

AN EVALUATION OF THE GRAHAM SCHOOL SYSTEM

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CHAPTER I

INTRODUCTION

A school administrator who is acquainted with the educational trends and developments and who desires to maintain an educational program which is in keeping with these trends and developments must be able to make a scientific study of his own school. He must be able to make comparisons of the results obtained in his school with the accomplishments in other schools. He must be able to evaluate the achievements of his pupils in certain phases of educational activities.

Efficiency in any line of human endeavor depends upon our ability to evaluate the results obtained.¹

Too often schools are managed, curricula developed, and employees accepted without regard for, or consideration of, the general practices or requirements which have been based on scientific work in education.

It is generally accepted that scientific work in education will furnish the bases for more rapid elimination of mistakes and will point the way to

¹Don C. Bliss, Methods and Standards for Local School Survey, p. 17.

improved organization and method in the development of education.²

Statement of the Problem

The problem of this study is to evaluate the public schools of Graham, Texas in accordance with accepted standards and common practices for certain phases of school activity.

Limitation of the Study

The study is limited to the following phases of the Graham School System: certain aspects of the financial status of the school; ratings of the school plant by an accepted rating scale; study of the educational staff as to training, experience, tenure, and salary; study of the school curriculum; and a study of the pupils, giving special attention to the differences in school marks received by bus pupils and town pupils.

Purpose of the Study

The purpose of the study is to compare the Graham School System with other school systems in the same area; to evaluate the Graham School System with accepted standards, on the phases of school activities studied; and to

² A. A. Alexander, "A Study of McKinney's School System." (Unpublished Master's thesis, Department of Education, North Texas State Teachers College, 1937), p. 1.

make constructive recommendations and suggestions for needed improvements as shown by the data collected.

Definition of Terms

In order to avoid repetition, certain terms have been used synonymously in this study. "Actual wealth" and "real wealth" are used interchangeably throughout the study of the financial status of the district and refer to the sale value of property. As used in this study "school," "school district," "school system," "independent school district," "independent district," and the name of the town are synonymous terms and are used to indicate the public school system of the city named. For example, Graham, Graham School District, Graham School System, Graham Independent School District and Graham Independent District are all synonymous terms.

The term "scholastic" refers to a child between the ages of six and seventeen inclusive.

A "bus pupil" is one who rides a bus to school, and a "town pupil" is one who does not ride a bus, although he may, or may not, live within the corporate limits of the town.

Source of Data

Data were obtained from the following Texas State

Department of Education bulletins: The Public School Directory, 1941-1942; The Thirty-Second Biennial Report of the State Department of Education; and Standards and Activities of the Division of Supervision, 1941-1942.

Other data were collected from intelligence tests and questionnaires filled out by pupils, questionnaires to school tax collectors, and from personal inspection and investigation of records and reports in the offices of the Principals and Superintendent of the Graham Schools.

Organization of the Study

The study is organized into seven chapters, namely: Introduction, The Financial Status of the Graham School District, The School Plant, The Curriculum, The Teaching Staff, The Pupils, and Summary and Recommendations.

Chapter I gives a statement of the problem, limitation of the study, purpose of the study, definition of terms, source of the data and organization of the study.

In Chapter II a study is made of the financial status of the Graham School District with regard to effort and expenditure. The true wealth, as determined from the school tax collectors, and the assessed wealth is compared with nine other districts in the same area. The effort the district puts forth to finance the school system is compared to the effort of the other nine districts. The

expenditures for the different budgetary items are compared with the general practices and with standards set up by experts in the field of school finance.

Chapter III shows the ratings of the buildings of the Graham School as determined by the Strayer-Engelhardt Score Card for Rating Buildings.

In Chapter IV a study is made of the school curriculum with regard to subject offerings in the elementary schools and the high school. A comparison is made of the subject offerings in the Graham High School and those of nine other high schools located in the same area.

