which instruction was to be given in the higher branches. (8) Under the provisions of this act, high schools were established in the cities and towns.

Development of High Schools from 1861-1880, Inclusive, by Five-Year Intervals

In the "First Annual Report of the State Superintendent of Public Instruction", it indicates that there were 79 pupils enrolled in high school in Douglas County (9) and mention was made of Topeka High School (10) but no data in regard to enrollment are recorded.

In the "Fifth Annual Report of the State Superintendent of Public Instruction" no mention is made of high schools. (11) In the "Tenth Annual Report of the State Superintendent of Public Instruction", the following data are reported in regard to high schools in cities and towns. (12)

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8. Laws of Kansas, 1861, p. 270.
9. First Annual Report, State Superintendent of Public Instruction, Kansas, Dec. 31, 1861, p. 28.
10. Ibid., p. 30.
11. Fifth Annual Report, State Superintendent of Public Instruction, Kansas, 1865.
12. Tenth Annual Report, State Superintendent of Public Instruction, Kansas, 1870, pp. 115-133.

TABLE I

High Schools and Enrollments in High Schools in the Cities and Towns of Kansas (1870)

Name of City or Town	Number of Pupils in High School Dept. Male	Female
Atchison	9	9
Chetopa	11	16
Fort Scott	16	14
Leavenworth	Total--Male and Female--174	
Topeka	No data	

In the "Fifteenth Annual Report of the State Superintendent of Public Instruction" the following data are reported in regard to high schools in cities and towns. (13)

TABLE II

High Schools and Enrollments in High Schools in the Cities and Towns of Kansas (1875)

Name of City or Town	Enrollment
Chetopa	35
Fort Scott	34
Hiawatha	10
Junction City	26
Lawrence	65
Oswego	39
Ottawa	83
Paola	67
Wathena	43
Wichita	48

The data which are presented in regard to the development of the high schools in cities and towns are based on the reports to the state superintendent of public instruction. The data should be interpreted as the number of high schools making reports rather than the number of high schools actually in ex-

13. Fifteenth Annual Report, State Superintendent of Public Instruction, Kansas, 1875, p. 50.

istence. The difficulty in getting information relative to the early schools is emphasized by both the county and state superintendents in the annual and biennial reports of the state superintendent.

The early high schools varied a great deal as to the length and content of the course and the preparation of their teachers. Some of the early high schools offered a twelve-weeks course while others offered forty-five weeks. (14) The early reports frequently mention the fact that the teachers were poorly prepared, especially, the elementary school teachers. It was due to conditions such as these which necessitated the establishment of the Preparatory Department in the State University. In the early catalogues of the State University this statement in regard to the Preparatory Department is found:

This Department has been organized to supply the existing want of suitable Preparatory Schools in the State, and therefore will not be made a permanent feature of the University."(15)

The first step toward its elimination was made in 1876 when the regents of the State University authorized the preparation of a course of study, which, if approved by the high schools, would permit the admission of their high school graduates without examination. (16)

In 1876, the first list of high schools which adopted the course of study was published. They were Atchison, Emporia,

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14. Third Biennial Report, Superintendent of Public Instruction, 1881-1882, p. 25.

15. Third Annual Catalogue of the Officers and Students of the University of Kansas, 1868-1869, p. 19.

16. Eleventh Annual Catalogue of the Officers and Students of the University of Kansas, 1876-77, pp. 39-41.

Lawrence and Winchester. (17) In 1877, Leavenworth was added.(18) In 1878, Junction City was added and Winchester was dropped from the list. (19) Gradually, the number of high schools increased until in 1883 there were 25 high schools in the group.(20)

In the "Second Biennial Report of the State Superintendent", the high schools are not enumerated. However, in the Chancellor's Report of the State University, mention is made of the high schools which had had their course of study approved by the State University. The high schools mentioned were: Lawrence, Atchison, Emporia, Junction City and Peabody.(21)

Development of High Schools from 1885 to 1930, Inclusive, by Five-Year Intervals

In Table III, the development of high schools in cities of the first, second, and third classes (including villages) in five-year intervals from 1885 to 1930, inclusive is presented. In these data, township high schools are included but county or community high schools and rural high schools are not. However, no distinction is made between one-, two-, three-, or four-year high schools.

17. Ibid., p. 41.
18. Twelfth Annual Catalogue of the Officers and Students Of the University of Kansas, 1877-78, p. 47.
19. Thirteenth Annual Catalogue of the Officers and Students of the University of Kansas, 1878-79, p. 59.
20. Eighteenth Annual Catalogue of the Officers and Students of the University of Kansas, 1883-84, pp. 67-68.
21. Second Biennial Report, State Superintendent of Public Instruction, Kansas, 1880, p. 235.

TABLE III

Development of High Schools in Cities of First, Second, and Third Class (including villages) from 1885 to 1930, Inclusive, by Five-Year Periods, Exclusive of County (Community) and Rural High Schools. (a)

Date	Number of High Schools in Cities of		
	First Class	Second Class	Third Class
1885	4	13	21
1890	4	32	26
1895	6	45	61
1900	6	39	97
1905	6	65	262
1910	9	62	375
1915	10	73	513
1920	10	69	479
1925	11	71	303
1930	11	69	277

a. Compiled from Biennial Reports of the State Superintendent of Public Instruction of Kansas.

The decrease which may be noted in cities of the third class is not actually a decrease in high school facilities. The passage of other legislation; e.g. the rural high school law, has led to a reorganization of many of the smaller city high schools as a portion of the territory of a rural high school district.

THE ORIGIN AND DEVELOPMENT OF COUNTY HIGH SCHOOLS IN KANSAS.

Introduction

The high schools which were established in Kansas from 1861 to 1885 were located in the cities or towns. This condition made it difficult, if not impossible, for boys and girls in rural districts to attend a high school. Furthermore, such a condition necessitated the maintenance of a preparatory division in the state university. James H. Canfield

of the University of Kansas was desirous of seeing these conditions altered so he proposed the county high schools as a remedial measure. In regard to the work of Canfield as it relates to the county high school law, Althaus writes as follows:

> The county high school was the idea of Dr. James H. Canfield of the University of Kansas. During the 80's., Dr. Canfield was the aggressive spirit of the university and he was ambitious that the University should become second to none. The first step in raising the standards of the school was to abolish the preparatory department. At that time, there were few high schools that thoroughly prepared their students for the university. Therefore, Dr. Canfield proposed that certain counties establish county high schools. The legislature of 1886 endorsed his idea and enacted the necessary law. (22)

The County High School Law of 1886

The county high school law of 1886 was optional, not mandatory. According to the provisions of this law, it was permissible to establish a county high school in counties having a population of 6000 or more. (23) In order to organize a county high school, it was necessary to circulate a petition and procure the signatures of one-third of the electors of the county. After the petition had been circulated, the county commissioners, after a twenty day notice, were authorized to call an election for the purpose of determining whether a county high school should be established. (24) For one to be established, it was necessary that a majority of all the votes cast be favorable to its establishment. (25)

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22. Althaus, Carl B., The Organization and Financing of Special High School Provisions in Kansas, Published in Mimeograph Form by the Author, Lawrence, Kansas, p. 3.
23. Laws of Kansas, 1886, Chapter 147, Section 1.
24. Laws of Kansas, 1886, Chapter 147, Section 2
25. The State v. Echols, 41 Kansas 1, January 1889.

The First County High School

The first county high school to be established was the Dickinson County High School at Chapman, Kansas. It was founded in 1889 and school opened in 1890. At the time of its organization, the valuation of high-school property was given as $33,000. In 1929, the taxable property of the county was given as $30,000,000. (26) According to Althaus,(27) the establishment of the first county high school was a compromise measure. The people in the western portion of the county were anxious to have certain bonds approved, the proceeds of which were to be used for the development of railroads in that portion of the county. However, the people of the eastern portion maintained that they would not benefit from the issuance of such bonds. A compromise was reached whereby the people of the eastern portion were to vote for the bonds and the people in the western portion were to vote for a county high school to be located at Chapman. Thus, the first county high school came into existence.

The Development of County High Schools

Atchison county was the first to take advantage of the law of 1886 and established a county high school at Effingham in 1888. However, the school was not opened until 1891. (28) The constitutionality of the county high school law was ques-

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26. Twenty-Seventh Biennial Report, State Superintendent of Public Instruction, Kansas, 1929-1930, p. 24.
27. Althaus, Carl B., Op. Cit., p. 4.
28. Twenty-Seventh Biennial Report, State Superintendent of Public Instruction, Kansas, 1929-1930, p. 24.

tioned in this instance but its validity was upheld by the Supreme Court of Kansas. (29)

The constitutionality of the law having been determined, the proponents of the county high school hoped to see a rapid development. However, such development did not take place because of two obstacles. The first obstacle was due to rivalry between towns within a county that wished to secure the high school. The second had to do with taxation. Since district high schools had been established in many cities and towns, the establishment of a county high school would result in double taxation. Thus, the development of the county high school was prevented by the jealousy and ambition of cities as well as the fear of double taxation.

The failure of the optional county high school law to function as it had been hoped resulted in mandatory legislation. In 1893, the legislature passed a law providing for the establishment of the Labette County High School at Altamont. The constitutionality of this act was questioned but it was held to be constitutional. (30) From 1889 to 1905, seven county high schools were organized by vote, two by petition and vote, and thirteen by special legislation. (31) It is apparent that mandatory legislation is much more successful than optional legislation.

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29. Koester v. Commissioners of Atchison County, 44 Kansas 141, January 1890.
30. Eicholtz v. Martin, 53 Kansas 488, January 1894.
31. Althaus, Carl B., Op. Cit., p. 39.

In 1897, the legislature passed an act which authorized the organization of county-seat high schools in any county having less than 2,500 population. (32) In 1915, the county high school law of 1886 was amended and the required number of inhabitants was reduced to 2,000. (33) The four county high schools established under the provisions of the act of 1897 were the Scott County High School, the Lane County High School, the Kiowa County High School and the Greeley County High School. (34) The laws of 1897 and 1915 are significant because

TABLE IV

Development of County-Community High Schools (a) in the State of Kansas, 1890 to 1932, Inclusive, by Four-Year Intervals. (35)

Year	Number of County-Community High Schools	Enrollment in County-Community High Schools
1890	1	137
1894	3	541
1898	6	1023
1902	12	1919
1906	22	3350
1910	22	3503
1914	27	4148
1918	28	4429
1922	28	4183
1926	24 (b)	4489
1930	23	4808
1932	23	5240

a. Compiled from Biennial Reports of the State Superintendent of Public Instruction of Kansas.

b. Includes Stevens County which operates under the law of 1911. This law provides county aid for the high schools of the county.

32. Laws of Kansas, 1897, Chapter 180, Section 1. Later changed to any county having less than 6,000 inhabitants. Laws of Kansas, 1903, Chapter 433, Section 1.

33. Laws of Kansas, 1915, Chapter 316, Section 1.

34. Althaus, Carl B., Op. Cit., p. 5.

35. This table has been taken from Althaus, Carl B., Op. Cit., p. 40. Data for 1930 and 1932 have been compiled by the writer.

they made possible the establishment of high schools in the less populous counties where the need is usually greater due to the scarcity or absence of district high schools.

Table IV shows the development of the county-community high schools from 1890 to 1932. The growth has been slow when compared with that of rural high schools but it has been much more desirable than the latter from a financial and educational standpoint. There have been a few county high schools disorganized. However, the enrollment shows a steady increase despite the reduced number of county high schools now in existence.

In March, 1923, the legislature repealed the law of 1886 and passed the community high school law. By this law all county high schools were disorganized and community high school districts were organized. However, the community high school district did not include the territory in other accredited high school districts. This removed the objectionable feature of the old law which resulted in double-taxation. (36)

Significance of the County High School Movement

The enactment of the county high school law of 1886 and other legislation related to it is an important step in the development of high school facilities in Kansas. By this legislation an opportunity was given to the boy or girl in the rural community for a high-school education without the payment of tuition. While his opportunities were not equal to

36. Laws of Kansas, 1923, Chapter 187.

the boy or girl in the urban communities, they became more nearly equal and more easily attainable. It is unfortunate that the presence of rival towns and the fundamental weakness of the law could not have been eliminated so that a broader functioning of this law would have been possible.

THE ORIGIN AND DEVELOPMENT OF TOWNSHIP HIGH SCHOOLS IN KANSAS.

Introduction

The township is a prominent feature in civil government in the New England, Middle Atlantic and in some of the Central States. As a unit it exists in California, North Carolina, Oklahoma, Arkansas, and Missouri. However, it is little used in these states. For purposes of school control, it is prominent in North Dakota, South Dakota, Indiana, Maine and portions of Ohio and Michigan. The best example of township control is found in Indiana. Cubberley (37) describes the system as found in Indiana as follows:

> ...One finds the best examples of township control in Indiana, where one trustee, who looks after roads, bridges, and poor-relief, also is in charge of the schools. Excepting in the case of incorporated cities and towns having a separate organization, of which there are many, he alone manages the educational affairs of the entire township, acting for school purposes, both as clerk and as treasurer of the school township. As the school trustee he builds and repairs schoolhouses, consolidates schools, employs teachers, pays all bills and salaries, has control of any 16th Section lands, and in general manages the schools of his township much as a town school committee would handle the affairs of a new England town....

The township as a unit for school control has never made

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37. Cubberley, E. P. State School Administration, Houghton Mifflin Company, Chicago, 1927, p. 193.

much headway. The main defect in it as a unit is that it bears no relation to geographic features or natural community boundries. Cubberley (38) indicates that the tendency today is to abandon it as a unit.

Establishment of Township High Schools by Special Legislative Enactments

The earliest township high schools were established under special acts of the legislature. The first township high school was authorized by the legislature in 1881. (39) The territory was the same as that included in the civil township. Sixteen township high schools were authorized by the legislature from 1881 to 1907. (40) These township high schools were made rural high schools by an act of the legislature in 1921.(41)

The Township High School Law of 1911

The township high school law of 1911 made provision for the organization of a township high school in any township in which there was no city or town. (42) Later, it was changed to any township in which there was no incorporated town exceeding three hundred population. (43)

The first high school to operate under the provisions of the township high school law was Spring township, Harper County. The territory included 63 square miles and had an assessed valuation of $2,000,000. It was established in 1911

38. Op. Cit., p. 192.
39. Laws of Kansas, 1881, Chapter 156, Section 1.
40. Laws of Kansas, 1881, to 1907, inclusive.
41. Laws of Kansas, 1921, Chapter 251, Section 1.
42. Laws of Kansas, 1911, Chapter 262, Section 1.
43. Laws of Kansas, 1913, Chapter 278, Section 1.

and is now operating under the rural high school law. (44)

The township high schools organized under the law of 1911 were placed under the rural high school law in 1917 by an act of the legislature.(45) The township high schools which had been created by special legislative enactments were made rural high schools in 1921.

Merits and Defects of the Township High School Laws

The township high school law provided free high school facilities for the rural pupils near their home. However, its defects outweighed the merits of the law. It was open to all the criticisms which are made of the rural high school law today as well as the fact that it bears no relation to either geographic features or natural community boundaries.

THE ORIGIN AND DEVELOPMENT OF RURAL HIGH SCHOOLS IN KANSAS.

Introduction

The rural high school is in reality an outgrowth of the township high schools. It merely represents a special type of consolidation wherein only secondary pupils are brought together. The rural high school has its counterpart in the union high schools of California, the township and community high schools in Illinois, and the agricultural schools in Michigan and Mississippi. While it seems highly desirable for consolidation to include the grades, consolidation for secondary school purposes is worthwhile where this cannot be accom-

44. Twenty-Seventh Biennial Report, State Superintendent of Public Instruction, Kansas, 1929-1930, p. 24.
45. Laws of Kansas, 1917, Chapter 284, Section 10.

plished.

The Rural High School Law of 1915

According to this act, the legal voters residing in a territory containing a minimum of 16 square miles, located in one or more townships, could form a rural high school district. (46) In order to organize a rural high school district, it is necessary to circulate a petition which must be signed by at least two-fifths of the electors of the proposed rural high school district. This petition must be presented to the county commissioners in the county in which the major portion of the rural high school district is found. After receiving the petition the county commissioners, may, after twenty-one days notice, call a special election. At the election, the people vote on the question of organizing and locating the rural high school as well as the amount of bonds which are to be issued for building purposes. A majority vote is required in order to organize the rural high school, to locate same, and to issue bonds. (47)

The fact that it was necessary to vote on the bond issue and the organization of the rural high school at the same time resulted in the failure to organize certain proposed rural high school districts. As a result of this, the state superintendent recommended in 1916 that the rural high school districts should be permitted to vote separately on the question of organization

46. Laws of Kansas, 1915, Chapter 311, Section 1.
47. Laws of Kansas, 1915, Chapter 311, Section 2.

and the issuance of bonds. (48) In 1917, the law was amended in keeping with the recommendation of the state superintendent. (49) This removed one of the obstacles to the establishment of rural high schools.

If the proposed rural high school district contains an incorporated town with a population of more than 300 inhabitants (50) two petitions must be circulated and submitted to the county commissioners. One must be signed by the electors within the city or town and the other by those outside. The proposition must receive a favorable majority of the electors within and without the incorporated city or town. (51) The section relating to population was changed to a population of more than 500 in 1917. (52)

The original law required that the question of bond issue and organization should be submitted at the same time. (53) The question arose as to the issuance of bonds after the organization of a rural high school district had taken place and whether the provision for separate vote of town and country prevailed under such conditions. In the case of Raymond v. High School District, (54) the court held that under such conditions it was unnecessary for a separate vote to be made.

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48. Twentieth Biennial Report, State Superintendent of Public Instruction, Kansas, 1915-1916, p. 7.
49. Laws of Kansas, 1917, Chapter 284, Section 2.
50. Laws of Kansas, 1915, Chapter 311, Section 3.
51. Laws of Kansas, 1915, Chapter 311, Section 3.
52. Laws of Kansas, 1917, Chapter 284, Section 3.
53. Laws of Kansas, 1915, Chapter 311, Section 2.
54. Raymond v. High School District, 101 Kansas 231, January 1917.

In regard to this decision, Althaus makes this comment:

> The implications of this decision are worth nothing. Suppose a proposed rural high school district includes a town of five hundred inhabitants and that some of the country people are opposed to the organization of a rural high school. The surest way to get the rural high school established and to have bonds approved is to have the city and country people vote separately on the organization of the district. Since no bonds are being voted perhaps a majority of the country votes will favor the proposition and the district will be organized. After the district has been organized, then have the city and the country people vote together on the bond issue. Perhaps the city voters who favor the bond issue will outnumber the country voters who may be opposed to the bond issue. If so, the bond issue will carry. In the writer's judgment, there is considerable doubt about the fairness of this procedure.(55)

After the proposition for organizing a rural high school has been approved, it is the duty of the county superintendent to call a special meeting of the electors of the rural high-school district for the purpose of electing a board of directors. (56) According to the law of 1915, the board of directors was authorized to levy not to exceed 40 cents on the $100 assessed valuation of the district. (57) Since the original law was passed, a number of revisions have been made in regard to the section dealing with the maximum levy. The money secured from the levy was to be used to pay teachers, to create a fund to retire indebtedness, to pay interest on indebtedness, and to care for the incidental expenses of the schools. (58)

The Validity of the Rural High School Law

The supreme court, in a test case, ruled the rural high-school law to be valid shortly after the passage of the act.(59)

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55. Althaus, Carl B. Op. Cit., p. 34.
56. Laws of Kansas, 1915, Chapter 311, Section 4.
57. Laws of Kansas, 1915, Chapter 311, Section 5.
58. Laws of Kansas, 1915, Chapter 311, Section 5.
59. High School District v. Davis, 96 Kansas 647, July 1915.

The favorable decision gave impetus to the rural high school movement.

The Development of Rural High Schools

Shortly after the rural high school law was passed in 1915, a number of small rural high schools was established. Some of the early rural high schools had a very low valuation. It soon became apparent that some regulation would be necessary to prevent the enthusiasm of local communities, from establishing rural high schools, which could not support them. In 1925, the legislature passed an act which fixed the minimum valuation at $2,000,000. (60) After the passage of this act, the rural high school districts which were organized have been better able to support a rural high school.

TABLE V

Development of Rural High Schools (a) in the State of Kansas, 1916 to 1932, Inclusive, by Two-Year Intervals (61)

Year	Number of Rural High Schools	Enrollment in Rural High Schools
1916	25	376
1918	121	4342
1920	204	8065
1922	243	12827
1924	264	15667
1926	287	16294
1928	297	18725
1930	299	19240
1932	302	Not available

a. Compiled from the Biennial Reports of the State Superintendent of Public Instruction of Kansas.

60. Laws of Kansas, 1925, Chapter 241, Section 1.

61. This table has been taken from Althaus, Carl B., Op. Cit., p. 43. Data for 1930 and 1932 have been compiled by the writer.

Table V shows the rapid increase in the number of rural high schools in Kansas during a sixteen-year period. Some of this growth in the number may be explained as being due to the acts of the legislature. As previously indicated, the township high schools which had been established under the general township high school law of 1911 were made rural high schools in 1917. (62) The township high schools which were created by special legislative enactment were made rural high schools in 1921. (63) However, a major portion of this development has been due to local ambitions and the interest of the people in rural communities in securing educational facilities close to home. Furthermore, the favorable economic conditions during the period was a vital factor in their establishment.

Table V also shows a remarkable increase in enrollment. The increase in enrollment is due in part to an increase in the number of rural high schools. However, some of the increase is due to the increased enrollment in the various rural high schools. Also, the tendency for the rural high schools to include a larger territory is a vital factor in this increase. Furthermore, the enrollment is indicative of the extent to which the rural high school is functioning in the rural communities.

Merits of the Rural High School Law

The enactment of the rural high school law made it pos-

62. Laws of Kansas, 1917, Chapter 284, Section 10.
63. Laws of Kansas, 1921, Chapter 251, Section 1.

sible to provide free high school facilities for pupils in rural communities. Not only were they free, but they were convenient. While the rural high schools have been criticised frequently, it must be remembered that it did much to make high school facilities available to thousands of boys and girls in rural communities.

Furthermore, the increased area which could be included resulted in increased valuation and made possible the establishment of schools in some communities which could not have afforded them.

Summary

The first high schools established in Kansas were established in the cities and towns. The desire to increase the facilities for secondary education led to the passage of the county high schools laws, the township high school laws and the rural high school laws. The development has been haphazard and disorganized and has led to much duplication and overlapping. Despite the obvious defects in the method of development of secondary education in Kansas, it has expanded the opportunities for secondary education to include a large percentage of those of high school age within the state.

CHAPTER II

THE PRESENT PROBLEM.

Introduction

For many years educators have been criticising the district system of schools which exists in whole or in part in twenty-one states in the United States. According to Cubberley (1) the district is the unit of administration in Washington, Idaho, Nevada, Wyoming, Colorado, Kansas, Oklahoma, Arkansas, Missouri, Minnesota, Wisconsin, Illinois, New York, and Delaware. Two of these states, Nevada and Delaware combine the district unit with a state unit without any intermediate control. In a small portion of Oregon, the county unit prevails. The district is the unit in Montana and Nebraska. In the former, the county unit was made optional in 1919 and in the latter in 1915. In North Dakota, South Dakota, Iowa and Michigan, the administrative unit is the district and town or township. In the latter state, the town or township unit was made optional in a portion of the state in 1891 and in another portion in 1909.

The small high school is a product of the same type of thinking as the district system and the one-room school. Logically, the small high school is an outgrowth of the district system. While the unit has expanded, it is nothing more or less than a glorified district unit. The philosophy under-

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1. Cubberley, E. P. State School Administration, Houghton Mifflin Company, Chicago, 1927, p. 169.

lying the establishment of the small high school is the same as that which underlies the district system; namely, the philosophy of individualism.

The individualistic nature of the philosophy which underlies the district system has been well expressed in a bulletin (2) issued by the Illinois Educational Commission. A portion of this report, which best expresses this viewpoint, is presented.

> The chief argument in favor of the district system is its democratic nature. The district system has been called probably the most communistic as well as democratic feature of our political institutions.... Now there can be no question as to the democratic nature of district organization. It is, in appearance, at least, "of the people, by the people and for the people." Under the system the people have an immediate voice in the management of their schools. And such interest as the people have taken in this matter, and the expression of their will in the district meeting, have been a valuable means in the development of free institutions. The district has been a kind of school of civil government. It has been the area upon which has been worked out some of the most important questions of our democracy.
>
> But in the development of a democracy there always comes a time when efficiency requires the surrender of immediate action to representative action, and nowhere in the growth of democracy is that point reached sooner than in the management of schools.

Certainly, the point has been reached where the State must take the initiative and deal with the problems which the application of individualistic philosophy, in regard to the establishment of small rural high schools in Kansas, has created. Perhaps, it is not inappropriate that a similar recommendation be made in regard to the small high schools not organized as rural high schools.

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2. Bulletin No. 4, Illinois Educational Commission. A Tentative Plan for Making the Township the Unit of School Organization, Springfield, 1908.

Glenn Frank describes individualism as follows:

> Individualism has been the glory of America over the generations. But something has happened to individualism in the last few years. Individualism is important only in terms of what it does to and for the individual. There is nothing sacred about the name. If rugged individualism results in ragged individuals, it may be time to reconsider our concept of individualism. The fact is that the old and somewhat anarchic individualism, which was a superb virtue in our pioneer days has become a vice in this complicated, technical, interdependent age. (3)

As Frank indicates "it may be time to reconsider our concept of individualism." If so, it is patent that we must reconsider the products of individualism as well. The small rural high school in Kansas is a product of the pioneer type of individualism.

The need for reconsideration of the public school system of Kansas is accentuated at the present time due to economic conditions. Althaus (4) has shown that the ability to support schools has decreased in recent years while the cost of schools has been increasing. It is desirable that the cost of education be reduced to a point commensurate with the ability to pay. That this be done without reducing the opportunity for secondary education is desirable. Undoubtedly, the elimination of some of the smaller high schools is imperative.

Rural high schools have been established with little if any guidance from the State Department of Public Instruction.

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3. Frank, Glenn, "Individualism," The Kansas Teacher and Western School Journal, Vol. XXXIV, January, 1932, No. 3., p.17.

4. Althaus, Carl B., Some Facts Regarding Economic Conditions in Kansas and Their Relation to Financing the Public Schools of the State, Published by Kansas State Teachers Association, Topeka, 1932.

With the increasing pressure of the financial burden, the people are looking more and more to the State and State Department of Public Instruction for the solution of the problem. While the latter is willing to give assistance, it has not been empowered either by law or precedent to cope with the situation. Consequently, it is poorly prepared for such an emergency. That the State Department of Public Instruction is interested in the problem of the small high school is evidenced from the content of their circulars (5) and the hearty cooperation given the writer in this study.

Standards for Accrediting and Approval of High Schools in Kansas

The State Board of Education fixes the standards for accrediting and approval of high schools in Kansas. (6) The membership, term of office, expenses and compensation of the members of the State Board of Education was fixed in 1919 by an act of the legislature. (7) The law provides:

> That the state board of education shall be composed of the state superintendent of public instruction, who shall be ex officio chairman; the chancellor of the state university; the president of the state agricultural college; the president of the Kansas state teachers college of Emporia; the president of the Kansas state teachers college of Pittsburg; the president of the Kansas state teachers college of Hays; and two county or city superintendents of public instruction; and a county superintendent of public instruction to be appointed by the governor on the first Monday in April, 1919, for a period of two years, and each and every two years thereafter, from any county in which none of the foregoing in-

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5. Circular 250A, State of Kansas, Department of Public Instruction, Topeka, January 6, 1932.
Circular 259A, State of Kansas, Department of Public Instruction, Topeka, February 13, 1932.
6. Laws of Kansas, 1915, Chapter 296, Section 8.
7. Laws of Kansas, 1919, Chapter 256, Section 1. Revised by Laws of Kansas, 1933.

stitutions may be located. Each member of the state board of education shall receive all necessary and actual traveling expenses incurred in attending the meetings of the board and in the discharge of the duties required by law, and in addition thereto each appointed member shall receive as full compensation the sum of five dollars per day for each days actual service not exceeding ten days in any one year.

The state superintendent has the power to appoint the supervisors of the public schools. (8) Two of them devote their time to the high schools of Kansas. They visit the high schools to determine whether a high school is to be accredited or approved. During the school year of 1929-1930, they were able to visit 461 high schools out of 660. (9) Needless to say, there are too many high schools in Kansas for the supervisors to perform their duties efficiently and effectively.

The standards for accredited high schools are: (10)

1. Building and Equipment.

The building must be well lighted and heated and properly ventilated. It must be clean, comfortable, and attractive. The location, toilet facilities, water supply, and other hygienic conditions must be such as to insure the health of pupils and teachers.

Ample room must be provided for carrying on the work of the school, and the various rooms should be designed and equipped to serve certain specific purposes. Each recitation room must be seated with clean, comfortable single desks, or desk-arm chairs, and should be provided with the necessary maps, charts, reference books, and other appliances likely to be needed in conducting the recitations to be held in that particular room.

Where commercial work is offered, one room, at least, must be seated with regulation commercial desks.

In the science recitation room there must be a demonstration desk for the use of the science teacher.

The laboratory should be equipped with regulation laboratory tables and chairs and with cases in which to keep apparatus and supplies under lock and key. Apparatus and chemicals must be kept in separate cases. Where supply is avail-

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8. Laws of Kansas, 1919, Chapter 256, Section 3.
9. Twenty-Seventh Biennial Report, State Superintendent of Public Instruction, Kansas, 1929-1930, p. 30.
10. Ibid., pp. 31-33.

able, the laboratory should be supplied with water, gas and electricity. A sufficient amount of apparatus for each required experiment in physics or chemistry must be provided to enable the students to work individually or in groups not to exceed four and to carry out the work required in a laboratory science.

The library must consist of carefully chosen books of reference and supplementary readings upon the various departments of high-school work. It should be so located as to be most convenient to the study room, and a card index is indispensable for the best results. A first-class encyclopedia is a prime requisite in any reference library.

2. Course of Study and Daily Program.

There must be a definite course of study, approved by the State Board of Education, showing what subjects are taught each year and what subjects are open to the students of the various classes--freshman, sophomore, junior, and senior--and each student should be required to select his subjects from the list of subjects offered to the students of the year in which he may be classified:

The course of study should not offer more work than can be taught by the teachers employed, and it must be reasonably permanent and not subject to complete annual revision.

The daily program should be so arranged as to avoid conflicts in the subjects offered to the students classified in any particular year, and to meet the requirements for double periods in laboratory, vocational and other work mentioned in standard 5.

3. Teachers.

Each teacher should be selected with reference to his or her ability to teach one or more subjects in the course of study.

All teachers must be well qualified; that is, they should be graduates of standard institutions of collegiate rank requiring the completion of four-year courses of 120 semester hours in advance of a standard four-year high-school course; or they should be qualified by long experience and successful teaching. In every case the teacher must hold a certificate valid for teaching in high schools and granted by the Kansas State Board of Education, or by one of the three Kansas state teachers' colleges.

No teacher of academic subjects should be required to conduct more than thirty-five classroom exercises or recitations a week, and in the case of the English and science departments where much time must be given to the correction of themes and notebooks and to the supervision of laboratory work, a maximum of twenty-five weekly recitations is recommended.

Thirty-five forty-minute periods or twenty-five sixty-minute periods a week, including recitations, laboratory, study hall, and all other work, should be the maximum for any teacher of academic subjects.

Superintendents and principals should be given sufficient time to visit the various grades or departments or classrooms for purposes of supervision. It is not the part of either efficiency or economy to employ a superintendent or principal and pay a salary commensurate with the office and then make of him a mere classroom teacher with no opportunity to perform the necessary duties of his office.

4. Credits for Graduation, Four-Year High School.

No school shall be accredited which does not require at least fifteen units for graduation. Sixteen units are recommended.

A unit is understood to mean the credit given for the satisfactory completion of the study of any subject requiring preparation outside of the recitation, with five forty-minute recitations a week for a full school year.

In the case of scientific branches requiring laboratory practice there shall be not less than two double periods of laboratory practice or the equivalent thereof each week.

In penmanship, typewriting, manual training, sewing, cooking, drawing, music, and other subjects not requiring study and preparation for a recitation, a unit of credit requires a course of daily exercises, with double or eighty-minute periods, extending through a school year.

The fifteen units required for graduation shall be made up of regular school work done under regularly employed teachers, exclusive of "outside credits."

Three-year senior high schools shall require for graduation at least eleven units from the tenth, eleventh and twelfth grades.

5. Admission and Advanced Credit.

Students should be admitted to the high school only on the completion of the work of the elementary grades of a city school system, or graduation from the rural schools, as evidenced by passing the county diploma examination, or on the satisfactory passing of an entrance examination.

High-school credit for work done in other schools should be given only on examination or on a transcript from an accredited or an approved high school; and any school accepting without examination the work done in other than approved or accredited high schools will be regarded as lowering its own standards to that of the other schools, and this fact will be considered in determining its rating.

7. Length of School Year.

The school year must be at least thirty-six weeks in length, and no school will be accredited in which it is shorter.

8. Recitation Periods.

The recitation period shall be at least forty minutes in length, exclusive of all time used in the passing of classes or teachers. Laboratory periods and periods devoted to type-

writing, manual training, domestic science, domestic art, drawing and other subjects not requiring preparation for a recitation, should be double or eighty-minute periods, or the equivalent thereof.

9. Size of Classes.

Classes should not be excessive in size. Twenty to twenty-five pupils are recommended as the maximum and in no case should the number exceed thirty. In manual training, domestic science and art, and in laboratory sections twenty pupils should be the maximum. It is recommended that, in general courses, classes should not be organized for fewer than six students.

10. Records.

An accredited high school must have a standard system of high-school records, carefully and completely kept, and protected in a safe or fireproof compartment.

11. Number of Teachers.

In order that a school may be accredited there should be at least three teachers devoting full time to grade work, providing there is a grade department, and at least two who devote their entire time to the high school. Where it is possible, a minimum of three teachers for the high school is recommended.

12. Support by the Community.

In determining the rating to be given the school, attention will be given to the interest of the patrons in the school as evidenced by the financial support given, the disposition to improve educational conditions, the policy of retaining teachers through a period of years rather than making frequent changes, and by the general spirit of educational progress.

13. Spirit of the School.

The efficiency of classroom instruction, the attitude of the students toward their work, their enthusiasm and seriousness of purpose, their willingness to do thoroughgoing, painstaking hard work rather than to follow lines of least resistance, their courtesy toward each other and toward their teachers, their manners, and the general intellectual and moral tone of the school, are factors of the highest importance and will be given special consideration in determining the rating of the school.

The standards for approved high schools are the same as for accredited high schools except the standards relating to teachers. The standards as they relate to teachers are: (11)

Each teacher should be selected with reference to his or

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11. Op. Cit., p. 33.

her ability to teach particular subjects offered in the course of study.

All teachers in approved three-year high schools must hold state certificates valid for teaching in any high school. Teachers in approved two-year high schools must have state certificates based on the completion of at least two years of work in an institution of collegiate rank, following the completion of a standard four-year high-school course.

No teacher should be required to teach more than thirty forty-minute periods or twenty-five sixty-minute periods per week, and under no circumstances should the number exceed thirty-five forty-minute periods.

Classification of Accredited High Schools

Since it is impossible for all high schools in the state to meet the standards equally as well, the high schools are rated as A, B, C or D in relation to the standards previously reported and the ones which follow: (12)

A. (1) At least five teachers exclusive of the superintendent, devoting full time to high-school work. If the high school is not a part of a graded school system, there must be at least five teachers exclusive of the principal.
(2) At least six teachers in the grades, where there are grades in connection.
(3) A school year of at least nine months in the grades, where there are grades in connection.
(4) Maintain at least three courses of study, each having, in addition to the five and one-half units required for graduation from an accredited high school, at least four units distinctive of the course in which they are offered.
(5) For the department in which a teacher instructs a preparation should be shown of at least twenty semester hours college credit, toward which a maximum of ten hours high school may be substituted at the rate of five hours per high-school unit.

B. (1) At least four teachers in the high school, including superintendent or principal.
(2) At least four teachers in the grades.
(3) A school year of at least nine months in the grades.

C. (1) At least three teachers in the high school, including superintendent or principal.
(2) At least three teachers in the grades.
(3) A school year of at least nine months in the grades.

12. Op. Cit., p. 33.

D. (1) At least two teachers giving their entire time to high-school work.
(2) At least three teachers in the grades.

Justification for This Study

An examination of the standards for accrediting and approval of high schools reveals the fact that no attempt has been made to regulate minimum teaching load. From an educational viewpoint, this may seem to be undesirable. However, if the teaching load is too small, the cost per-pupil enrolled may be exorbitant. Because of this fact, it is imperative that some minimum teaching load should be included in the standards as well as a maximum teaching load. Furthermore, too small a teaching load results in small classes and a loss in socialization.

The standards for accrediting or approval of high schools, the standards for the classification of accredited high schools, and the state laws are equally silent on the number of pupils enrolled. The number of pupils enrolled is a vital factor in an economical and efficient school and should not be ignored.

Area is a very significant factor in an educational set-up, especially as it relates to rural high schools. Yet only one law has been passed in regard to this highly important factor in a rural high school situation. This law fixed the minimum area as 16 square miles. (13) It may have been a desirable minimum in 1915 but it is too small today. Undoubtedly, the improved means of transportation which are available today offer sufficient justification for an increase in this require-

13. Laws of Kansas, 1915, Chapter 311, Section 1.

ment. Furthermore, a maximum area should be fixed because it is possible for an area to be too large as well as too small. However, if adequate transportation facilities are provided, it is more likely to be the latter.

No consideration is given to the question of valuation per-pupil enrolled in either the standards for accrediting high schools or in the state laws. The ability of the people to provide an adequate educational program is determined to a large extent by the assessed valuation in a given community. The assessed valuation must be considered in relation to the number of pupils enrolled in the school. Both minimum and maximum valuation per-pupil enrolled should be considered by the state in its educational program. It should be considered because of the equalization of educational facilities as well as the equalization of taxes paid.