Chapter V presents the findings concerning the training, experience, tenure and salary of the educational staff of the Graham Schools. The training of the staff is compared with the Texas minimum standard for accrediting. The salaries of the staff are evaluated in terms of the minimum salary established by the Committee on Standards for Accrediting.

Chapter VI presents the results of a study of pupils and deals with the number of scholastics, enrollment, average daily attendance, age-grade distribution, and school marks. A special study is made to determine the difference, and causes, if any, in school marks received by pupils who ride the bus and those pupils who do not ride the bus.

Chapter VII gives a summary and offers recommendations determined from the findings in the preceding chapters.

CHAPTER II

FINANCIAL STATUS OF THE GRAHAM SCHOOL DISTRICT

Introduction

Too much emphasis cannot be placed upon the financial problems of the public schools. Money must be had to employ well trained and competent teachers, to provide buildings and equipment, and to carry on the many activities necessary to provide educational opportunities for boys and girls.

The early schools in America were private schools, and, therefore, were available only to those persons who were able to pay for their education. It was soon learned that if America was to survive as a democracy, equal educational opportunities must be provided for all. This could be done only through a system of public schools which were supported by the general public.

It is the belief of the American people that the schools are most important to their scheme of civilization and that this undertaking can be carried on more economically publicly than privately.

¹ Eugene G. Wilkins. Public School Tax Management in Texas, p. 3.

Graham's Ability to Support Its Schools

The ability of a community to support its schools may be measured by its resources and the effort it makes to raise revenue.

Various methods have been used by prominent educators in measuring the ability of a community to support its schools. Updegraff² used assessed valuation per teacher. Swift³ used the true valuation per child in average daily attendance. Sears⁴ used the amount of wealth behind each dollar spent on education. Strayer⁵ has expressed the financial ability of a school in terms of the taxable property per enrolled child. It is very difficult in Texas to determine the real wealth of a community from its tax records, as the principal source of tax revenue comes from the most tangible of all property, real estate, whereas many other forms of property, less

²Harlon Updegraff, Rural School Survey of New York State, Volume of Financial Support, p. 73.

³F. H. Swift, Studies in Public School Finance, p. 134.

⁴J. B. Sears, The Boise Survey, p. 269.

⁵George D. Strayer, Survey of the Schools of Beaumont, Texas, p. 152.

tangible, are not taxed at all. Many tax authorities in Texas believe that not over 50 per cent of the taxable property of a community is ever placed upon the tax rolls.⁶

For the purpose of determining Graham's ability to finance an adequate educational program, true wealth per scholastic⁷ and assessed wealth per scholastic will be considered. The true wealth cannot accurately be determined, as much property is not on the tax rolls. However, by using the percentage of true wealth used for assessment purposes, the true value of all property on the tax roll may be determined.

Table 1 shows the real wealth per scholastic in ten districts within the same area.⁸

⁶The Texas Comptroller's report for 1941-1942, shows \$400,000 in banks as assessed for tax purposes, in Young County, Texas, while the banks themselves showed deposits of over \$5,000,000.

⁷In the state of Texas, a scholastic is a child between the ages of 6 and 17 on September 1, of the current year.

⁸Information from Texas Public School Directory and questionnaire to tax assessors of the districts named.

Table 1

REAL WEALTH PER SCHOLASTIC IN GRAHAM,
TEXAS, AND IN NINE OTHER CITIES
IN THE SAME AREA, AS SHOWN
BY THE TAX ROLLS

School District	Number of Scholastics	Tax Assessor's Estimate of Actual Value of Property of Tax Rolls	Actual Value of Property Per Scholastic Based on Assessor's Estimate	Rank
Henrietta	781	\$7,503,380	\$9606	1
Nocona	784	4,337,854	5532	2
Wichita Falls	10,750	55,481,280	5183	3
Graham	1,450	6,913,807	4768	4
Jacksboro	713	3,162,139	4434	5
Olney	1,000	4,109,330	4109	6
Seymour	578	3,000,000	3778	7
Bowie	713	2,441,767	3424	8
Electra	1,579	4,828,931	3058	9
Burkburnett	995	2,200,000	2211	10