Finally, minimum and maximum cost per-pupil enrolled should be considered in evaluating a high school. If the amount expended is too small it will result in an inefficient educational set-up. However, it is equally as important that a maximum be fixed so that the cost will not be exorbitant. Exorbitant costs indicate an uneconomical set-up and a greater possibility of the school becoming a burden upon the community.

Purpose

The purpose of this study is to formulate criteria or standards for an optimum rural high for average Kansas communities. Using these criteria or standards as a basis, certain reorganizations and eliminations of existing rural high

schools are suggested. Also, the criteria or standards are suggestive for the establishment of other rural high schools if such are found to be desirable.

The usual solution proposed to remedy an undesirable educational set-up, such as exists in case of some of the small rural high schools, is consolidation. While consolidation is desirable, other reorganizations may be made which will make a rural high school optimal for the community which it serves.

These criteria or standards are intended to be supplementary to those already established by the State Board of Education and those provided by legislative enactment.

Definition of a Small Rural High School

There isn't any standard definition for a small high school. Rufi in his "The Small High School" used the following definition: "a small high school may be defined as one employing 4 or fewer teachers and enrolling 75 or fewer pupils. (14) For purposes of this study a small rural high school is defined as one employing 7 or less full-time teachers and enrolling 150 or fewer pupils. A full time teacher is defined as one teaching 3 or more classes per day.

Schools Included in This Study

There are 716 high schools in Kansas (15) which were

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14. Rufi, John, The Small High School, Columbia University, Contributions to Education, Teachers College Series, Number 236, 1926, p. 3.

15. Kansas Educational Directory, 1931-32. Compiled by Geo. A. Allen, State Superintendent of Public Instruction, Topeka, November, 1931.

accredited or approved in 1931-1932. Fifteen of these are located in cities of the first class, 4 of these are in Kansas City and 2 in Wichita; 76, in cities of the second class; 572, in cities of the third class or open country; and 53 which are accredited but not classified. Seven or fewer teachers are employed in 473 of these high schools. Certain facts in regard to these small high schools are presented in Table VI. (16)

TABLE VI

Some Facts Relative to the Number of Teachers, Enrollment and Teacher-Pupil Ratio in 473 Small Kansas High Schools, 1931-1932

Number of Schools	Number of Teachers in Each School	Minimum Enrollment	Average Enrollment	Maximum Enrollment	Teacher-Pupil Radio
58	7	41	93	152	1-13
95	6	31	82	129	1-14
124	5	10	58	150	1-11
87	4	10	46	117	1-11
58	3	9	41	123	1-13
45	2	4	21	74	1-10
6	1	1	11	20	1-11

Since the 473 small high schools are organized under different laws, it is necessary that this study should be limited to schools organized under one law. For that reason, rural high schools have been selected. Parochial schools have been eliminated because the problem of finance is essentially different from that which exists in the public school. Finally, the study has been limited to rural high schools having the four-year type of organization. Stated positively, this study considers public rural high schools having 7 or fewer

16. Circular 250A, State of Kansas, Department of Public Instruction, Topeka, January 6, 1932.

teachers, organized as a four-year high school.

There are 302 rural high schools in Kansas. Eight or more teachers are employed in 32 of the rural high schools; 3 are two-year rural high schools; 3 are parochial high schools; and 10 are organized as rural high schools using other than the four-year plan. There are 254 public rural high schools in Kansas having 7 or fewer teachers, organized upon the four-year basis. From these 254 rural high schools, 100 have been selected for purposes of this study.

The factors considered in the selection of the 100 rural high schools are:

1. The number of teachers employed.
2. The number of pupils enrolled.
3. The location of the school.
4. The classification of high school.

An examination of Tables VII, VIII, IX and X indicates that the 100 rural high schools are reasonably representative of the 254 rural high schools previously referred to.

TABLE VII

Number and Per Cent of Rural High Schools in Original and Representative Groups Employing Two, Three, Four, Five, Six or Seven Teachers

	Original Group		Representative Group	
Number of Teachers	Number of Schools	Per Cent	Number of Schools	Per Cent
7	16	6.299	6	6
6	53	20.866	20	20
5	72	28.346	30	30
4	70	27.559	28	28
3	36	14.173	14	14
2	7	2755	2	2
Total	254	99.988	100	100

Since the number of teachers is one of the most important factors considered by the personnel of the State Department of Public Instruction in the classification of high schools, this criterion is probably the most important to be considered in attempting to select rural high schools which are representative. An examination of Table VII indicates that approximately the same per cent of rural high schools employing a given number of teachers prevails in the representative group as in the original group.

In selecting 100 rural high schools which are representative on the basis of the four criteria previously indicated, it is difficult to select representative rural high schools on the basis of enrollment. This difficulty is due to the lack of uniformity which exists in teacher-pupil ratio. Al-

TABLE VIII

Number and Per Cent of Rural High Schools in Original and Representative Groups According to Enrollment for September, 1932

	Original Group		Representative Group	
Enrollment	Number of Schools	Per Cent	Number of Schools	Per Cent
141-150	2	0.79	1	1
131-140	2	0.79	0	0
121-130	6	2.36	1	1
111-120	4	1.58	1	1
101-110	11	4.33	4	4
91-100	19	7.48	9	9
81- 90	23	9.05	8	8
71- 80	27	10.63	13	13
61- 70	31	12.2	16	16
51- 60	36	14.17	14	14
41- 50	48	18.89	16	16
31- 40	26	10.24	9	9
21- 30	15	5.91	7	7
11- 20	4	1.58	1	1
Total	254	100.00	100	100

though the rural high schools selected are reasonably representative as far as the number of pupils enrolled is concerned, this study is made with the acknowledgment that in terms of this criterion, the rural high schools which have been included are not as representative as in terms of the other criteria.

In order to determine the location of the rural high schools considered, the state was divided into quarters by drawing a line due east and west and due north and south. The number of rural high schools in each quarter of the state was thus ascertained. The next step was to select 100 rural high schools from the original 254 so that approximately the same per cent of the rural high schools selected are located in each quarter of the state as in the original group. In the 100 rural high schools selected, fifty-five counties are represented. It is evident that these rural high schools are fairly representative from the geographical standpoint.

TABLE IX

Number and Per Cent of Rural High Schools in Original and Representative Groups Located in Various Quarters of the State of Kansas

	Original Group		Representative Group	
Location of Schools	Number of Schools	Per Cent	Number of Schools	Per Cent
Northeast	126	49.606	47	47
Northwest	37	14.567	15	15
Southeast	56	22.047	25	25
Southwest	35	13.779	13	13
Total	254	100.000	100	100

High schools in Kansas are classified as Class A, B, C or D. The 100 rural high schools have been selected so that the per cent of Class A rural high schools in the representative group is approximately the same as the per cent of Class A rural high schools in the original group. The same procedure was used in regard to Classes B, C, and D.

TABLE X

Number and Per Cent of Rural High Schools in Original and Representative Groups According to Class A, B, C or D.

Class	Original Group		Representative Group	
Class	Number of Schools	Per Cent	Number of Schools	Per Cent
A	49	19.291	19	19
B	132	51.969	54	54
C	52	20.472	19	19
D	21	8.268	8	8
Total	254	100.000	100	100

Method of Procedure

The 100 rural high schools were selected from 254 rural high schools on the basis of the number of teachers employed, the number of pupils enrolled, the geographical location of the school and the classification of high school. The 100 rural high schools are divided into three groups according to the number of full-time teachers employed. Group I is composed of the six-and seven-teacher schools; Group II, the four-and five-teacher schools; and Group III, the two- and three-teacher schools. Throughout the study, this plan of designating the groups will be preserved for comparative purposes.

Data are reported on the 100 representative rural high schools in regard to the following factors:

A. Teaching load (pupil-to-teacher ratio).

B. Enrollment of rural high schools.

C. Area of rural high school districts.

D. Assessed valuation per-pupil enrolled.

E. Cost per-pupil enrolled.

F. Related data.

The data relative to factors A, B, C, D and E are used to establish the criteria for an optimum rural high school for Kansas communities. The related data are used for comparative purposes and in connection with the other factors enumerated.

The mean and S D# have been calculated for factors A, B, C, D and E. The sigma value for each one of the five factors has been calculated for each one of the rural high schools.

The mean is used because it is the most reliable measure of central tendency. (17) For the same reason, the standard deviation is used as the measure of dispersion. (18)

The next step was to determine the rural high schools which did not vary from the mean more than 1.00 S D on each criterion as well as for a combination of all criteria. The rural high schools which did not vary from the mean more than

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See Appendix D for formulae used in this study.

17. Garrett, Henry E., Statistics in Psychology and Education, Longmans, Green and Co., New York, 1926, p. 127.

18. Ibid., p. 26.

1 S D are defined as optimum rural high school in this study. All others are defined as non-optimum.

By an optimum small rural high school is meant the best type of rural high school for average Kansas communities in terms of these criteria considered separately and as a group. There is no assumption made that the application of these criteria would make an ideal educational set-up or that other criteria are not essential to a complete statement of the educational problem involved. The criteria have been determined on the basis of what is being done in representative Kansas communities. They are suggested for purposes of application to communities which fail to meet the standards used in this study.

Limitations

In order to determine whether a rural high school is a desirable one, it would be necessary to consider the entire educational set-up. Five factors have been considered directly in establishing the criteria. Other factors have been considered more or less incidentally such as the mill levy for the support of schools, teacher preparation, teaching experience etc. One should recognize the limitations of conclusions reached which do not have as their basis the educational set-up in its entirety.

In this study no attempt has been made to measure the outcomes of instruction. Regardless of whether the outcomes of instruction are considered as the amount of subject matter mastered or the attitudes which have been established or suc-

cess in life activities, the results should not be ignored.

No consideration is given to the fact that the school performs other functions than those usually considered to be the function of the school. The extent to which the schools contribute to life of the community is a vital question.

Despite these limitations, the application of these criteria would do much toward the removal of inequalities which exist from the standpoint of the pupil. Furthermore, their application would do much toward the equalization of the burden which the existence of the small rural high school places upon the community.

CHAPTER III

THE OPTIMUM RURAL HIGH SCHOOL.

Introduction

The rural high schools of Kansas were established by the people of the rural high school district with little guidance from educational authorities. Power to direct the establishment of rural high schools must come through legislative enactments. The legislature has placed very little power in the hands of educational authorities thus far. The county superintendent of public instruction is authorized to call a special meeting of the electors for the purpose of selecting a board of directors. (1) In case the territory of a proposed rural high school district is in two or more counties the county superintendents and county commissioners have the power to determine the boundaries. If they cannot agree, the boundaries are approved by the state superintendent. (2) In these two cases, educational authorities have been delegated minor powers in the establishment of rural high schools.

The state legislature has placed limitations relative to the minimum area (3) of a rural high school district, the minimum valuation of a rural high school district (4) and the maximum tax levy. (5) Beyond this, the legislature has not

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1. Laws of Kansas, 1915, Chapter 311, Section 4.
2. Laws of Kansas, 1921, Chapter 241, Section 1.
3. Laws of Kansas, 1915, Chapter 311, Section 1.
4. Laws of Kansas, 1925, Chapter 241, Section 1.
5. Laws of Kansas, 1915, Chapter 311, Section 5.
   Laws of Kansas, 1920, Chapter 52, Section 7.
   Laws of Kansas, 1925, Chapter 237, Section 1.
   Laws of Kansas, 1929, Chapter 237, Section 1.
   Laws of Kansas, 1931, Chapter 267, Section 1.

seen fit to pass legislation which would limit the power of the people to establish a rural high school if the proposition were approved by the people.

With so little guidance from educational authorities and the legislature, it could not be expected that an efficient system of rural high schools would be established.

The factors which are considered in Chapters III and IV for the purpose of establishing criteria for an optimum rural high school are:

A. Teaching load (teacher-pupil ratio).

B. Enrollment of rural high schools.

C. Area of rural high school district.

D. Assessed valuation per-pupil enrolled.

E. Cost per-pupil enrolled.

F. Related data.

A. Teaching Load

Introduction

The small high school has been criticised because the teaching load is heavier than in the larger high schools. O'Brien (6) found that the median number of classes taught in the schools not employing more than 10 teachers to be 5 for both academic and non-academic teachers, in schools employing 11 to 29 teachers to be 4 for academic teachers and 3 for non-academic teachers, and in schools employing 30 or

6. O'Brien, F. P., The High School Teaching Load and Preparation of High-School Teachers, Bulletin of the University of Kansas, Vol. 27, May 15, 1926, No. 10, p. 5.

more teachers to be 5 for both academic and non-academic teachers. In the smaller schools, a number of teachers taught 6, 7 and 8 classes; in the middle group a lesser number taught 6 and 7 classes but no teacher taught as many as 8 classes; while in the larger schools, no teacher taught more than 6 classes. The same writer (7) reports the median number of different subjects taught to be 3 in smaller schools and 1 in the medium size and larger schools. These data are adequate justification for the criticism. Yet, the median pupil-hour load per day of full time academic teachers was 67 in the smaller schools; 105 in the medium sized schools; and 126 in the larger schools. (8)

W. A. Stacey (9) reports that the average teaching load for the North Central Association high schools in Kansas to be 1-25 (teacher-pupil ratio). If this be compared with the teaching load in the smaller high schools the difference is easily noted. The same writer (10) reports the following data relative to the average teaching load for all the small high schools of the state.

One-teacher schools	1-11
Two-teacher schools	1-10
Three-teacher schools	1-13
Four-teacher schools	1-11

7. Ibid., p. 8.
8. Ibid., p. 7.
9. Circular 250 A, State of Kansas, Department of Public Instruction, January 6, 1933, p. 4.
10. Ibid., p. 1.

Five-teacher schools	1-11
Six-teacher schools	1-14
Seven-teacher schools	1-13

To some extent, the seriousness of this situation is concealed if one considers only the average teaching load. There is a wide variability in the teaching load of the various schools which cannot be ascertained by an examination of the data previously reported. An examination of Table XI reveals this wide variability.

TABLE XI (11)

Distribution of Teaching Load for Small Kansas High Schools

Number of Teachers in Each School	Teaching Load	
	Minimum	Maximum
1	1-1	1-20
2	1-2	1-37
3	1-3	1-41
4	1-3	1-29
5	1-2	1-30
6	1-5	1-22
7	1-6	1-22

It is impossible to consider teaching load in isolation from the other factors in the educational set-up. It must be considered in relation to the curricula provided by the school. If the curricula provide for a large number of offerings in relation to enrollment, it necessarily results in a small teaching load in terms of teacher-pupil ratio or a large one in terms of number of classes or number of different classes

11. Table XI is derived from data reported in Circular 250 A, p. 1.

taught. Expanding the curricula, enrollment remaining the same, results in smaller classes. Smaller enrollment in classes results in increased cost per-pupil hour of instruction. Comparative unit costs as reported by Gordon Davis (12) for smaller rural high schools; Claude B. Harris (13) for medium size rural high schools; and J. J. Hendrix (14) for the larger rural high schools indicate this increased cost per-pupil hour of instruction due to small classes.

Adding to the curricular offerings requires more teachers. Since the major portion of school expenditures are for instructional purposes, this results in an expensive school considered in terms of per-pupil costs. For the 100 rural high schools included in this study, it was found that the per cent of the total amount of money expended for instructional purposes varied from 14.5 to 92, while the average was 63 per cent.

Methods for Determining Teaching Load

There are three methods in use for determining teaching load:

First: teaching load may be ascertained by dividing the

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12. Davis, Gordon, Unit Costs of Instruction in Nine of the Smaller Rural High Schools of Kansas for the First Semester of 1931-1932, Unpublished Master's Thesis, University of Kansas, 1932.

13. Harris, Claude B., Unit Costs of Instruction in Nine of the Medium Size Rural High Schools of Kansas for the First Semester, of 1931-1932, Unpublished Masters Thesis, University of Kansas, 1932.

14. Hendrix, J. J., Unit Costs of Instruction in Nine of the Larger Rural High Schools of Kansas for the First Semester of 1931-1932, Unpublished Masters Thesis, University of Kansas, 1932.

number of pupils enrolled by the number of full-time teachers employed. This is equivalent to defining teaching load as the relation which exists between the number of teachers employed and the number of pupils enrolled or teacher-pupil ratio. By this procedure no attempt is made to determine the teaching load of the individual teacher as such. The writer realizes that this procedure tends to conceal the wide variability in teaching load which actually exists.

Second: teaching load may be determined by considering the number of pupils or number of classes or number of different subjects taught by each teacher. This method as well as the preceding one is limited in value because it considers only one factor.

Third: Harl R. Douglass (15) has presented the most comprehensive and the most desirable procedure for the determination of teaching load. This procedure is more desirable than those previously mentioned because it considers the time required of instructors as the basis for determining teaching load.

The following factors are influential in determining the amount of time required of an instructor according to Douglass:(16)

1. The number of sections taught daily (or weekly).
2. The number of pupils taught.
3. The number of different preparations required.
4. The amount of time required for cooperations: study

15. Douglass, Harl R., Organization and Administration of Secondary Schools, Ginn and Company, Chicago, 1932, pp. 114-126.

16. Op. Cit., p. 115.

halls, activities, etc.

5. The length of the class period.

6. The nature of the subjects taught and the consequent amount of time required for preparation, for marking papers and notebooks, and for arranging equipment, apparatus and materials.

7. The personnel of the pupils taught: tractability, range of individual differences in ability, etc.

8. The age and maturity of pupils taught and consequent character of the subject matter.

Douglass (17) suggests the following formula for the calculation of teaching load for junior and senior high schools:

$$T\,L = \left[C\,P - \frac{2\,Dup.}{10} + \frac{(N\,P - 20\,C\,P)}{100} + \frac{P\,C}{2}\right]\left[\frac{P\,L + 55}{100}\right]$$

T L = units of teaching load per week.

C P = class periods spent in classroom per week.

Dup = number of class periods spent per week in classroom teaching classes for which the preparation is very similar to that for some other section, not including the original section.

N P = number of pupils in classes per week.

P C = number of class periods spent per week in supervision of study hall, student activities, teachers' meetings, committee work, assisting in administrative or supervisory work, or other cooperations.

P L = gross length in minutes of class periods.

Douglass (18) summarizes the validity of this formula as follows:

However, it should be quite clear that the use of the formula will yield much more accurate and reliable measures of teaching loads than to take as criteria either the number of classes taught or the number of pupils taught, neither of which take direct cognizance of the other, and both of which ignore the saving in preparation owing to duplicate sections, the time spent in cooperations, and the difference in length of class period. It is also maintained that the assumptions are in all probability very close to the truth, and that the formula will yield estimates that are as accurate and valid for ordinary administrative and supervisory purposes as a great many formulas upon which important esti- and decisions are made in the industrial or business world, or more so.

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17. Op. Cit., p. 115.
18. Op. Cit., p. 118.

Method Used in This Study

The teaching load has been determined by dividing the number of pupils enrolled in each school by the number of full-time teachers employed. Teaching load is expressed in terms of teacher-pupil ratio. For comparative purposes, such as used in this study, this seems to be a desirable procedure. However, it is not as refined a technique as the other methods.

Sources of Data

The number of full-time teachers employed and the enrollment of each school included in this study were secured from the Kansas Educational Directory (19) for 1931-32. These data have been checked for accuracy by comparing them with the data found in the "High School Principal's Organization Report" for September 1931. #

Presentation and Interpretation of Data

In Table XII, data are presented relative to the teaching load in the 100 rural high schools included in this study. Table XII shows that the median teaching load expressed in terms of teacher-pupil ratio is 1-16 in Group I; 1-13 in Group II; 1-12 in Group III; and 1-13.77 for all groups combined. The range in Group I is from 1-12 to 1-25; in Group II, from 1-7 to 1-23; in Group III, from 1-6 to 1-21; and

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19. Kansas Educational Directory, 1931-1932. Compiled by Geo. A. Allen, Jr., State Superintendent of Public Instruction.

\# See Appendix B for copy of "High School Principal's Organization Report."

for the 100 rural high schools, from 1-6 to 1-25.

TABLE XII

Distribution of Rural High Schools in Groups I, II and III According to Teaching Load (Teacher-Pupil Ratio)

Teaching Load	Group I	Group II	Group III	Number of Schools
1-25	1			1
1-24				
1-23		1		1
1-22	1	1		2
1-21			1	1
1-20				
1-19		1		1
1-18	1	1		2
1-17	3	3	2	8
1-16	8	6	1	15
1-15		5	2	7
1-14	4	4	1	9
1-13	3	10		13
1-12	5	5	1	11
1-11		7	2	9
1-10		6	2	8
1-9		4	2	6
1-8		2	1	3
1-7		2		2
1-6			1	1
Number of Schools	26	58	16	100
Median	1-16	1-13	1-12	1.13.77
Range	1-12 to 1-25	1-7 to 1-23	1-6 to 1-21	1-6 to 1-25

The teaching load is low in terms of teacher-pupil ratio when compared with 1-25 for the North Central Association high schools of Kansas. Comparisons with larger high schools do not represent a fair comparison of actual teaching load. The teacher in the small rural high school has more classes and a greater number of different subjects to teach. Therefore, the teaching load is actually greater than the teacher-pupil ratio indicates. Yet, in some instances at least, an increase in teacher-pupil ratio is

certainly desirable in the interests of an economical school. Undoubtedly, some direction should have been given in times past to have prevented such an undesirable situation.

The mean teaching load for the 100 rural high schools included in this study is 14.03 ± .2374 and the S D is 3.52 ± .2489. In terms of the assumption made earlier in this study, an optimum rural high school, in terms of a single criterion is one in which the teacher-pupil ratio varies from 1-11 to 1-17, inclusive.

TABLE XIII

Number and Per Cent of Optimum and Non-optimum Rural High Schools in Groups I, II and III According to the Criterion of Teaching Load

	Optimum From - 1.00 S D to +1.00 S D		Non-optimum Greater than + 1.00 S D		Greater than - 1.00 S D	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Group I	23	88.46	3	11.54	14	24.14
Group II	40	68.96	4	6.90	14	24.14
Group III	9	56.25	1	6.25	6	37.50
Total	72	72.00	8	8.00	20	20.00

Table XIII shows the number and per cent of rural high schools in Groups I, II and III which meet the criterion for an optimum rural high school in terms of the criterion, teaching load. Twenty-three or 88.46 per cent of the schools in Groups I, 40 or 68.96 per cent in Group II, 9 or 56.25 in Group III, and 72 per cent of the 100 schools meet this criterion.

The schools which vary from the mean more than - 1.00 S D do not meet the criterion of optimum. While the teacher-pupil

ratio of 1-18 and above seems low in comparison with 1-25 as found in North Central Association high schools, it is actually higher if one considers the number of different subjects taught as well as the number of classes taught.

The schools which vary from the mean greater than -1.00 S D are deserving of serious attention. Undoubtedly, reorganization or elimination is the solution of this problem. According to Table XIII, it would be necessary to reorganize or eliminate, 14 or 24.14 per cent of Group II and 6 or 37.5 per cent of Group III in order to meet this criterion. In no case should the word elimination be interpreted to mean a lessening of educational opportunity. In case any school is eliminated, some provision for secondary education should be provided for all pupils.

B. Enrollment of Rural High Schools

Introduction

The number of pupils enrolled in a school is an important factor in the educational set-up. In a small high school, the curricular offerings are limited. Usually, the offerings are the traditional subjects and the ones which are acceptable or required for college entrance. If the offerings are expanded, the number of teachers needed is increased, the teacher-pupil ratio is lowered, and the cost per-pupil enrolled is increased. Furthermore, an expansion of the curricular offerings frequently necessitates the teaching of classes by teachers with little or no preparation for the elective subject. Here as elsewhere, it is impossible to

consider one factor in isolation from the other factors.

Source of Data

The enrollment for each school was secured from the Kansas Educational Directory (20) for 1931-1932. These data were originally reported by the principal in the "High School Principal's Organization Report" for September 1931.

Presentation and Interpretation of Data

An examination of Table XIV shows the distribution, range and median enrollments for Groups I, II and III. The differences in enrollment in the three groups reflect the extent to which the curricula may be expanded in the schools of the various sizes. To the extent to which broadened curricula help to meet individual needs, the advantages are on the side of the larger schools. In a similar manner, it reflects the limited possibilities for participation in extra-curricular activities. Failure to adjust the curricula to enrollment of the school results in an uneconomical one as well as other undesirable educational procedures.

The mean enrollment for the 100 rural high schools included in this study is 64.5 $\pm$ 1.666 and the S D is 24.7 $\pm$ 1.7466. In terms of enrollment, an optimum rural high school is one in which the enrollment varies from 40 to 89, inclusive. A greater per cent meet this criterion in Group II than in either Group I or III. Groups I and III are represented by approximately the same per cent of their respective groups.

20. Op. Cit., Compiled by Geo. A. Allen, Jr., State Superintendent of Public Instruction.

TABLE XIV

Distribution of Small Rural High Schools in Group I, II and III According to Enrollment

Enrollment	Group I	Group II	Group III	Number of Schools
141-150	1			1
131-140				
121-130	1			1
111-120	1			1
101-110	3	1		4
91-100	9			9
81-90	4	4		8
71-80	5	8		13
61-70	2	14		16
51-60		13	1	14
41-50		11	5	16
31-40		4	5	9
21-30		3	4	7
11-20			1	1
Number of Schools	26	58	16	100
Median	93	59	37	63
Range	64-149	27-108	19-52	19-149

The schools which vary from the mean more than + 1.00 standard deviation have a larger enrollment than the standard for the optimal group. This is not to be interpreted as being undesirable. However, those schools which vary from the mean more than - 1.00 standard deviation are unsatisfactory in terms of the assumption. Seven schools or 12.07 per cent in Group II and 10 or 62.5 per cent of Group III do not meet the criterion of enrollment which is presented.

The data presented in Tables XIV and XV are indicative of the need for legislative action in fixing the minimum enrollment for rural high schools before they can be established. If such legislation had been passed earlier, such a condition as exists today in regard to small enrollments would not be found.

TABLE XV

Number and Per Cent of Optimum and Non-optimum Rural High Schools in Groups I, II and III According to the Criterion of Enrollment.

	Optimum		Non-optimum			
	From -1.00 S D to +1.00 S D		Greater than +1.00 S D		Greater than -1.00 S D	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Group I	11	42.31	15	57.69		
Group II	50	86.21	1	1.72	7	12.07
Group III	6	37.50			10	62.50
Total	67	67.00	16	16.00	17	17.00

C. Area of Rural High School Districts

Introduction

Area is an important factor in the educational set-up of a rural high school. The area of a rural high school district determines the amount of transportation necessary for bringing the pupils to school. If the area is large, transportation must be provided if the rural high school is to perform the function for which it was established. The amount of transportation needed determines to some extent the cost of the school. However, the cost of transportation has been shown to be less than the cost for the operation of an inefficient school. (21) The problem of transportation is closely allied to the condition of roads. An improved system of roads is justification for insistence upon larger areas.

21. Smart, Thomas J. How Better Schools for Less Money May be Made Available for a Kansas Community, University of Kansas, Bulletin of Education, Vol. III, No. 3., February 1931. pp. 3-20.

The legislature has made provision for transportation of rural high school pupils. The law (22) provides that the majority of the electors must approve the transportation of pupils at the annual meeting or at a special meeting of the electors of the district. If the sanction of the electors is given, the rural high school board is authorized to provide transportation for all pupils living three or more miles from the rural high school. This is a step toward the optimum functioning of the rural high school and toward the equalization of educational opportunity. The law is optional and it is doubtful whether it has been adopted in even a majority of the rural high school districts. To what extent, it has been provided, the writer is unable to report.

The area of a rural high school district is closely related to the enrollment of the school. The number of people per square mile and the number of pupils of high school age are variable factors. Yet, a larger number of potential pupils are found in a larger area regardless of the density of population than in a smaller area. However, the ratio may not be the same. The inclusion of village or town within the rural high district may justify a smaller area. Furthermore, this is closely allied with the teaching load, course of study, etc.

Finally, there is a close relationship between area and

22. Laws of Kansas, 1921, Chapter 252, Section 1.

valuation. Other things being equal, a larger area means a larger valuation and a smaller area means a smaller valuation.

Source of Data

The area of each the rural high school districts was obtained from Twenty-Seventh Biennial Report of the State Superintendent of Public Instruction of Kansas. (23)

Presentation and Interpretation of Data

Table XVI shows the distribution of rural high schools in Groups I, II and III. The median area in Group I is 75 square miles; in Group II, 63 square miles; and for Group III, 44 square miles. The median number of square miles for all schools is 63.48. From the standpoint of a desirable educational set-up, the larger area is more desirable. Considered as groups, the median area in Group I is more desirable than in either Group II or III and Group II is more satisfactory than Group III. Yet, it must be recognized that the area is too small in many instances for an effective educational set-up. Undoubtedly, the elimination of some of these should be considered.

If possible, some of the small rural high school districts should be annexed to other rural high school districts or the pupils transported to a neighboring high school and tuition paid for the pupils. In some instances, it might be possible to annex additional territory to the rural high school dis-

23. Op. Cit., For the Years Ending June 30, 1929 and June 30, 1930, pp. 278-283.

trict. Any of these procedures would be more economical and, at the same time, a better school could be provided.

The minimum area permitted in a rural high school district is fixed by legislative action. The law provides that "territory containing not less than sixteen square miles and comprising one or more townships or parts there-of" (24) is necessary. The minimum area provided by this law is too small and accounts for the smallness of many rural high school districts. It also is a factor in the exorbitant cost of some of the rural high schools. That this law should have provided a larger minimum area is self evident.

TABLE XVI

Distribution of Rural High School Districts in Groups I, II and III According to Area in Square Miles of Rural High School Districts

Area	Group I	Group II	Group III	Number of Schools
280-299		1		1
260-279				
240-259				
220-239		1		1
200-219				
180-199				
160-179		2		2
140-159		1	1	2
120-139	3	1		4
100-119	7	3		10
80-99	1	8	2	11
60-79	8	14	1	23
40-59	4	15	5	24
20-39	3	12	6	21
0-19			1	1
Number of Schools	26	58	16	100
Median	75	63	44	63.48
Range	25-136	25-188	19.75-148	19.75-288

24. Laws of Kansas, 1915, Chapter 311, Section 1.

The average area for all small rural high schools included in this study is 72.2 ± 2.93. The S D is 43.4 ± 3.07. In terms of area, an optimum rural high school is one in which the area ranges from 29.8 square miles to 115.6 square miles. It should be noted that the minimum area arrived at is 13.8 square miles larger than the minimum set by law. While this is low, the adoption of this as basis would be a partial solution to the problem.

TABLE XVII

Number and Per Cent of Optimum and Non-optimum Rural High Schools in Groups I, II and III According to the Criterion of Area

	Optimum		Non-optimum			
	From -1.00 S D to +1.00 S D		Greater than +1.00 S D		Greater than -1.00 S D	
	Number	Per Cent	Number	Per C Cent	Number	Per Cent
Group I	22	84.61	3	11.54	1	3.85
Group II	50	86.21	6	10.34	2	3.45
Group III	12	75.00	1	6.25	3	18.75
Total	84	84.00	10	10.00	6	6.00

Table XVII indicates the number of optimum and non-optimum rural high schools in each group according to area. A greater per cent meet this criterion in Group I than in Group II or Group III. However, the per cent in each Group is approximately the same. A far greater per cent in Group III are too small according to the criterion of an optimum rural high school in regard to area. Elimination of these rural high schools or addition of territory is highly desirable. If the schools be eliminated, the pupils should be transported elsewhere.

Summary

Section A

1. The teaching load in small rural high schools is low in terms of teacher-pupil ratio but it is high in terms of number of classes taught and number of different subjects taught.

2. It is impossible to consider teaching load in isolation. It must be considered in terms of the entire educational set-up.

3. The methods in use for determining teaching load are: (1) teacher-pupil ratio; (2) number of classes or number of different subjects or number of pupils; and (3) the more complete method proposed by Douglass.

4. Teacher-pupil ratio is used as the measure of teaching load in this study for comparative purposes.

5. The median teaching load for the 100 rural high schools is 1-13.77 in terms of teacher-pupil ratio. The range is from 1-6 to 1-25.

6. The mean teaching load for the 100 rural high schools included in this study is 14.03 and the S D is 3.52.

7. An optimum rural high school for average Kansas communities in terms of teaching load is one in which the teacher-pupil ratio varies from 1-11 to 1-17, inclusive.

Section B

1. The number of pupils enrolled is an important factor in the educational set-up of a small rural high school. It is closely allied with the curricular offerings, teaching

load, cost of education, etc.

2. The median enrollment for the 100 rural high schools included in this study is 63. The range varies from 27 to 149.

3. The mean enrollment for the 100 rural high schools included in this study is 64.5 and the S D is 24.7.

4. An optimum rural high school for average Kansas communities in terms of enrollment ranges from 40 to 89 pupils, inclusive.

Section C

1. The area of a rural high-school district is an important factor in the educational set-up because it determines the amount of transportation needed. Area is closely related to enrollment, valuation, cost, etc.

2. The median area for the 100 rural high-school districts is 63.48 square miles. The range is from 19.75 to 288 square miles.

3. The mean area for the 100 rural high schools is 72.2 square miles and the S D is 43.4 square miles.

4. An optimum rural high school for average Kansas communities in terms of area in square miles is one in which the area is from 29.6 square miles to 115.6 square miles, inclusive.

CHAPTER IV

THE OPTIMUM RURAL HIGH SCHOOL (Continued)

In Chapter III, three factors are considered; teaching load, enrollment and area of the rural high schools. In this chapter, a consideration of the financing of rural high schools is presented. A portion of these data is used to develop criteria relative to assessed valuation per-pupil enrolled and to cost per-pupil enrolled.

D. Valuation Per-Pupil Enrolled

Introduction

The ability of the people of a rural high school district to support a rural high school is determined largely by the valuation of real property within the district. While the valuation of personal property is, by law included, considerable personal property escapes taxation in Kansas. (1) According to Jensen (2) there are three assumptions underlying the use of the property tax:

1. That all property is alike or may be so regarded for purposes of taxation.

2. That property measures the ability to pay taxes or can otherwise be used as a measure of tax-paying obligations.

3. That a tax on all property can in practice be administered effectively, as contemplated in the tax laws.

Jensen (3) indicates that these assumptions are invalid. All property is not alike and cannot be logically considered

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1. State Tax Commission, Eight Report to the Legislature, p. 31.
2. Jensen, Jens P. Public Finance, p. 246, Thomas Y. Crowell Company, New York, 1924.
3. Ibid., pp. 246-251.

to be so even for purposes of taxation. In regard to the second assumption. Jensen (4) presents some very pertinent facts to show its lack of validity.

> The assumption that property measures the ability to pay taxes is certainly not valid. Even though we accept the invalid proposition that income from property is proportionate to a person's property, it would still be necessary to make use of the principle of progression in order to apportion the tax burden according to either the faculty or sacrifice principle and, as we have seen it is practically inapplicable to property taxes. But it is far from true that all income is proportional to the amount of property owned, however true it may have been in earlier times. A large element of our population consists of professional men and women who have little property but whose earnings from salaries or private professional fees are large. A tax on property would not reach such persons at all and they would to a large extent, go untaxed although they possess, unquestionably a great deal of tax paying ability.

The third assumption is invalid because all property cannot be reached. If the property is reached, it is not all assessed on the same basis even if the law does provide that it shall be so-assessed. There is variation between counties in the assessed valuation of the same type of property; between governmental units within the same county; and variation within the small unit such as a rural high school district.

Theoretically, valuations are uniform throughout the state. Actually, they are not. Since this situation is known to exist, the comparisons made in this study should not be interpreted as representing the true situation as it relates to valuation.

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4. Ibid., p. 250.

Units of Comparison

The unit of comparison used in this study is the assessed valuation per pupil enrolled. This is generally assumed to be a less valid measure of comparison than per-pupil in average daily attendance. Within limits, it may be assumed that the relation between assessed valuation per-pupil enrolled and per-pupil in average daily attendance is fairly constant from school to school. The primary reason for using per-pupil enrolled rather than per-pupil in average daily attendance is one of availability. At the time these data were gathered, statistics were not available for calculating the assessed valuation per-pupil in average daily attendance. However, the use of this unit seems to be highly desirable because it considers the actual number of pupils for which teachers and equipment must be provided whether they are in attendance or not.

Sources of Data

The information relative to assessed valuation was secured by means of a questionnaire from the county clerks of the respective counties in which the schools are located. # In some instances, where the rural high school district is composed of territory in two or more counties, it was necessary to get valuations from two or more counties. However, in most cases, the county clerk, in the county in which the school is located, reported total valuations.

See Appendix C for copy of questionnaire and letter which accompanied the request.

Data in regard to enrollments were secured from the Kansas Educational Directory. (5)

Presentation and Interpretation of Data

There is a wide variation in the ability to support a rural high school as indicated by the total assessed valuation of the rural high school districts. The assessed valuations of rural high school districts vary from 0.67 millions to 6.73 millions. The median assessed valuation, in millions

TABLE XVIII

Distribution of Small Rural High Schools in Group I, II and III According to Total Assessed Valuation of Rural School Districts in Millions of Dollars. (1931-1932)

Total Assessed Valuation	Group I	Group II	Group III	Number of Schools
6.5-6.99	1			1
6.0-6.49				
5.5-5.99				
5.0-5.49	1	1		2
4.5-4.99				
4.0-4.49	1	3		4
3.5-3.99	4	1		5
3.0-3.49	2	4		6
2.5-2.99	7	11		18
2.0-2.49	6	15		21
1.5-1.99	2	18	5	25
1.0-1.49	2	5	7	14
1.5-0.99			4	4
Number of Schools	26	58	16	100
Median	2.174	2.2	1.285	2.167
Range	1.01-6.73	1.07-5.26	0.67-1.82	0.67-6.73

of dollars, in Group I, is 2.714; in Group II, 2.2; and in Group III, 1.285. The median for all schools in millions of dollars is 2.167. In terms of total assessed valuation, the

5. Op. Cit., Compiled by Geo. A. Allen, State Superintendent of Public Instruction, Topeka, November, 1931.

situation is more favorable in Group I than in either Group II or III. On the same basis, the schools in Group II are much better situated than those in Group III.