On the basis of the data in Table 1 the mean of the actual value of property on the tax roll in the ten cities is \$4610 per scholastic. Each scholastic in Graham is supported by slightly more wealth than the average of the ten cities studied. The range of the ten cities is from \$2211 per scholastic in Burkburnett to \$9606 per scholastic in Henrietta. If it can be assumed that only fifty per cent of the property within a district is placed upon the tax rolls, then the mean of the actual value of the

property is \$9220. The estimated wealth per enrolled child in Texas is \$7,469, while in the United States as a whole, it is \$11,912.⁹ This would indicate that there is ample wealth behind each scholastic in the ten cities studied to provide adequate educational opportunities for all.

The actual value of the property within a district is an indication of what the district can afford to spend on education, but it has little relation to what the district may have available to spend. The assessed wealth per scholastic has much more relation to the money available for expenditures than does the actual wealth.

Table 2 shows the amount of assessed wealth per scholastic in the ten cities studied. It also shows the percentage of actual value used for assessment purposes by the different districts on actual value of property per scholastic. It also shows the ranking of each district on assessed wealth per scholastic.

⁹ National Education Association, Research Bulletin, School Costs and State Expenditures, 1930-1939, Vol. XIX, No. 3, May 1941, p. 148.

Table 2

ASSESSSED WEALTH PER SCHOLASTIC IN GRAHAM,
TEXAS, AND NINE OTHER CITIES IN
THE SAME AREA

School District	Actual Value of Property per Scholastic	Rank	Per Cent of Actual Value Used for Assessment Purpose	Assessed Wealth per Scholastic	Rank
Henrietta	\$9606	1	50	\$4803	1
Nocona	5532	2	50	2766	7
Wichita Falls	5183	3	75	3887	2
Graham	4768	4	75	3576	3
Jacksboro	4423	5	66 ^{2/3}	2956	6
Olney	4109	6	75	3082	4
Seymour	3778	7	60	2267	9
Bowie	3424	8	80	2739	8
Electra	3058	9	100	3058	5
Burk-burnett	2211	10	100	2211	10

Graham ranks comparatively high on assessed wealth per scholastic as it is third in the list of ten. The mean for the group is \$3134.

The median of this group is \$3019, which is very near the median of the state as a whole. The median for the state as a whole is between \$3,000 and \$3,250.¹⁰ Although Henrietta uses only 50 per cent of actual value for assessment purpose, it ranks first in the amount of

¹⁰ Texas State Department of Education, Biennial Report of the Department of Education, 1934-1936, p. 64.

assessed property per scholastic. Burkburnett uses 100 per cent of the actual value for assessment purposes but even this percentage does not raise this district from the lowest rank.

The assessed valuation per scholastic does not present the true situation as to the amount of money available for each scholastic, since the tax rates used by the different districts also affect the income. The general school laws of the State of Texas¹¹ provide for a maximum tax rate of \$1.00 on each \$100 of taxable property. All tax rates must be voted upon by the people in the district. After a rate has been voted by the people, this rate, or any rate below that voted upon, must annually be voted upon by the board of trustees of the district. A special law has been passed by the legislature which will allow the district to vote a rate greater than the \$1.00 provided in the general laws.

The tax rates of the ten schools studied range from \$1.00 on each \$100.00 to \$1.50 on each \$100.00 valuation. Nine of the schools have a rate of \$1.00 while one has a rate of \$1.50.

¹¹Texas State Department of Education, Public School Laws, 1938, p. 99.

Schools must divide their tax incomes between a maintenance fund and a sinking fund.¹² This division of the rate must be made each year in order that sufficient funds may be available to redeem bonds and to pay interest on outstanding bonded indebtedness which comes due during the current year. The law provides that as much as 50 cents on each \$100 valuation may be levied for sinking fund purposes.¹³

Table 3 shows the rates levied by the ten districts studied and the amount of money per capita which could be raised on these rates.