In 1925, the state legislature enacted a law fixing the minimum assessed valuation of a rural high school district.(6) This law provides:

> That no high-school district shall be organized within the state of Kansas the aggregate value of property of which, as determined by the returns of the tax assessor, shall be less than two million dollars. ($2,000,000): Provided, That a rural high-school district may be organized with an assessed valuation of not less than $1,250,000, provided the territory included within its boundaries contains a high school which has been established and continuously conducted for a period of five years next preceding the organization of such rural high-school district and which for the last year of the five had an average attendance of not less than forty pupils.

An examination of Table XVIII indicates that this law was passed about ten years too late. Four schools or approximately 15 per cent of the rural high schools in Group I, 23 or approximately 40 per cent in Group II, and 16 or 100 per cent in Group III have an assessed valuation less than $2,000,000. If this law had been passed in 1915, many of the small high-school districts with low assessed valuation would not have been organized. Undoubtedly, a few would have been organized under the second portion of this act but the number would have been decidedly reduced.

Table XIX indicates the existing inequalities of the ability of rural high school districts to provide high school facilities in terms of assessed valuation per-pupil

6. Laws of Kansas, 1925, Chapter 241, Section 2.

enrolled. In Group I, the richest district has an assessed valuation almost 8 times as large per-pupil enrolled as the poorest district; in Group II, the assessed valuation per-pupil enrolled is almost 6 times as large in the richest as compared to the poorest; in Group III, the assessed valuation per-pupil enrolled is almost 3 times as great in the richest as compared with the poorest. In the entire 100 rural high-schools, the assessed valuation per-pupil enrolled is almost 10 times as large in the richest as compared to the poorest.

TABLE XIX

Distribution of Small Rural High Schools in Group I, II and III According to Assessed Valuation Per-Pupil Enrolled in Thousands of Dollars (1931-1932)

Assessed Valuation Per-Pupil Enrolled	Group I	Group II	Group III	Number of Schools
95-99.9		1		1
90-94.9		1		1
85-89.9				
80-84.9		2		2
75-79.9	1	1		2
70-74.9		3		3
65-69.9		2		2
60-64.9		2		2
55-59.9	1	1		2
50-54.9	1	2	2	5
45-49.9	2	6	2	10
40-44.9	2	3	2	7
35-39.9	2	10	3	15
30-34.9	3	9	2	14
25-29.9	7	4	3	14
20-24.9	2	9	1	12
15-19.9	3	2	1	6
10-14.9	2			2
Number of Schools	26	58	16	100
Median	29.28	37.5	36.67	35.67
Range	10.3 - 78.3	16.7 - 99.0	19.2 - 53.1	10.3 - 99.0

If the poorest district were to attempt to provide the same type of school as the richest, the burden would be more than the community could bear. That these data are indicative of the need for a program was recognized by the State School Code Commission in their recommendations to the legislature.(7) The recommendations as they related to a program of equalization were:

> The most difficult task that the Commission has had is the problem of the financial support of schools. It recommends the establishment of a state and county equalization fund. According to this plan there would be a uniform district levy of one and a half mills and the remaining amount necessary for the support of a minimum educational opportunity would be supplied from this state and county equalization fund. The equalization fund should be distributed in a way so that the school districts may be benefited in proportion to their needs, and in a manner also to encourage the offering of better educational opportunities.

While the need for equalization is apparent, the legislature did not heed this portion of the report or any other phase.

The mean assessed valuation per-pupil enrolled for the 100 rural high schools included in this study is $39.400 ± $1,193.86 and the S D is $17,700 ± $1,251,59. In terms of the fundamental assumption made previously in this study, an optimum rural high school is, in terms of a single criterion, one in which the assessed valuation per-pupil enrolled ranges from $21,700 to $57,100, inclusive.

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7. The Report of the State School Code Commission of Kansas, Recommendations to the Legislature of 1929, Volume II, September 29, 1928, p.5.

TABLE XX

Number and Per Cent of Optimum and Non-Optimum Rural High Schools in Groups I, II and III According to Criterion of Assessed Valuation Per-Pupil Enrolled

	Optimum		Non-optimum			
	From +1.00 S D to -1.00 S D		Greater than +1.00 S D		Greater than -1.00 S D	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Group I	19	73.08	2	7.69	5	19.23
Group II	41	70.69	12	20.69	5	8.62
Group III	15	93.75			1	6.25
Total	75	75.00	14	14.00	11	11.00

Table XX shows the number and per cent of rural high schools in Groups I, II and III in terms of the criterion of assessed valuation. Seventy-five per cent of all schools meet this requirement. Fourteen rural high schools have an assessed valuation which exceeds the maximum while 11 have less than the minimum established. Between these two groups, there is an extreme inequality. Even within the so-called optimum group, there is considerable inequality. The data presented in Tables XVIII, XIX and XX point to glaring inequalities in assessed valuation per-pupil enrolled. The solution for such a condition is a sound state program of equalization.

E. Cost Per-Pupil Enrolled

Introduction

"The small rural high school is too expensive" is a criticism that is often made. Undoubtedly, this criticism is a valid one in many instances. Data presented in this study are indicative of the extremely large costs per-pupil enrolled. If the people of the state are to continue providing facilities for secondary education for the children

of the state, a reorganization which will result in reduced costs is imperative. While certain reduction in expenditures may be made by the local rural high school district, it is doubtful if such reductions will reduce the cost of education in many communities commensurate with the ability of the people to pay. Nothing less than a complete reorganization of the rural high school system of the state can meet this problem.

While it may be argued by some educators that costs can be interpreted only in terms of educational out-put, it must be recognized that the ability of people to pay cannot be relegated to an unimportant position. In fact, it is one of the most important criteria if not the most important from the standpoint of those who support our educational system. If educators expect the people to continue to provide educational facilities, more attention must be given to the practical problem of ability to pay.

Furthermore, since consolidation is one of the desirable ways to reduce costs, it is a pertinent fact which must be recognized that the achievement of pupils is superior in consolidated to those in non-consolidated schools. Timon Covert, (8) Associate Specialist in School Finance, in the Office of Education, has reported 18 studies which are indicative of superior results obtained in the consolidated schools.

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8. Circular No. 9, An Annotated Bibliography of Studies of Consolidation and Transportation, 1923-1929, United States Department of Interior, Office of Education, Washington, D.C., March, 1930.

Thus far, the state legislature of Kansas has not limited the amount of money which may be spent by a rural high school district. While there is a limitation upon the levy which may be made for the support of rural high schools, this has had very little influence due to the wide variability in valuation and in the educational set-up.

Unit of Comparison Used

The unit of comparison used in this study is the cost per-pupil enrolled. This unit is less frequently used than cost per-pupil in average daily attendance. Cost per-pupil enrolled has been used because the data were available at the time this study was made and the unit represents more fully the number of pupils for which teachers and equipment must be provided.

Sources of Data

The information relative to total costs was secured from the clerk's annual report (9), to the County Superintendent of Public Instruction, which is sent by the latter to the State Superintendent of Public Instruction.

Data in regard to enrollments were secured from the Kansas Educational Directory. (10)

Presentation and Interpretation of Data

Table XXI shows the wide variation in total costs of

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9. Op. Cit., For the Year Ending June 30, 1931.
10. Op. Cit., Compiled by Geo. A. Allen, State Superintendent of Public Instruction, Topeka, November, 1931.

TABLE XXI

Distribution of Small Rural High Schools in Groups I, II and III According to Total Costs in Thousands of Dollars (1930-1931)

Total Costs	Group I	Group II	Group III	Number of Schools
25-25.9	1			1
24-24.9				
23-23.9	1			1
22-22.9	1			1
21-21.9	2			2
20-20.9				
19-19.9	1	1		2
18-18.9	5			5
17-17.9	2			2
16-16.9	3	4		7
15-15.9	3			3
14-14.9	2	1		3
13-13.9	2	7		9
12-12.9	3	7		10
11-11.9		7		7
10-10.9		13	1	14
9-9.9		9		9
8- 8.9		6		6
7-7.9		2	3	5
6-6.9			7	7
5-5.9		1	2	3
4-4.9			2	2
3-3.9			1	1
Number of Schools	26	58	16	100
Median	$17,000	$11,846	$7,428	$12,428
Range	$12,138-$25,031	$5,975-$20,084	$3,427-$10,153	$3,429-$25,031

rural high schools in Kansas. In terms of total costs, the rural high schools in Group I cost more than those in either Group II or III and those in Group II more than those in Group III. However, such data are misleading because they do not consider the number of pupils enrolled, the valuation of the rural high school district, the tax levy or the teaching load. If these factors be considered in relation to total costs, the rural high schools in Group I are more economical

than those in either Group II or III. In a similar manner, those in Group II are more economical than those in Group III.

Table XXII shows the cost of rural high schools in terms of cost per-pupil enrolled. This is more significant than total costs for comparative purposes because a common unit is used. The median cost in Group I is $180 per-pupil enrolled; in Group II, $169; in Group III, $137.50; and for the 100 rural high schools, $187. In terms of median per-pupil costs, the rural high schools in Group I are slightly more economical.

If only the medians be considered, the really significant differences are concealed. The range in Group I is $126-$303; In Group II, $89-$485; in Group III, $82-$350; and for all rural high schools considered in this study, $82-$485. The ranges are indicative of the wide variability in per-pupil costs. The cost per-pupil enrolled is almost six times as expensive in the most expensive rural high school as in the least. Furthermore, the least expensive rural high school in terms of per-pupil costs is less than one-half the median cost per-pupil enrolled for all rural high schools considered. Likewise, the most expensive rural high school is about two and one-half times as expensive as the median per-pupil cost of all the rural high schools.

Such wide variations in expenditures are indefensible. Undoubtedly, the rural high schools which spend far below the median cost per-pupil enrolled do not have a desirable educational set-up or they are unusually favorably situated. If these schools do not have a desirable educational set-up, it

is the duty of the state to readjust this situation, in the interests of educational opportunity. If, on the other hand, they are extremely favorably situated, these districts should aid the less fortunate. A state program of equalization is necessary to adjust the situation.

The other extreme, those schools which spend far more than the median are deserving of consideration. In some instances, the educational set-up must be distinctly inferior

TABLE XXII

Distribution of Small Rural High Schools in Groups I, II and III According to Cost Per-Pupil Enrolled (1930-1931)

Cost	Group I	Group II	Group III	Number of Schools
$475-$499		1		1
450- 474				
425- 449				
400- 424				
375- 399		3		3
350- 374		1		1
325- 349			1	1
300- 324	1			1
275- 299		2		2
250- 274	3	2		5
225-249	4	3	3	10
200- 224	1	11	2	14
175- 199	5	14	4	23
150- 174	7	10	1	18
125- 149	5	8	4	17
100- 124		2		2
75- 99		1	1	2
Number of Schools	26	58	16	100
Median	$180	$189	$187.50	$187
Range	$126-$303	$89-$485	$82-$350	$82-$485

for such an enormous expenditure. If, on the other hand, in some isolated instance, such expenditure is found to be necessary, the state should assume some responsibility for the expenditure of money beyond a desirable maximum.

The mean cost per-pupil enrolled is $198.75 ± 4.44 and the S D is $65.80 ± 4.653. An optimum rural high school in terms of this criterion is one in which the per-pupil cost ranges from $132. 95 to $264.55. All rural high schools whose per-pupil cost is less than $132.95 or greater than $264.55 are non-optimum in terms of this criterion.

TABLE XXIII

Number and Per Cent of Optimum and Non-Optimum Rural High Schools in Groups I, II, and III According to the Criterion of Cost Per-Pupil Enrolled

	Optimum		Non-Optimum			
	From -1.00 S D to +1.00 S D		Greater than +1.00 S D		Greater than -1.00 S D	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Group I	22	84.62	2	7.69	2	7.69
Group II	46	79.31	8	13.79	4	6.90
Group III	14	87.50	1	6.25	1	6.25
Total	82	82.00	11	11.00	7	7.00

Table XXIII shows that approximately the same per cent of rural high schools in each group meet the criterion of optimum in terms of per-pupil costs. These facts indicate that it is possible to organize a rural high school in such a manner that the cost will not be burdensome or so low as to result in an inadequately supported rural high school.

Table XXIII shows that 2 rural high schools or 7.69 per cent of Group I, 8 rural high schools or 13.79 per cent of Group II, 1 rural high school or 6.25 per cent of Group III and that 11 of the rural high schools are too expensive when compared with the criterion. In a similar manner, 2 rural high schools or 7.69 per cent of Group I, 4 rural high schools

or 6.9 per cent of Group II, 1 rural high school or 6.25 per cent of Group III, and that 7 rural high schools or 7 per cent of all rural high schools spend less than the minimum amount for an optimum rural high school. On the basis of this criterion, 18 rural high schools would be eliminated or reorganized in some manner.

F. Related Data (Tax Levy)

Introduction

The legislature of the state of Kansas has passed a number of laws fixing the maximum tax levy which can be made by a rural high-school board for the support of a rural high school. It has been the intention of the legislature to prevent the rural high schools from becoming too great a burden upon the community. Considered from this standpoint, such legislation is desirable. However, such legislation is highly undesirable unless some means of equalization is used in connection with it. If a rural high-school district has a high valuation, other things being equal, the tax rate is low. If a rural high-school district has a low valuation, other things being equal, the tax rate is high. In other words, the ratio between tax rate and valuation is an inverse one. Since this is true, such legislation should be supplemented by a state program of equalization to have enabled the districts with low valuation to have given more adequate financial support to their schools.

Legal Limitations on Tax Levy for Township and Rural High Schools

Township High Schools

In 1911, the state legislature authorized the legal electors of any township in which there is no town or city.... to establish, locate and maintain a high school in each such township. (11)

By this law, the levy for taxes could not exceed four mills on the dollar of valuation on all taxable property in the township. According to this law, the money so raised was to be used to pay teachers and incidental expenses of the township high schools. (12) In 1917, the township high schools which had been organized under the law of 1911 were brought under the control of the rural high school law by legislative enactment. (13)

Rural High Schools

In 1915, the legislature passed an act which provided for the establishment of rural high schools. By this act, the levy was not to exceed four mills on the dollar of valuation on all taxable property located within the rural high-school district. The money, so raised was to be used to pay the salary of teachers, to pay debts and incidental expenses of the rural high school. (14)

In 1920, the state legislature passed an act which amended the rural high school law of 1915. By this act, the

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11. Laws of Kansas, 1911, Chapter 262, Section 1.
12. Laws of Kansas, 1911, Chapter 262, Section 6.
13. Laws of Kansas, 1917, Chapter 284, Section 10.
14. Laws of Kansas, 1915, Chapter 311, Section 5.

tax levy could not exceed six mills on the dollar of valuation on all property within arural high-school district. (15) In 1925, the legislature fixed the tax levy not to exceed six mills on the dollar of valuation on the taxable property within a rural high-school district. However, the board might levy not to exceed eight mills if the rural high school

is in a county or counties having a population of less than eight thousand each. (16)

The minimum tax rate was fixed at six mills by the legislature in 1929 (17) with no special provision for counties with small population. In 1931, an act was passed which provided that six mills was the maximum levy which could be made under ordinary conditions. Provision was made for the extension of the levy under certain conditions. These conditions are:

if in the opinion of boards of joint rural high-school districts situated in counties having a population not to exceed 11,750 and not less than 7,500, and not less than a valuation of $14,000,000 nor more than $20,000,000 as shown by the government census of 1930 and state taxable valuation of year 1930, the amount of taxes so limited by this act shall be insufficient for the needs of the district, then the question of an increased levy shall be determined in the same manner as by law provided for school districts of section 79-1937 of Revised Statutes for 1923. (18)

Source of Data

The data relative to tax rate for general purposes and for bonded indebtedness and interest were secured by means

15. Laws of Kansas, 1920, Chapter 52, Section 7.
16. Laws of Kansas, 1925, Chapter 237, Section 1.
17. Laws of Kansas, 1929, Chapter 237, Section 1.
18. Laws of Kansas, 1931, Chapter 267, Section 1.

of a questionnaire. It was sent to county clerks of the respective counties. #

Presentation and Interpretation of Data

Table XXIV shows the mill levy for general purposes in 100 rural high-school districts. The median mill levy for Groups I, II and III is practically the same. Only 1 rural high school extended the levy beyond the 6 mill levy as fixed by the law of 1931. It was necessary for 8 rural high schools to levy the maximum permitted by the law of 1931. On the other hand, 1 rural high-school district in Group I levied only 0.5 mills while 3 rural high-school districts in Group II and 1 in Group III made no levy.

Undoubtedly, some of this variation in tax rate is due to the variation in valuation between the various rural high-school districts. Some of it is due to the type of educational program which is provided, number of teachers, salaries of teachers, etc. Finally, some of it is due to unsound budgetary procedure. Failure to adjust the tax rate so that the income will approximately meet the expenditures, results in either a deficit or surplus. In some instances, the deficit has been so great that the levy must be high to care for it. In others, the surplus has been so great that a small levy or no levy is necessary to run the school for a year. Either procedure is to be condemned in terms of desirable budgetary procedure.

See Appendix C for copy of questionnaire and letter which accompanied the request.

TABLE XXIV

Levy in Mills for General Purposes in Rural High-School Districts in Groups I, II and II for the Year 1931-1932

Levy	Group I	Group II	Group III	Number of Schools
7.0-7.9		1		1
6.0-6.9	3	3	2	8
5.0-5.9	4	7	2	13
4.0-4.9	5	18	4	27
3.0-3.9	7	13	3	23
2.0-2.9	5	6	4	15
1.0-1.9	1	7		8
0.0-0.9	1	3	1	5
Number of Schools	26	58	16	100
Median	3.857	4.00	4.00	3.96
Range	0.5-6.0	0.0-7.0	0.0-6.0	0.0-7.0

Table XXV shows the tax rate necessary to meet the payments on bonded indebtedness and interest charges. Here, as elsewhere, considerable variation may be observed. The range is from 0.0 to 4.0. While only 1 rural high-school district levies 4.0 mills, it should be noted that 18 make levies of 2 mills or more. Nine rural high school districts in Group I, 17 in Group II and 9 in Group III make no levies for bonded indebtedness or interest. In other words, 35 rural high-school districts have no bonded indebtedness. Such conditions as these determine to a large extent the tax rate for general purposes. It is evident that the burden of the rural high schools upon the people will be noticeably decreased when these expenditures are no longer necessary.

The levy which is made for bonded indebtedness is not included in the maximum fixed in the various rural high school laws. The Supreme Court of Kansas affirmed the decision of the

lower court that levies for bonded indebtedness are not included in the maximum set by the various rural high-school laws. The decision was based on the rural high-school law of 1920 but it is applicable to the more recent ones as well. Since the rural high-school law of 1920 did not specifically include bonded indebtedness, the Supreme Court of Kansas held that the levy was to be made by the county commissioners of each county in accordance with the law of 1879. (19)

TABLE XXV

Levy in Mills for Bonded Indebtedness and Interest in Rural High-School Districts in Groups I, II and III for the Year 1931-1932.

Levy	Group I	Group II	Group III	Number of Schools
4.0-4.49		1		1
3.5-3.99			2	2
3.0-3.49		1	1	2
2.5-2.99	2	3	1	6
2.0-2.49	2	5		7
1.5-1.99	5	7		12
1.0-1.49	6	15	2	23
0.5-0.99	1	3	1	5
0.0-0.49	10	23	9	42
Number of Schools	26	58	16	100
Median	1.17	1.1	0.44	1.065
Range	0.0-2.8	0.0-4.0	0.0-3.7	0.0-4.0

Table XXVI shows the mill levy for all purposes in the 100 rural high-school districts in Groups I, II and III. There is much variation in mill levy between the various rural high-school districts although the median and range for the three groups is approximately the same. It is neces-

19. Missouri, Kansas and Texas Railroad Company v. Hays, 119 Kansas 249-252.

sary for one rural high-school district to make a levy of 11 mills while another did not make any levy. The situation in the latter rural high-school district can be explained as being due to faulty budgetary procedure.

TABLE XXVI

Levy in Mills for All Purposes in Rural High-School Districts in Groups I, II and III for the Year 1931-1932

Levy	Group I	Group II	Group III	Number of Schools
11-11.99		1		1
10-10.99				
9-9 .99		1	1	2
8- 8.99	2	1		3
7- 7.99	3	1	1	5
6- 6.99	4	10	3	17
5- 5.99	4	9	4	17
4- 4.99	5	17	1	23
3- 3.99	3	8	3	14
2- 2.99	4	6	2	12
1- 1.99		2		2
0- 0.99	1	2	1	4
Number of Schools	26	58	16	100
Median	5.00	4.65	5.25	4.78
Range	0.5-8.27	0.07-11.00	0.0-9.59	0.0--11.00

Table XXVII shows the levy in mills which would be necessary to make in each of the 100 rural high-school districts to raise the average per-pupil cost. ($198.75) The assumption made in the construction of this table is that the income would be derived entirely from taxation within the district. While this assumption is not entirely true, it is approximately the

case. If this standard be adopted, it shows the inequality of rural high school districts to meet the standard. Furthermore, it emphasizes the need for a program of equalization. It also shows that the tax rate is inversely related to valuation if the cost is kept constant.

TABLE XXVII

Levy in Mills Necessary to Raise the Average Cost Per-Pupil Enrolled ($198.75) Based on the Assessed Valuation (1931-1932) Per-Pupil-Enrolled for Rural High Schools in Groups I, II and III.

Levy	Group I	Group II	Group III	Number of Schools
19-19.9	1			1
18-18.9				
17-17.9	1			1
16-16.9				
15-15.9				
14-14.9				
13-13.9				
12-12.9	1			1
11-11.9	1	1		2
10-10.9	1	1	1	3
9- 9.9	1	3	1	5
8- 8.9	1	6		7
7- 7.9	5	3	2	10
6- 6.9	4	9	1	14
5- 5.9	3	11	5	19
4- 4.9	4	9	4	17
3- 3.9	2	5	2	9
2- 2.9	1	10		11
Number of Schools	26	58	16	100
Median	6.75	5.45	5.4	5.68

Summary

Section D.

1. The ability of the people of a rural high school district to support a rural high school is dependent largely upon the assessed valuation of real property and to a lesser extent upon personal property.

2. The assumptions underlying the property tax are invalid. Considerable personal property escapes taxation in Kansas thus placing the burden on real property.

3. The unit of comparison is assessed valuation per-pupil enrolled.

4. The median total assessed valuation for the 100 rural high-school districts is 2.167 millions of dollars and the range from 0.67 to 6.73 millions of dollars.

5. The median assessed valuation per-pupil enrolled is 35.67 thousand of dollars and the range is from 10.3 to 99.0 thousand of dollars. This is evidence of the gross inequalities which exist in the rural high-school districts in regard to assessed valuation per-pupil enrolled. To remedy this a program of equalization is recommended.

6. The mean assessed valuation per-pupil enrolled is $39,400 for the 100 rural high-school districts included in this study and the S D is $17,700.

7. An optimum rural high school for an average Kansas community in terms of assessed valuation is one in which the assessed valuation per-pupil enrolled ranges from $21,700 to $57,100, inclusive.

Section E.

1. The small rural high school is an expensive institution in terms of cost per-pupil enrolled.

2. No limitation has been placed upon the amount of money which may be expended as long as it does not necessitate a mill levy greater than that permitted by law.

3. The unit of comparison which is used in this study is the cost per-pupil enrolled.

4. The median cost per-pupil enrolled is $187 and the range is from $82 to $485 per-pupil enrolled.

5. The mean cost per-pupil enrolled is $198.75 and the S D is $65.80.

6. An optimum rural high school for average Kansas communities in terms of cost per-pupil enrolled varies from $132.95 to $264.55, inclusive.

Section F.

1. Frequent regulation of the tax rate for rural high-school districts has been made by the state legislature.

2. While the intent of the legislature was to limit the burden which the existence of a rural high school placed upon a community, such legislation is unwise without supplementary legislation.

3. The maximum tax levy for general purposes in the early history of the rural high school was 4 mills. More recently it has been 6 mills with provision for extension under certain conditions.

4. The median tax rate for general purposes is 3.96 for the rural high schools included in this study and the range is from 0.0 to 7.0 mills, inclusive.

5. The median tax rate for bonded indebtedness and interest is 1.065. The range is from 0.0 to 4.0 mills, inclusive.

6. The levy made for bonded indebtedness is not included in the maximum levy provided by legislative enactment.

7. The median tax rate for all purposes is 4.78 and the range varies from 0.0 to 11.00 mills, inclusive.

8. The tax rate is inversely proportional to valuation if the cost is kept constant. This fact emphasizes the need for an adequate system of equalization.

CHAPTER V

THE CRITERIA ESTABLISHED.

Introduction

In accordance with the original assumption, an optimum rural high school for the average Kansas community is one in which the teaching load, enrollment, area, assessed valuation per-pupil enrolled and cost per-pupil enrolled do not vary from the mean greater than plus or minus one standard deviation. Rural high schools which vary from the mean greater than plus or minus one standard deviation are non-optimum for the average Kansas community.

Criteria for an Optimum Rural High School for an Average Kansas Community

The criteria which are established in this study for an optimum rural high school for an average Kansas community are:

1. An optimum rural high school in terms of teaching load is one in which the teacher-pupil ratio ranges from 1-11 to 1-17, inclusive.

2. An optimum rural high school in terms of enrollment is one in which the enrollment ranges from 40 to 89 pupils, inclusive.

3. An optimum rural high school in terms of area in square miles is one in which the area ranges from 29.8 to 115.6 square miles, inclusive.

4. An optimum rural high school in terms of assessed valuation per-pupil enrolled ranges from $21,700 to $57,100 assessed valuation per-pupil enrolled, inclusive.

5. An optimum rural high school in terms of cost per-pupil enrolled is one in which the cost per-pupil enrolled ranges from $132.95 to $264.55, inclusive.

TABLE XXVIII

Criteria for an Optimum Rural High School for an Average Kansas Community

	Minimum	Maximum
Teaching load	1-11	1-17
Enrollment	40	89
Area in square miles	29.8	115.6
Assessed Valuation per-pupil enrolled	$21,700.00	$57,100.00
Cost per-pupil enrolled	$132.95	$264.55

Table XXVIII shows in tabular form the criteria which are established for an optimum rural high school in an average Kansas community.

The application of these criteria to all Kansas rural high schools should be made with a clear understanding of the following facts:

1. They have been formulated in terms of existing practices. No assumption is made that existing practices are an ideal basis for the establishment of criteria. However, the assumption is made that existing practices are indicative of desirable procedures as they actually have been worked out in representative communities.

2. Wide variations in local conditions are such as to make unwarrantable the assumption that they can be applied to all communities irrespective of local conditions. The assumption is made that local conditions are not so variable as to prevent an intelligent application of these criteria.

3. Furthermore, the assumption is made that it is the duty of the state to provide an equitable program of education. In so doing, it may be necessary, that eliminations, reorganizations and equalizations be made by the state.

TABLE XXIX

Number and Per Cent of Rural High Schools in Groups I, II and III Meeting All Criteria for an Optimum Rural High School

	Number	Per Cent
Group I	7	26.90
Group II	28	48.28
Group III	4	25.00
Total	39	39.00

Table XXIX shows the number and per cent of rural high schools of each group meeting all the criteria established. Seven rural high schools or 26.9 per cent in Group I, 28 or 48.28 per cent in Group II and 4 or 25 per cent in Group III meet all the criteria established. While the greatest per cent is in Group II, it is patent from the facts presented that it is possible for schools of varying sizes to meet these criteria.

The Non-Optimum Rural High School

Introduction

In accordance with the original assumption, rural high schools which vary from the mean greater than plus or minus one standard deviation on one or more of the bases used are non-optimal for average Kansas communities.

Presentation and Interpretation of Data

Table XXX shows that 19 rural high schools or 73.1 per

cent in Group I, 30 or 51.72 per cent in Group II and 12 or 75 per cent in Group III do not meet one or more of the criteria established. Only 39 rural high schools out of 100 meet the criteria. Sixty-one of the rural high schools do not meet the criteria.

TABLE XXX

Number and Per Cent of Rural High Schools in Groups I, II and III Which Do Not Meet One or More of the Criteria Established

	Number	Per Cent
Group I	19	73.10
Group II	30	51.72
Group III	12	75.00
Total	61	61.00

Table XXXI shows the number of optimum and non-optimum rural high schools on each criterion. The rural high schools which do not meet the criteria are separated into two groups as in previous tables. The data which are presented in Table XXXI are a summary of the data in Tables XIII, XV, XVII, XX and XXIII.

TABLE XXXI

Number of Optimum and Non-Optimum Rural High Schools on the Five Bases

	Optimum	Non-optimum	
	From -1.00 S D to + 1.00 S D	Greater than +1.00 S D	Greater than -1.00 S D
Teaching load	72	8	20
Enrollment	67	16	17
Area	84	10	6
Valuation per-pupil enrolled	75	14	11
Cost per-pupil enrolled	82	11	7

It is an undeniable fact that conditions vary in the different sections of the state. It is equally evident that

there are variations between communities in the same section of the state and even adjoining communities. The failure of some of these rural high schools to meet these criteria may be due primarily to community variations.

In order to understand these variable conditions, it is essential that a careful survey of each community be made in order to discover what they are. Probably, there will be a multiplicity of causes for the variations in the community and the school itself which must be considered. For purposes of convenience these variations may be classified as follows: (1) controllable and (2) non-controllable. Under the first heading, are such variations as those that exist in the educational set-up of the particular community. Community pride and animosities, while difficult to control, may be controlled through a program of education. Among the non-controllable variations may be mentioned the geographic conditions which often results in wide variations in the concentration of wealth and of peoples. These and other variations make it imperative that the state should be the director of the educational system if an equitable development is to be made.

Table XXXII shows the types of non-optimum rural high schools. Undoubtedly, many of the variations indicated might have been prevented if the state had prepared a constructive educational program in advance. Such variations may react favorably in one community but may be a burden in another community. It is generally conceded that the state is the most desirable educational unit. If this premise be accepted, it

TABLE XXXII

Types of Non-Optimum Rural High Schools in Groups I, II and III

Type # a.	b.	c.	d.	e.	Group I	Group II	Group III	Number of Schools
+	0	0	0	0		2		2
0	+	0	0	0	4			4
0	0	+	0	0	1	3		4
0	0	0	+	0	1			1
0	0	0	0	+	1			1
+	+	0	0	0	2	1		3
0	+	+	0	0	2			2
0	0	+	+	0		1		1
0	0	0	+	+	1	1		2
+	0	0	0	-			1	1
0	+	-	0	0	1			1
0	+	0	-	0	4			4
0	+	0	0	0	1			1
-	0	+	0	0		1		1
-	0	0	0	+		2		2
-	-	0	0	0			1	1
-	-	0	+	0		3		3
-	-	0	0	+				1
-	0	0	+	+		2		2
+	+	0	-	-	1	1		2
0	0	+	+	-		1		1
-	-	0	+	+		3		3
-	0	0	0	0		1		1
0	-	0	0	0			3	3
0	0	-	0	0		1		1
0	0	0	-	0		3		3
0	0	0	0	-		1		1
-	-	0	0	0		1	3	4
0	-	-	0	0			1	1
0	0	-	-	0			1	1
0	0	0	-	-		1		1
-	0	-	0	0		1		1
-	-	-	0	0			1	1
Number of Schools					19	30	12	61

+ = greater than + 1 S D, 0 = between ± 1 S D, - = greater than - 1 S D.

a. Teaching load.
b. Enrollment.
c. Area in square miles.
d. Assessed valuation per-pupil enrolled.
e. Cost per-pupil enrolled.

is necessary that the state should control and regulate the educational development so that one community will not be unduly benefited at the expense of a less fortunate community. Here, as elsewhere, it is imperative that the local group be subordinated to the interests of the larger group. In this case, the interests of all the pupils of the state must be considered.

Comparative Data

Introduction

If these criteria are to be applied to the rural high schools of Kansas, it is necessary to know the relation which exists between the various criteria. Each of the factors considered derives its properties from the total educational set-up. All the factors are interrelated in a systematic fashion. If one of the factors be changed, the whole is changed. Therefore, a knowledge of the relation which exists between the factors is essential if application is to be made.

Presentation and Interpretation of Data

Table XXXIII shows the relative position of the 100 rural high schools in regard to teaching load and enrollment. In 5 of the rural high schools, the teaching load and enrollments are greater than optimal. In 3 of the rural high schools, the teaching load is greater than optimal while the enrollment of the rural high is optimal. In 11 of the rural high schools, teaching load is optimal while the enrollment is greater than optimal. In 57 of the rural high schools, both teaching load and enrollment are optimal. In 4 of the rural high schools,

the teaching load is optimal but the enrollment is less than optimal. In 7 rural high schools, the teaching load is less than optimal while the enrollment is optimal. In 13 rural high schools, the teaching load and enrollment are less than optimal. Seventy-five of the rural high schools are in the same relative position in regard to teaching load and enrollment.

TABLE XXXIII

Distribution of 100 Rural High Schools According to Teaching Load and Enrollment

Teaching Load	Enrollment		
	Greater than +1.00 S D	From +1.00 S D to -1.00 S D	Greater than -1.00 S D
	Number	Number	Number
Greater than +1.00 S D	5	3	
From +1.00 S D to -1.00 S D	11	57	4
Greater than -1.00 S D		7	13

Table XXXIV shows the relative position of the 100 rural high schools in regard to teaching load and area in square miles. In 8 of the rural high schools, the teaching load is greater than optimal while the area in square miles is optimal. In 7 of the rural high schools, the teaching load is optimal while the area in square miles is greater than optimal. In 60 of the rural high schools, the teaching load and area in square miles are both optimal. In 5 of the rural high schools, the teaching load is optimal while the area in square miles is less than optimal. In 3 of the rural high schools, the teaching load is less than optimal while the area in square miles is greater than optimal. In 16 of the rural high schools,

the teaching load is less than optimal while the area in square miles is optimal. In 1 rural high school, the teaching load and area in square miles are both less than optimal. Seventy-five rural high schools have the same relative position on both teaching load and area in square miles.

TABLE XXXIV

Distribution of 100 Rural High Schools According to Teaching Load and Area in Square Miles

Teaching Load	Area in Square Miles		
	Greater than +1.00 S D	From +1.00 S D to -1.00 S D	Greater than -1.00 S D
	Number	Number	Number
Greater than +1.00 S D		8	
From +1.00 S D to -1.00 S D	7	60	5
Greater than -1.00 S D	3	16	1

Table XXXV shows the relative position of 100 rural high schools in regard to teaching load and assessed valuation per-pupil enrolled. In 6 of the rural high schools, the teaching load is greater than optimal while the assessed valuation per-pupil enrolled is optimal. In 2 of the rural high schools, the teaching load is greater than optimal while the assessed valuation per-pupil enrolled is less than optimal. In 6 of the rural high schools, the teaching load is optimal while the assessed valuation per-pupil enrolled is greater than optimal. Fifty-seven rural high schools are optimal for both teaching load and assessed valuation per-pupil enrolled. In 9 of the rural high schools, the teaching load is optimal while the assessed valuation per-pupil enrolled is less than optimal. In 8 of the rural high schools, the teaching load is less than

optimal while the assessed valuation per-pupil enrolled is greater than optimal. In 12 of the rural high schools, the teaching load is less than optimal while the assessed valuation per-pupil enrolled is optimal. Only 57 of the rural high schools have the same relative position in regard to teaching load and assessed valuation per-pupil enrolled.

TABLE XXXV

Distribution of 100 Rural High Schools According to Teaching Load and Assessed Valuation Per-Pupil Enrolled

Teaching Load	Assessed Valuation Per-Pupil Enrolled		
	Greater than +1.00 S D	From +1.00 S D to -1.00 S D	Greater than -1.00 S D
	Number	Number	Number
Greater than +1.00 S D		6	2
From +1.00 S D to -1.00 S D	6	57	9
Greater than -1.00 S D	8	12	

Table XXXVI shows the relative position of 100 rural high schools in regard to teaching load and cost per-pupil enrolled. In 1 rural high school, the teaching load and cost per-pupil enrolled are greater than optimal. In 5 rural high schools, the teaching load is greater than optimal and the cost per-pupil enrolled is optimal. In 2 of the rural high schools, the teaching load is greater than optimal while the cost per-pupil enrolled is less than optimal. In 3 of the rural high schools, the teaching load is optimal and the cost per-pupil enrolled is greater than optimal. Sixty-five rural high schools are optimal for both teaching load and cost per-pupil enrolled. In 4 rural high schools, the teaching load is optimal and the cost

per-pupil enrolled is less than optimal. In 7 rural high schools, the teaching load is less than optimal while the cost per-pupil enrolled is greater than optimal. In 12 of the rural high schools, the teaching load is less than optimal while the cost per-pupil enrolled is optimal. In 1 rural high school, the teaching load and cost per-pupil enrolled are both less than optimal. Sixty-seven rural high schools have the same relative position.

TABLE XXXVI

Distribution of 100 Rural High Schools According to Teaching Load and Cost Per-Pupil Enrolled

Teaching Load	Cost Per-Pupil Enrolled		
	Greater than +1.00 S D	From +1.00 S D to -1.00 S D	Greater than -1.00 S D
	Number	Number	Number
Greater than +1.00 S D	1	5	2
From +1.00 S D to -1.00 S D	3	65	4
Greater than -1.00 S D	7	12	1

Table XXXVII shows the relative position of 100 rural high schools in regard to enrollment and area in square miles. In 2 rural high schools, the enrollment and area are both greater than optimal. In 13 rural high schools, the enrollment is greater than optimal and the area is optimal. In 1 rural high school, the enrollment is greater than optimal and the area is less than optimal. In 7 rural high schools, the enrollment is optimal and the area is greater than optimal. In 57 rural high schools both enrollment and area are optimal. In 3 rural high schools, the enrollment is optimal and the area less than optimal. In 1 rural high school, the enrollment is less

than optimal and area is greater than optimal. In 14 rural high schools, the enrollment is less than optimal and the area is optimal. In 2 rural high schools, the enrollment and area are both less than optimal. Sixty-one rural high schools have the same relative position on enrollment and area.