Table 3

THE ASSESSED VALUATION PER SCHOLASTIC, TAX RATES,
AVAILABLE MONEY PER SCHOLASTIC, AND RANK
OF EACH OF THE TEN CITIES

School District	Assessed Valuation per Scholastic	Maintenance			Bond		
		Rate	Amount	Rank	Rate	Amount	Rank
Henrietta	4803	82	39.38	1	18	8.65	7
Wichita Falls	3687	75	29.15	2	25	9.72	6
Graham	3576	70	25.03	4	30	10.73	4
Olney	3082	55	16.95	9	45	13.97	1
Electra	3058	60	18.55	8	40	11.23	3
Jacksboro	2956	67	19.71	6	33	9.65	5
Nocena	2766	70	19.56	7	30	8.30	8
Bowie	2739	100	27.39	3	50	13.70	2
Seymour	2267	70	15.87	10	30	6.80	9
Burk- barnett	2211	94	20.78	5	6	1.33	10

¹² Ibid., p. 94.

¹³ Ibid., p. 94.

On both available maintenance money per scholastic and available bond money per scholastic, Graham ranks fourth in the group of ten cities.

Henrietta is in first place in the assessed valuation per scholastic and the available maintenance money per scholastic but drops into seventh place on the amount of bond money available for each scholastic.

Bowie has both the highest maintenance rate and bond rate of the ten schools, but as it ranks seventh in assessed valuation per scholastic, its ranking in money available per scholastic for both maintenance and bonds is only raised to third and second places respectively.

Burkburnett has the lowest bond rate of any city, 6 cents on the \$100 valuation. This allows this district to use more of its money, 94 per cent, for maintenance.

In order to determine the effort the district is putting forth to support its schools, it is necessary to determine the amount of tax paid on each \$100 of actual value of property.

Table 4 shows the amount of tax paid on each \$100 of actual value of property in each district. This table also shows the tax rate of the different districts and the rank of each district on the amount of tax paid on each \$100 of actual value.

Table 4

AMOUNT OF SCHOOL TAX PAID ON THE ACTUAL VALUE
OF \$100 WORTH OF PROPERTY IN GRAHAM, TEXAS
AND NINE OTHER CITIES IN THE SAME AREA

School District	Percentage of Actual Value Used for Assessment Purposes	Assessed Value of Property per \$100	Tax Rate on Each \$100	Amount of Tax Paid on \$100 of Actual Value	Rank
Henrietta	50	\$50	\$1.00	\$.50	9 $\frac{1}{2}$
Nocona	50	50	1.00	.50	9 $\frac{1}{2}$
Wichita Falls	75	75	1.00	.75	5
Graham	75	75	1.00	.75	5
Jacksboro	66 $\frac{2}{3}$	67	1.00	.67	7
Olney	75	75	1.00	.75	5
Seymour	60	60	1.00	.60	8
Bowie	80	80	1.50	1.20	1
Electra	100	100	1.00	1.00	2 $\frac{1}{2}$
Burkburnett	100	100	1.00	1.00	2 $\frac{1}{2}$

Data from this table show that Bowie puts forth more effort to support its schools than does any other one of the ten cities studied. Each tax payer in the Bowie district must pay a tax of \$1.20 on each \$100 of property he owns; while in both Henrietta and Nocona each tax payer must pay only 50 cents on each \$100 of property. In the Graham School District each tax payer must pay 75 cents on each \$100 of property. If Bowie, with an actual value of \$3424 per scholastic, can raise \$41.09 for each pupil

surely Graham with an actual value of \$4768 per scholastic, could raise \$47.68 for each child of school age, instead of the \$35.76 she is now raising.

School Receipts

The funds received by a school district in Texas usually come from four different sources, namely, the Federal Government, the state, the county, and the local district. The amount received from the county is usually so small that it is not considered. The majority of the county funds are derived from interest from the county permanent school fund and seldom exceeds fifty cents per scholastic.