TABLE XXXVII

Distribution of 100 Rural High Schools According to Enrollment and Area in Square Miles

Enrollment	Area in Square Miles		
	Greater than +1.00 S D	From +1.00 S D to -1.00 S D	Greater than -1.00 S D
	Number	Number	Number
Greater than +1.00 S D	2	13	1
From +1.00 S D to -1.00 S D	7	57	3
Greater than -1.00 S D	1	14	2

Table XXXVIII shows the relative position of 100 rural high schools in regard to enrollment and assessed valuation per-pupil enrolled. In 11 rural high schools, the enrollment is greater than optimal and the valuation is optimal. In 5 rural high schools, the enrollment is greater than optimal and the valuation is less than optimal. In 8 rural high schools, the enrollment is optimal and the valuation is greater than optimal. Fifty-three rural high schools are optimal for both enrollment and valuation. In 6 rural high schools, the enrollment is optimal and the area is less than optimal. In 6 rural high schools, the enrollment is less than optimal and the valuation greater than optimal. In 11 rural high schools, the enrollment is less than optimal and the valuation is optimal. Fifty-three rural

high schools have the same relative position on both.

TABLE XXXVIII

Distribution of 100 Rural High Schools According to Enrollment and Assessed Valuation Per-Pupil Enrolled

Enrollment	Assessed Valuation Per-Pupil Enrolled		
	Greater than +1.00 S D	From +1.00 S D to -1.00 S D	Greater than -1.00 S D
	Number	Number	Number
Greater than +1.00 S D		11	5
From +1.00 S D to -1.00 S D	8	53	6
Greater than -1.00 S D	6	11	

Table XXXIX shows the relative position of 100 rural high schools in regard to enrollment and cost per-pupil enrolled. In 14 rural high schools, the enrollment is greater than optimal and the cost is optimal. In 2 rural high schools, the enrollment is greater than optimal and the cost is less than optimal. In 7 rural high schools, the enrollment is optimal and the cost is greater than optimal. Fifty-five rural high schools are optimal for both enrollment and cost. In 5 rural high schools the enrollment is optimal and the cost is less than optimal. In 4 rural high schools, the enrollment is less than optimal and the cost is greater than optimal. In 13 rural high schools, the enrollment is less than optimal and the cost is optimal. Fifty-five rural high schools have the same relative position on both.

TABLE XXXIX

Distribution of 100 Rural High Schools According to Enrollment and Cost Per-Pupil Enrolled

Enrollment	Cost Per-Pupil Enrolled		
	Greater than +1.00 S D	From +1.00 S D to -1.00 S D	Greater than -1.00 S D
	Number	Number	Number
Greater than +1.00 S D		14	2
From +1.00 S D to -1.00 S D	7	55	5
Greater than -1.00 S D	4	13	

Table XXXX shows the relative position of 100 rural high schools in regard to area in square miles and assessed valuation per-pupil enrolled. In 2 rural high schools, both area and valuation are greater than optimal. In 8 rural high schools, the area is greater than optimal and the valuation is optimal. In 12 rural high schools, the area is optimal and the valuation is greater than optimal. Sixty-two rural high schools are optimal for both area and valuation. In 10 rural high schools, the area is optimal and the valuation is less than optimal. In

TABLE XXXX

Distribution of 100 Rural High Schools According to Area in Square Miles and Assessed Valuation Per-Pupil Enrolled

Area in Square Miles	Assessed Valuation Per-Pupil Enrolled		
	Greater than +1.00 S D	From +1.00 S D to -1.00 S D	Greater than -1.00 S D
	Number	Number	Number
Greater than +1.00 S D	2	8	
From +1.00 S D to -1.00 S D	12	68	10
Greater than -1.00 S D		5	1

5 rural high schools, the area is less than optimal and the valuation is optimal. In 1 rural high school both area and valuation are less than optimal. Sixty-five rural high schools have the same relative position on both.

TABLE XXXXI

Distribution of 100 Rural High Schools According to Area in Square Miles and Cost Per-Pupil Enrolled

Area in Square Miles	Cost Per-Pupil Enrolled		
	Greater than +1.00 S D	From +1.00 S D to -1.00 S D	Greater than -1.00 S D
	Number	Number	Number
Greater than +1.00 S D		9	1
From +1.00 S D to -1.00 S D	11	67	6
Greater than -1.00 S D		6	

Table XXXXI shows the relative position of 100 rural high schools with reference to area in square miles and cost per-pupil enrolled. In 9 rural high schools, the area is greater than optimal and the cost is optimal. In 1 rural high school, the area is greater than optimal and the cost is less than optimal. In 11 rural high schools, the area is optimal and the cost is greater than optimal. Sixty-seven rural high schools are optimal on both. In 6 rural high schools, the area is optimal and the cost is less than optimal. In 6 rural high schools, the area is less than optimal and the cost is optimal. Sixty-seven rural high schools have the same relative position on both.

TABLE XXXXII

Distribution of 100 Rural High Schools According to Assessed Valuation Per-Pupil Enrolled and Cost Per-Pupil Enrolled

Assessed Valuation Per-Pupil Enrolled	Cost Per-Pupil Enrolled		
	Greater than +1.00 S D	From +1.00 S D to -1.00 S D	Greater than -1.00 S D
	Number	Number	Number
Greater than +1.00 S D	7	6	1
From +1.00 S D to -1.00 S D	4	68	3
Greater than -1.00 S D		8	3

Table XXXXII shows the relative position of 100 rural high schools with reference to assessed valuation per-pupil enrolled and cost per-pupil enrolled. In 7 rural high schools, both valuation and cost are high. In 6 rural high schools, the valuation is high and the cost is optimal. In 1 rural high school, the valuation is above optimal and the cost is low. In 4 rural high schools, the valuation is optimal and the cost is greater than optimal. Sixty-eight rural high schools are optimal for both. In 3 rural high schools, the valuation is optimal and the cost is less than optimal. In 8 rural high schools, the valuation is less than optimal and the cost is optimal. In 3 rural high schools, the valuation and cost are both less than optimal. Seventy-eight rural high schools have the same relative position on both valuation and cost.

Summary

1. The optimum rural high school for an average Kansas community is one in which the range for (a) teaching load is from 1-11 to 1-17; (b) enrollment is from 40 to 89; (c) area

in square miles is from 29.8 to 115.6; (d) assessed valuation per-pupil enrolled is from $21,700.00 to $57,100.00; and (e) cost per-pupil enrolled is from $132.95 to $264.55.

2. Seventy-two of the 100 rural high schools meet the criteria for teaching load; 67 for enrollment; 84 for area in square miles; 75 for valuation per-pupil enrolled; and 82 for cost per-pupil enrolled. Thirty-nine meet all criteria. Sixty-one fail to meet one or more criteria.

3. The cause for the wide variations which are reported is due to community variations. Community variations may be of various types.

4. Because of these variations, it should be the duty of the state to prepare a definite program of equalization.

5. The factors involved derive their properties from the total educational set-up. They are interrelated in a systematic fashion so that a change in one, changes the whole.

6. The same relative position is held by a majority of the rural high schools regardless of what factors or combination of factors is considered.

CHAPTER VI

THE APPLICATION OF THE CRITERIA TO THE NON-OPTIMUM RURAL HIGH SCHOOLS.

Introduction

The non-optimum rural high school, as defined in this study, is one in which the deviation from the mean is greator than plus or minus one standard deviation. This deviation may be in terms of one or more of the criteria. In applying these criteria to the non-optimal rural high school, it is not the intent that the privileges of a high school education be denied to anyone. The aim is to propose certain changes which will make the opportunities more equitable.

An indiscriminate application of criteria may lead to undesirable eliminations or reorganizations. The fundamental premise underlying the application of these criteria is that there must be intelligent guidance and leadership which should come from the state through its officials. Guidance and leadership have been noticeably absent in the development of the rural high school. Systematization results in a subordination of the individual school to the state out of which comes a more equitable condition as far as the individual school is concerned.

The application of these criteria to any school which does not meet them will result in a changed educational set-up. If a rural high school fails to meet a single criterion, to adjust that phase results in changes in regard to other factors as well as the entire plan. A single criterion must

not be considered as something apart but as something related to--this viewpoint will be emphasized in the application of the criteria.

Table XXXII shows 33 combinations of the factors in a non-optimal rural high school. The aim in this chapter is to present the broader problem of application of the criteria to the non-optimal rural high school. To do this, it is essential that the inter-relationships be considered. It is the contention of the writer that it is necessary to have detailed information regarding any rural high school before concrete application can be either practical or intelligible. Since the detailed application of these criteria does not fall within the province of this study, no attempt has been made to apply them to any specific rural high school.

n Teaching Load

The state board of education is empowered by law to prepare a course of study which must be followed by rural high schools. The present course of study for high schools prescribes 6 units out of a total of 15 or 16 for graduation. The 6 units include the following: English, 3 units; social science, 2 units (must include one-half unit of Constitution of the United States; and 1 unit of either a laboratory science or mathematics. If 16 units are required for graduation, the pupil may elect 10 units, subject to the limitation that another major (3 units) and minor (2 units) must be selected. In theory, the student is given a great deal of freedom but in the small rural high schools his opportunities are decidedly limited.

The state board of education has prescribed only a mini-

mum in regard to offerings. The desire of many small rural high schools to expand the curriculum has resulted in undesirable conditions. Expansion of offerings beyond a reasonable minimum for the size of school under consideration will result in an increased teaching load due to the diversity of subjects offered or an increased cost as a result of the employment of additional teachers. If no additional teachers are employed, the diversity of offerings results in the teaching of subjects by inadequately prepared teachers. This results in an increased teaching load as well as an inferior quality of instruction. However, if a minimum program were provided, teachers would be able to make definite preparation for the usual combinations found in rural high schools. This would reduce the teaching load and improve instruction.

If the expansion of offerings be made, enrollment remaining approximately the same, the cost per-pupil enrolled is increased. Thus, it is apparent that expansion of offerings may lead to undesirable results in the classroom as well as financially.

In Tables XXXIII, XXXIV, XXXV and XXXVI, the data are indicative of the extent to which the 100 rural high schools assume the same relative position with reference to teaching load and the other factors. Eighty-five rural high schools have the same relative position with reference to teaching load and enrollment; 61, with reference to teaching load and area in square miles; 57, with reference to teaching load and assessed valuation per pupil enrolled; and 67, with reference to

teaching load and cost per-pupil enrolled. The factors are related to each other in a systematic fashion in a given community but the relationship is not the same in all communities. Hence, we do not have all of the rural high schools in the same relative position in regard to any two factors.

Enrollment

The rural high schools included in this study have small enrollments. The minimum enrollment is 19, the maximum enrollment is 149, and the average enrollment is 64.5. The optimal enrollment as defined in this study ranges from 40 to 89.

The number of pupils enrolled is indicative of the degree to which the course of study may be expanded without making the cost per-pupil enrolled an exorbitant amount. The high school with only 19 pupils enrolled should limit its offerings to 16 units. These 16 units must be taught by 2 teachers and the courses alternated if the cost per-pupil enrolled is to be kept at a reasonable figure. To do so, the teachers will in all probability be teaching subjects for which they have little training. In actuality, there are three teachers employed, the teacher-pupil ratio is 1-6. The cost per-pupil enrolled is $349.68. The total cost is $6644.01. For instructional purposes alone, $4386.47 was spent. There is no bonded indebtedness and no expenditures were made for new equipment. If the rural high school were to reduce the number of teachers to 2, the teaching load would be approximately, 1-10. If this were done, assuming the teacher's salary to be $1200.00, the cost per-pupil enrolled would be $286.53. The average cost per-

pupil enrolled is $198.75 and the median is $187. The optimal expenditure ranges from $132.95 to $264.55. Any minimum program would cost approximately, $100 more per-pupil enrolled than the median cost per-pupil for all schools.

Undoubtedly, the elimination of this rural high school is desirable from an educational viewpoint.

On the other hand, the school with the enrollment of 149 has a teaching load of 1-25 with a cost of $125 per-pupil enrolled. This rural high school can have a more varied program and have the subjects taught by prepared teachers at, approximately, one-third the cost.

Such variations as these are indicative of the need for constructive direction to communities desiring to establish or that have established rural high schools.

The relation between enrollment and cost per-pupil enrolled is an inverse one. Althaus and Twente (1) report the same relationship between current expenditures and per-pupil in average daily attendance.

With small enrollments, the teaching-load in terms of teacher-pupil ratio is necessarily low but in terms of number of subjects, it is necessarily high. In a like manner, small enrollments result in high per-pupil costs and larger enrollments results in lower per-pupil costs. From the standpoint of a single rural high school, such condition may seem to be favor-

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1. Althaus, C. B. and Twente, J. W., The Organization and Financing of Rural High Schools in Kansas, Bulletin of University of Kansas, Lawrence, July1, 1932, Number 13, p. 27.

able but from the standpoint of a rural high school system, the situation is indefensible.

Area in Square Miles

The minimum area of a rural high-school district as fixed by law is 16 square miles. This minimum may have been desirable when it was established but it is too small now. The improvement in roads and in means of transportation have made an enlarged area possible. In 1920, there were only 17 miles of improved highways in the state; in 1922, 565 miles; in 1924, 793 miles; in 1926, 1,378 miles; in 1928, 2,397 miles; and in 1930, approximately, 5,000 miles. (2) Likewise, the number of automobiles and trucks increased from approximately 35,000 in 1913 to approximately 600,000 in 1930. (3) These conditions are sufficient justification for an insistence upon a larger area.

Pupil transportation has received very little consideration in Kansas. It is impossible to say to what extent the rural high schools have provided transportation. Data in regard to transportation of pupils at public expense as reported by the Office of Education show that only 7,300 pupils were transported in Kansas. Twelve states did not report the number transported. Of the 36 states reporting, Kansas ranked thirty-first in regard to this. Three states did not report the total amount spent for transportation. Of the 45 states reporting, Kansas ranked thirty-sixth. (4)

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2. Althaus, C. B. and Twente, J. W., Op. Cit., p. 48.
3. Ibid., p. 47.
4. Covert, Timon, Consolidation of Schools and Transportation of Pupils 1927-28, Circular No. 3, United States Department of the Interior, Office of Education, January, 1930.

If the area be enlarged, the necessity for transportation at public expense is increased. However, Smart (5) has shown that this would be less than the cost of an inefficient school. Seventeen states provide for state aid for pupil transportation. Five provide for state aid for transportation to any school while 12 provide it under specified conditions. In one instance the state pays the entire cost while a few pay less than 1 per cent. State aid for transportation of pupils is considered by some states in their equalization program, e.g. North Carolina. (6) Enlarging the area means larger enrollments and larger enrollments result in lower per-pupil costs as well as a more desirable educational program.

If the state of Kansas would aid in the transportation of pupils, the area could be enlarged. Here again, constructive leadership is needed. The problems of the rural high school cannot be solved without a consideration of the problem of transportation.

The density of population varies greatly from community to community. Likewise, the concentration of wealth varies. The minimum of 29.8 square miles and the maximum of 115.6 square miles as determined in this study offers sufficient range to allow for these variations.

A consideration of enrollments and area must be in relation to the educational set-up of all forms of secondary school

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5. Op. Cit., pp. 3-20.

6. Covert, Timon, State Aid for School Consolidation and Pupil Transportation, United States Department of the Interior, Office of Education, Leaflet No. 3, February, 1931.

organization within the state. Undoubtedly, the annexation of a portion or all of a rural high school district to one or more district high schools is desirable. In some instances, the combining of rural high school districts is essential. In some instances, the rural high school districts might be combined into a single district. In this connection, Althaus and Twente (7) make three important recommendations:

> The legislature should enact a law authorizing the state superintendent of public instruction (1) to employ such expert assistance as is needed to make a detailed, careful study of transportation facilities of all the counties of the state, the high school building space available and the possibilities of disorganizing certain schools; (2) to definitely encourage the patrons of the small unnecessary rural high schools to vote on disorganization or some plan of consolidation; and (3) to assist rural high schools to dispose of their property.

The remedy, which has been proposed by educators for undesirable educational set-ups such as exist in the rural high school, is consolidation. Early in the consolidation movement, its advocates usually emphasized the financial aspects. It was maintained that the consolidation of educational units would result in a considerable reduction in the cost of schools. Undoubtedly, this has been the result in many instances. Where costs have increased, it can be traced to the improved type of schools provided. In more recent years, emphasis has been placed upon the improved educational conditions.

The philosophy which underlies the establishment of the public schools is one of individualism. This has permeated both the elementary and secondary schools. Undoubtedly, the movement to consolidate our rural high schools would meet with

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7. Op. Cit., p. 44.

as much opposition as it has in the attempts to condolidate our elementary schools.

For over thirty years, there has been a movement toward consolidation of one-room rural schools. It has been fostered by state and county superintendents, and by representatives of state teachers colleges and the university. Very little headway has been made because consolidation is optional. The same result may be expected in regard to the rural high school unless power to consolidate is placed in the state department of education and a constructive program established for the reorganization of present conditions.

Valuation Per-Pupil Enrolled

The ability to support a rural high school depends mainly upon the assessed valuation of property within a high-school district. While education is conceived to be a function of the state, the state has done little to justify this conception as it relates to the support of rural high schools. In fact, education in a rural high-school district is in actuality a local function. The money for the support of the rural high school is derived mainly from taxation, the making and the approval of the budget, the tax levy, if it does not exceed the legal limitation, and the expenditure of the money are distinctly local functions. Since it is so practiced, gross inequalities exist.

The poorest rural high-school district has approximately $10,300 assessed valuation per-pupil enrolled while the richest has approximately $99,000. The median is about $35,670. If the poorest district were to establish an educational program

which would cost the average ($198.75), the levy would be between 19 and 20 mills. If the richest district were to do the same, the levy would be between 2 and 3 mills. The levy necessary in the poorest district would be excessive while the richest could easily support the rural high school.

Such conditions result in a poor high school in one district with a high tax rate and a much better high school in another with a low tax rate. If education be conceived as a local function, this condition will always prevail. If education be conceived as a function of the state, it will be necessary to equalize the educational program and the burden to support it. If all the property in the 100 rural high-school districts were taxed equally, it would be possible to provide an educational program of the average type with a levy of 5.68 mills. Such a procedure would equalize both educational program and tax levy. If the people of a rural high-school district wished to maintain an educational program superior to the minimum, it should be permitted to do so subject to legal limitations.

Valuation and the cost of the educational program are closely related. Seventy-eight rural high schools have the same relative position in regard to these two factors. There is a well marked tendency of rural high-school districts with a high valuation to spend more money for education. In a similar manner, a district with low valuation tends to spend less for education.

The minimum valuation per-pupil enrolled, as determined

in this study is $21,700 and the maximum is $57,100. The average is $39,400. In case any new rural high-school districts are organized, the valuation per-pupil enrolled should reach the average. However, in exceptional cases, the minimum might be acceptable. In regard to those rural high schools now in existence, an attempt should be made to eliminate those with a valuation per-pupil enrolled less than the minimum. Those rural high-school districts which exceed the average should aid the less fortunate. When some such procedure as this is followed, then education can be more nearly conceived as a state function.