The funds received from the Federal Government are principally those which partially reimburse the district for money spent for teaching home economics, agriculture, and trades and industries.

The principal state fund is the state per capita apportionment. This is a definite amount¹⁴ which is furnished each district according to the number of scholastics within the district on April 1, of the preceding year. Other state money is received by the district under definite provisions of the state equalization law.

¹⁴\$22.50 for each scholastic in 1942-1943.

The local funds received are those coming from tax money collected from property holders within the boundaries of the local school district.

Table 5 shows the amount and percentage received from each source by the Graham District and the per cent from each source received by the state as a whole.¹⁵

Table 5

AMOUNT AND PERCENTAGE OF SCHOOL FUNDS RECEIVED
FROM EACH SOURCE BY GRAHAM, TEXAS, AND
PERCENTAGE RECEIVED FROM EACH SOURCE
IN THE STATE AS A WHOLE

Source of Funds	Amount Received by Graham	Percentage of Total Amount	Percentage Received from Each Source in the State as a Whole
Federal	\$5,351	5.13	1.4
State	45,822	43.89	51.7
Local	53,218	50.98	46.9
Total	\$104,391	100.00	100.0

The Graham School System received a larger percentage of its money from the Federal Government than did the schools of the state as a whole. Many schools of the state do not

¹⁵ National Education Association, State School Finance Systems, Research Bulletin, November, 1942, p. 157.

participate in the Federal Vocational Program. This causes the Federal percentage to be very low in the state as a whole. The Graham District received a larger percentage of its income from local funds than did the schools of the state as a whole and, therefore, received a correspondingly less amount from the state. Approximately 51 per cent of the total income of the District was from local sources. For the state as a whole, it was 46.9 per cent.

The total income of \$104,426 provided the school with \$70.18 for each child enrolled in the district, or \$78.98 for each child in average daily attendance during the year. The average amount spent on each enrolled child in the United States is \$85.59, while the average amount spent on each child in average daily attendance is \$99.70. Texas spends \$66.77 on each enrolled child and \$82.33 on each pupil in average daily attendance.¹⁶ These data show that the Graham District does not have as much to spend on each child in average daily attendance as do either the schools of Texas or the United States as a whole.

Expenditures

The Public School Laws of the State of Texas specify

¹⁶ National Education Association, School Costs and State Expenditures, 1930-1939, Research Bulletin, May, 1941, p. 145.

that the funds of a school district shall be expended in accordance with a prepared budget.¹⁷ There are no provisions within the law which specify the amount, or percentage of the total amount, which may be expended on any one item within the budget.

An examination of what experts in the field of school finance have determined as the correct percentage for each item to the total gives an idea as to the manner in which a school should spend its money.

As previously mentioned, a school must set aside a definite percentage of its local revenue to pay interest on bonds and to retire bonds maturing during the current year. This part of the school budget can hardly be compared with any percentages found in other schools since the willingness of the citizens of one community to vote bonds upon itself to pay for buildings will vary greatly with the willingness of citizens within another district. For this reason only those items in the school budget known as operating expenses will be used for comparison.

The data in Table 6 make possible a comparison of the percentage of operating expenses found for each of

¹⁷ Texas State Department of Education, Public School Laws, 1941, p. 7.

Table 6

THE PERCENTAGES EXPENDED ON EACH ITEM IN GRAHAM
AND IN THE CITIES OF 2,500 TO 10,000, 5,000
TO 10,000 POPULATION AND THE PERCENTAGE
WHICH SHOULD BE EXPENDED ACCORDING
TO EXPERTS IN THE FIELD OF
SCHOOL FINANCE