Cost Per-Pupil Enrolled

The cost of a rural high school in terms of per-pupil enrolled depends upon the educational program. A minimum program may be provided at less expense than a more elaborate one. Althaus and Twente (8) show that it would be possible to save 13 per cent of the cost of rural high schools under 50 enrollment by the adoption of a minimum program.

The cost per-pupil enrolled is inversely proportional to enrollment. The smaller high schools tend to have greater per-pupil costs than the larger ones. From the standpoint of cost per-pupil enrolled, it is highly desirable that these high schools with small enrollments be eliminated or reorganized.

According to the standards established the minimum cost per-pupil enrolled is $132.95 and the maximum is $264.55. The maximum is about twice as large as the minimum. Such a varia-

8. Op. Cit., p. 45.

tion should be large enough to allow for community differences. However, the range established is much less than that which exists under present conditions. If such wide variations must exist, the state should provide aid for the districts which are burdened.

Summary

Power to reorganize and eliminate existing rural high schools should be vested in the state department of public instruction by legislative enactment. Prior to the reorganization or elimination of any rural high school, a well defined, constructive educational program should be formulated. Such a program should consider the various types of schools which we have today in their relation to the rural high schools as well as the rural high schools themselves.

In this program of reorganization and elimination both minimum and maximum criteria should be considered in the development of a more equitable and efficient system. If new rural high schools are established, the average should become the minimum standard.

The criteria should serve as goals. As progress is made toward the goal, plans should be made in such a manner that new criteria will be evolved which are in keeping with changing conditions and a changing philosophy of the function of education.

APPENDIX

A. Bibliography

B. High-School Principal's Organization Report

C. Letter and Questionnaire to County Clerks

D. Formulae Used in This Study

APPENDIX A

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APPENDIX B

HIGH-SCHOOL PRINCIPAL'S ORGANIZATION REPORT

lass.....

STATE OF KANSAS
DEPARTMENT OF EDUCATION

5-31—4,000

HIGH-SCHOOL PRINCIPAL'S ORGANIZATION REPORT

To the Principal or Superintendent:

This blank should be filled out and sent to us during your second week of school. Immediately upon changing any teacher within the school year, notify your High School Supervisor, giving the name of the new teacher employed. Please see that *every blank space* is filled with an answer. Please fill the duplicate form and keep it on file.

Sincerely yours,

GEO. A. ALLEN, JR., *State Superintendent.*

Location, city.....
County.....
Name of school.....
Superintendent.....
Years in present position, including current year.....
Salary of superintendent.....
Principal.....
Years in present position, including current year.....
Salary of principal.....
Population of city.....
Area in square miles of district.....
School enumeration (not for community and rural high).....
Valuation of district for current year.....
Bonded debt.....
Mills levied for general purposes.....
Mills levied for all purposes.....
Do you operate on a budget?.....
What is the name of your financial accounting system?

Number teaching full time in high school.....
Number teaching part time in high school.....
Does superintendent teach any class?.....If so, how many?.....
Total number grade teachers (not for community and rural high).....
Total enrollment in high school.....
Total enrollment in grades.
Type of high school organization—1 year, 2 year, 3 year, 4 year, 6 year, 3-3 year plan, 2-4 year plan—underscore form used.

SCHOOL ENROLLMENT

Year	(a) High School			(b) Elementary School	
	Boys	Girls	Total	Grades	Grades
7				Kindergarten	
8				1	5
9				2	6
10				3	7
11				4	8
12					
Postgraduates					
Totals					

Number of high-school students from outside the high school district:
Boys..... Girls..... Total.....
HIGH SCHOOL—Organized under what law:
Barnes, Community, Union, Rural, City, Consolidated.....
.....
If a Consolidated or Rural High School—
give month.....and year.....organized.

How many rural school districts are in your Rural High School District?

How many pupils in these rural schools are in the seventh grade?.....in the eighth grade?.....
Is any form of the JOB SHEET or UNIT PLAN of organization and instruction used in your school?.....If so, in what departments?.....
Date of opening of school this year.....193....
Number of weeks in school year.....
What is the length of school year in the grades? (Give in months)

What is the length of recitation periods?.....
What is the length of the study periods?.....
What is the length of all laboratory periods?.....
Number of laboratory periods per week.....
Subjects not requiring study and preparation for a recitation.....
.....
How many units do you require for graduation?.....
If only fifteen, are they made up of credits earned in regular classroom work?.....
How many pupils in your school are carrying more than four studies?
More than five studies?.....
On what basis do you admit students from other schools to advanced standing in your school?.....
What grade is required for passing?.....
Number graduated last year: Boys..... Girls.....

BOARD OF EDUCATION (give name of each member):
President.....
Clerk.....
Treasurer.....
.....
.....
.....

INFORMATION REGARDING LAST GRADUATING CLASS

IN HIGHER INSTITUTIONS

	Kansas		Other States	
	Boys	Girls	Boys	Girls
State University				
Agricultural College				
Teachers College				
Other Colleges				
Dental Schools				
Commercial Schools				

INFORMATION REGARDING LAST GRADUATING CLASS

IN GAINFUL OCCUPATIONS

	Boys	Girls
Trades		
Farming		
Business		
Teaching		
At Home		
Unknown		

GROUNDS

1. How large is the school ground?
2. Is it well drained?
3. Does the school own a separate athletic field; if so, how many acres?
4. Does the school operate a demonstration plot or farm; if so, how many acres?

BUILDING AND EQUIPMENT

1. Is your building stone, brick, concrete, frame, or tile?
2. When was it built? Cost?
3. Is the interior of building (walls, floors, windows, etc.) clean?
4. How are walls finished?
5. How often are windows washed?
6. How often are floors scrubbed?
7. How is janitor service provided? (Underscore):
   Regularly employed janitor; teachers; student janitor.
8. What system of heating is provided? (Underscore):
   Steam; hot air; stoves; combination.
9. Is the heating system satisfactory?
10. What system of ventilation is used? (Underscore):
    Force fan; gravity; windows.
11. Is the ventilating system satisfactory?
12. Does the plan for natural lighting of room provide for unilateral lighting? If not, where is the light admitted—rear, left, right, front?
13. What system of artificial lighting is provided? (Underscore):
    Electricity; gas; lamps.
14. What is source of water supply? (Underscore):
    City; cistern; school well; pressure tank.
15. Do you have sanitary drinking fountains?
16. Are the fountains kept clean?
17. What toilet facilities are provided? (Underscore):
    Water-flushed; dry system; chemicals; outside toilets.
18. Is the toilet system satisfactory?
19. Are toilets kept scrupulously clean?
20. Method of cleaning employed?
21. Total number of rooms used for high school purposes
22. Number of rooms used exclusively for—
    a. Recitation *b.* Science laboratories
    c. Sewing *d.* Cooking
    e. Manual Training *f.* Commercial work
    g. Voca. Agri. *h.* Voca. Home Econ.
    i. Study
    j. Are any high school classes taught in a basement room?
    k. Are any elementary classes taught in a basement room?
23. How are recitation rooms seated?
    a. Single desks *b.* Double desks
    c. Tables and chairs *d.* Desk arm chairs
    e. Recitation benches
24. Is each room provided with maps, charts, and other appliances likely to be needed in conducting recitations held in that particular room?
25. Is there a room seated with standard commercial desks?

SCIENCES

1. Are your laboratories equipped with standard laboratory tables? If not, give a statement as to the type of tables used
2. Are chemicals and apparatus kept in separate cases?
3. Are the cases in your laboratories ample for keeping all apparatus in good order?
4. Can these cases be kept locked?
5. Are your laboratories supplied with—
   Water? Gas? Electricity?
6. Is there sufficient apparatus for physics in order that your pupils may work—Individually In groups of two
   In groups of three In groups of four
7. Is there sufficient equipment to readily meet the requirements for laboratory work in Agriculture?
   Biology? Chemistry? Physics?
8. How much money is expended annually for new equipment and replacement of equipment in sciences?

VOCATIONAL

1. Is your manual-training room equipped with single or double benches?
2. How many pupils can be accommodated at one time?
3. Is your school approved for—
   a. Vocational Agriculture?
   b. Vocational Home Economics?
4. Is the heat in your cooking laboratory supplied by—
   a. Electricity? *b.* Gas? *c.* Oil stoves?
   d. Alcohol stoves? *e.* Coal range?
5. Is your cooking laboratory equipped with standard domestic-science tables?
6. How many tables?
7. How many girls can be accommodated at one time?
8. How many sewing machines are provided for sewing laboratory?
9. Is there a fee of any kind charged in manual training or cooking?

LIBRARIES

1. Is your school library convenient to the study room?
2. Is your library a separate unit, or is it a part of the study hall?
3. Types of library organization. Do you have—
   a. Full-time librarian?
   b. Library-study-hall librarian?
   c. Part-time-teacher librarian?
   d.
   Name of person responsible for library
4. Number of volumes in library

Daily Program for .... Senior High School

TEACHERS	1st Period	No. in Class	2d Period	No. in Class	3d Period	No. in Class	4th Period	No. in Class	5th Period	No. in Class	6th Period	No. in Class	7th Period	No. in Class	8th Period	No. in Class
	Length of Rec. | Study		Length of Rec. | Study		Length of Rec. | Study		Length of Rec. | Study		Length of Rec. | Study		Length of Rec. | Study		Length of Rec. | Study		Length of Rec. | Study	
	Subject		Subject		Subject		Subject		Subject		Subject		Subject		Subject	

EDUCATIONAL PROGRESS

8-31—4000

For.....Senior High School

What additions or changes have been made in your high school since September 15 of last year in—

(1) Building?

(2) Equipment?

(3) Teaching force?

(4) Courses of study?

(5) Organization?

(OVER)

COURSES OF STUDY

For.....High School. School Year 193.....-193.....

REQUIREMENTS: 1. Two majors of three units each.
a. First major; 3 units of English. *b.* Second major; 3 units of one of remaining groups.
2. Two minors of two units each.
a. First minor; 2 units of social science (unless it is elected as a second major). *b.* Second minor; 2 units from one of the remaining groups.
3. One-half unit of Constitution of the United States.
4. One unit either of mathematics or a laboratory science.
5. Remaining units may be selected from any one or more of the first eight groups.

	Grade in Which Subject is Offered		General		College		Vocational		Commercial		Norm. Train.			
			1st Sem.	2d Sem.	1st Sem.	2d Sem.	1st Sem.	2d Sem.	1st Sem.	2d Sem.	1st Sem.	2d Sem.	1st Sem.	2d Sem.
		*English 1–2												
		*English 3–4												
		*English 5–6												
Group I		English 7–8												
English.		Dramatics												
		Journalism												
*Required														
		Algebra 1–2												
		Algebra 3												
Group II		Plane Geometry 1–2												
Mathematics.		Solid Geometry												
		American History 1–2												
		E. E. History 1–2												
		Mod. E. History 1–2												
		English History 1–2												
Group III		World History 1–2												
Social		Citizenship												
Science.		*Constitution												
		Economics												
		Sociology												
		International Relations												
		Vocations												
*Required														
		Agriculture (Gen.) 1–2												
		Biology 1–2												
		Botany 1–2												
Group IV		Chemistry 1–2												
Sciences.		General Science 1–2												
		Physical Geography												
		Physiology												
		Physics 1–2												
		Zoölogy 1–2												
		Latin 1–2												
		Latin 3–4												
		Latin 5–6												
		Latin 7–8												
		Spanish 1–2												
		Spanish 3–4												
		Spanish 5–6												
Group V														
Languages.		French 1–2												
		French 3–4												
		French 5–6												
		German 1–2												
		German 3–4												
		German 5–6												

(OVER)

	Grade in Which Subject is Offered		General		College		Vocational		Commercial		Norm. Train.			
			1st Sem.	2d Sem.	1st Sem.	2d Sem.	1st Sem.	2d Sem.	1st Sem.	2d Sem.	1st Sem.	2d Sem.	1st Sem.	2d Sem.
Group VI Commerce.		Arithmetic 1–2												
		Bookkeeping 1–2												
		Bookkeeping 3–4												
		Business English												
		Geography												
		Law												
		Penmanship												
		Shorthand 1–2												
		Shorthand 3–4												
		Typewriting 1–2												
Group VII Industrial and Vocational Subjects.		Home Economics 1–2												
		Home Economics 3–4												
		Home Economics 5–6												
		Manual Training 1–2												
		Manual Training 3–4												
		Mech. Drawing 1–2												
		Mech. Drawing 3–4												
		Sheet Metal												
		Auto Mechanics												
		Printing 1–2												
		Voc. Agriculture 1–2												
		Voc. Agriculture 3–4												
		Voc. Home Econ. 1–2												
		Voc. Home Econ. 3–4												
Group VIII Music-Art.		Chorus												
		Glee Club												
		Orchestra												
		Band												
		Music Appreciation												
		Art												
Group IX *For Normal Training Students Only		Psychology												
		*Methods-Mang't												
		*Arith.–Review												
		*Geog.–Review												
		*Gram.–Review												
		*Reading–Review												

(OVER)

5. Number added during the year.....
6. Can the cases containing the books be locked?.....
7. Is there a system established for checking out the books at all times?.....
8. Are your books catalogued with the Dewey-Decimal system?

9. Does the catalogue have—
   1, 2, or 3 cards for each book? (Underscore.)
10. Is it the policy of your board of education to provide a fund from which annual additions and renewals can be made to the library?
    If so, how much?.....
11. Is the library open to the general public?.....
12. Is there a public library in your city?.....
13. Underline the subjects which you feel are amply covered by usable, up-to-date reference books in your library, being sure to give the *number in each*:

English.....	Ancient History.....
Modern History.....	English History.....
American History.....	Civics.....
Economics.....	Elementary Science.....
Physical Geography.....	Botany.....
Zoölogy.....	Chemistry.....
Physics.....	Agriculture.....
Sewing.....	Cooking.....
Physiology.....	Psychology.....
Normal Training.....	Foreign Language.....
Commercial Subjects.....	Art .....; Music.....

14. Underscore the periodicals you receive for your senior high school:

Arts and Decoration,	Nature Magazine,
Atlantic Monthly,	Outlook,
Birdlore,	Poetry,
Bookman,	Popular Mechanics,
Century,	Popular Science Monthly,
Current History,	Radio News,
Current Opinion,	Readers Digest,
Good Housekeeping,	Review of Reviews,
Harpers Magazine,	St. Nicholas,
Hygeia,	Scholastic,
House and Garden,	School Arts Magazine,
Industrial Arts,	Survey,
Literary Digest,	Time,
Music and Youth,	Travel,
National Geographic,	World's Work,

Others.....

5. How many usable sets of cyclopedias have you?.....
6. List names of your cyclopedias.....

7. How many New International or Standard Dictionaries have you?.....
8. Is the "Readers Guide to Periodicals" in your library?.....
9. Is Visual Education a part of your program?....
10. Which do you use, films, still pictures, or stereoscopic views? (Underscore.)

SCHOOL ACTIVITIES

1. Are any of the following in your school?

a. P.-T. Ass'n.....	Home Room Activities.....
b. Literary societies.....	
c. Hi-Y.....	G. R.....
d. Boy Scouts.....	Girl Scouts.....
e. Debating teams.....	Dramatic Club.....
f. Glee Clubs.....	Choruses.....
g. Band.....	Orchestra.....

h. Name of instructor in instruments.....
i. Military organization.....
j. Name of dean of girls.....
k. Name of dean of boys.....
l. Does your school participate in scholarship contests?.....
m. How many school or class plays are given each year?.....
n. Do the proceeds of such entertainments go to a school fund or to the students?.....
o. Is an accounting system used for your High School Activities?.....
p. Who is responsible for the accounting of the activities' finances?

HEALTH PROGRAM

1. Do you have an organized athletic association?.....
2. Who coaches athletic teams?
   a. Boys.....
   b. Girls.....
3. Does your school have teams in—

a. Football?.....	*b.* Soccer.....
c. Tennis.....	*d.* Basket ball.....
e. Baseball.....	*f.* Golf.....

4. Does your school participate in track and field contests?.....
5. How many semesters of physical education (including athletics) do you require of boys?..... .....; of girls?.....
6. Do you have an organized and functioning Intra-Mural program for boys?.....; for girls?.....
7. Is everyone required to participate in either the major athletics or in the intra-mural program?.....
8. Do you have a school nurse in your system?.....
9. Name of school nurse.....
10. In athletics are you governed by the consitution, rules, and by-laws of the Kansas State High School Athletic Association?

Date.....

Signature.....

Title.....

TEACHERS

NAME	Annual Salary	SCHOLASTIC PREPARATION								EXPERIENCE		KANSAS CERTIFICATE HELD			
		No. Years in—								No. Years as Teacher					
		High School	Normal School	College or University	Degrees Held	Major Subjects	Minor Subjects	Name of High School Attended	Name of Collegiate Institution Attended	In this School	In Secondary School	Kind of Certificate (See footnote below before filling this column)	Date Issued	Date Expires	By Whom Issued? State Board or one of the Teachers' Colleges
Supt.															
Prin. (List teachers alphabetically)															

In giving the kind of certificate held, use the abbreviations enclosed in parentheses. Certificates valid for teaching in accredited high schools are as follows:

Issued by State Board of Education—Life Certificate (Life); Three-year renewable for life (3-yr.—L.); Special certificates good for teaching the branch specified (Sp. in————); Temporary certificate good for one year only (Temp.); High School certificate granted because the holder was teaching in an accredited high school March 26, 1915 (H. S.); High School certificate granted in accordance with Laws 1919, ch. 259, sec. 3. (H. S.)

Issued by Kansas State Teachers' Colleges—Life Diploma, granted on completion of the four-year college course (Life D.); Life certificate, granted on completion of a two-year college course, valid in junior high schools, and valid in senior high schools if granted prior to September 1, 1916 (Life C.); Special certificates, valid for branches named in certificate (Sp. in————).

If a change of name has occurred since the certificate was issued, indicate clearly the name as it appears on the certificate. Every teacher in your High School should be listed each year. - List study hall supervisor as such.

13-8700

APPENDIX C

Letter and Questionnaire to County Clerks

DEPARTMENT OF PUBLIC INSTRUCTION

STATE HOUSE

TOPEKA

April 22, 1932

To County Clerks:

The undersigned, with the cooperation of the State Department of Public Instruction, is making a study of the small high schools of Kansas. Your assistance in getting the information asked for in the enclosed questionnaire will help in giving an answer to some of the important problems relative to the small rural high school.

Your cooperation in supplying this information is solicited and will be greatly appreciated.

Yours very truly,

Fred Lawson

Graduate Student

Name of Rural High School	Total Valuation of Rural High School District (1931)	Mills Levied for Rural High School for School Year 1931-1932	
		General Purposes	Bonds and Interest

APPENDIX D

FORMULAE USED IN THIS STUDY

$$M = G\ A + \left(\frac{\Sigma\ F\ D \times S}{N}\right)$$

$$S\ D = \sqrt{\frac{\Sigma\ F\ D^2}{N} - \left(\frac{\Sigma\ F\ D}{N}\right)^2} \times S$$

$$P\ E_{(aver.)} = \frac{.6745\ \sigma\ (dis)}{\sqrt{N}}$$

$$\sigma_\sigma = \frac{\sigma\ (dis)}{\sqrt{2\ N}}$$