Source of Sugges- tion	Divisions of Operating Expenses											
	General Control	Rank	Instructional Service	Rank	Operation of Plant	Rank	Maintenance of Plant	Rank	Auxiliary AGENCIES	Rank	Fixed Charges	Rank
Cities 2,500- 10,000 ^a	5.5	3	71.9	6	12.8	2	3.6	4	4.2	3	2.0	1½
5,000- 10,000 ^b	9.7	1	75.0	1½	7.6	6	2.8	5	3.3	4	1.6	4
Moehl- man ^c	5.0	4	75.0	1½	12.0	3	5.0	1	2.0	5	1.0	6
Tooth- aker ^d	4.0	6	74.0	3	11.0	4	4.0	2	5.0	2	2.0	1½
Graham ^e	6.3	2	72.8	4½	9.2	5	2.6	6	7.0	1	1.9	3
Reeder ^f	4.9	5	72.8	4½	13.5	1	3.8	3	1.6	6	1.2	5

^aL. M. Comstock, Per Capita Costs in City Schools for 1935-1936, p. 5.

^bTexas State Department of Education, Thirty-Second Biennial Report of the State Board of Education, p. 173.

^cA. B. Moehlman, Public School Finance, p. 105.

^dO. H. Toothaker, A Basic Standard for the School Budget, p. 47-48.

^eThe Graham School Budget, 1941-1942.

^fWard G. Reeder, The Fundamentals of Public School Administration, p. 171.

the six items in the Graham School budget with the standard budgets set up by experts in the field of school finance.

The ranking of the different budgetary items is also shown in this table. The highest per cent being given first rank; however, first rank does not indicate the most ideal condition. Instructional service is probably the only item in the budget on which first place ranking is desirable. Auxiliary agencies varies according to the transportation needs of the school being studied, therefore, the ranking on this item means very little. Last place in the ranking is desirable on all other items in the budget.

The divisions of the budget headed general control includes such items as educational administration, business administration, assessing and collecting taxes, and census expense. The Graham School spent 6.3 per cent of its operating expense on these items. In the schools of Texas with a total population of from 5,000 to 10,000 9.7 per cent of the total operating budget was spent on this item. These data indicate that Texas schools spend

more for general control than school finance authorities believe should be spent. They also show that Graham is more nearly in line with what should be spent on this item than are the schools in the state which are located in cities comparable to Graham. However, if the experts are right, Graham is spending too high a percentage of its budget on general control.

The instructional service division of the budget includes such items as salaries of teachers, supervisors, and principals and teaching material and supplies. From 70 to 75 per cent of the operating budget should be spent for instruction. The Graham School spent 72.8 per cent of its operating budget on this item which is well within the limits previously stated.

The operation of the school plant includes such items as janitorial service and supplies, and utilities. The schools of Texas do not spend as great a percentage on this item as is recommended by the experts. Low fuel consumption and low wage schedules in Texas as compared to other sections of the nation are probably some of the reasons it does not cost as much to operate the plants in Texas as is indicated in the standard budgets.

The maintenance of the school plant includes the upkeep of the building and grounds. This includes repairs

on buildings and equipment. Graham ranked last on this item. The reason for this ranking is most likely due to the fact that all the buildings in Graham were either new or had been remodeled only a few years before this study was made, thus eliminating the need of many repairs during the year.

The auxiliary agencies include the cost of transportation of pupils, student activities, and other items not specifically provided for in other sections of the budget. The Graham School ranked first on this item. This was caused by the large amount spent to provide transportation. Many standard budgets seem not to provide adequately for a satisfactory transportation system.

The section of the budget headed fixed charges includes rents and insurance, but as few schools pay any rent, the insurance item is usually the only one covered in this section. All of the suggested budgets considered listed from one to two per cent as the percentage necessary for fixed charges. Graham ranked third on this.

Summary and Recommendations

The Graham School ranks above the average of the ten cities studied in the amount of wealth behind each scholastic within the district. The district uses 75 per cent

of actual value for assessment purposes. This is about the average of the ten cities studied. In the amount of assessed wealth per scholastic, Graham ranks third in the group of ten. The maximum tax rate of \$1.00 on each \$100 of property valuation is levied by the Graham District. This rate will allow the district to collect \$35.76 for each scholastic within the district. Graham ranks fifth in effort put forth to finance the schools. The taxpayers of Bowie pay \$1.20 and those of Henrietta and Nocona pay only 50 cents on the same amount of property.

The Federal Government furnishes a larger percentage of the funds of the Graham School District than it does of the school districts of the state as a whole. The Graham School participates in several phases of the Federal Government's vocational program which accounts for the large amount of Federal funds received. The local school district furnishes a larger percentage of the funds of the school than do average local school districts in Texas. The Federal Government and the local district furnish a greater percentage of the funds of the Graham School than are furnished by those two agencies in the districts of the state as a whole. The total receipts of the Graham District is equivalent to

\$78.98 for each child in average daily attendance. This is \$3.35 less than is spent on each pupil in average daily attendance in the state as a whole. It is \$20.72 less than is spent on each child in average daily attendance in the United States as a whole.

Funds of the Graham School are expended in accordance with the annual budget. This budget is comparable to those suggested by experts in the school finance field. The Graham School spent a larger percentage of its money on auxiliary agencies than is recommended by the experts. This was due to the school's vast system of transportation which accomodates a large rural section.

In order that the Graham School System may have sufficient funds to provide a satisfactory educational program for each child, it is recommended that the taxing authorities of the district put forth every effort to place all taxable property of the district on the tax rolls.

CHAPTER III

THE SCHOOL PLANT

Introduction

The school plant cannot be used as an exclusive factor in judging the efficiency of a school system, although often the general public's conception of the schools is confined to their knowledge of the outward appearance of the buildings and grounds. Strayer makes the following comments relative to building and equipment for the public school:

The school plant with its equipment is a most important factor in providing a modern educational program for the present day youth. For him the school building should be, first, an efficient workshop, suited to his needs, safety and comfort. Second, it is his school home where he spends six or more hours a day, and as such it should develop him esthetically with whatever pleasant and beautiful surroundings the community may afford.¹

For the purpose of determining the degree to which Graham has provided an adequate school plant the Strayer-Engelhardt Score Card and Standards for Evaluating School Buildings was used. This score card, as a rating device, has been in general use for a number of years.

¹George D. Strayer, Survey of the Schools of Beaumont, Texas, p. 115.

The School Plant Measured by a
Standard Scale

The Strayer-Engelhardt scale is arranged to measure a number of items. It provides for the relative evaluation of certain factors under five general headings, as follows: site, building, service systems, classrooms, and special rooms. Each of these divisions has subdivisions which are assigned a certain number of points in accordance with the importance of each, as determined by the experts who perfected the scale. The total possible score of a building is 1,000 points, but it is very seldom that a building will make a score of over 900 points. Marberry says:

The total possible score of a school building is 1,000 points. A score of 900 is very exceptional. Out of the total of several hundred school buildings the writer has helped to score, only one elementary school and two high school buildings have scored above 900 points. A score of 800 is excellent. Grading downward, a score of 500 points is regarded² as on the border line of efficiency for school use.²

The school plant of Graham, Texas, consists of three buildings, in addition to a school building for Negroes, which is not considered in this survey. The three schools are the Senior High School, the Junior High-East Ward School, and the Shawnee Elementary School.

²J. O. Marberry, A Survey of the Los Angeles Heights Public Schools, p. 38.

School site.--All of the school buildings in the Graham School System are well located. All of the school sites are in residential areas of the city and are not affected by industrial noises or other unsatisfactory conditions. All of the schools are located on hard surfaced streets which makes them accessible in wet weather.

Table 7 shows the ratings given the three factors placed under the heading of "site" in the Strayer-Engelhardt scale.

Table 7

THE RATINGS OF THE THREE SCHOOLS OF GRAHAM,
TEXAS, ON THE PHASES OF THE SCHOOL SITE
INCLUDED IN THE STRAYER-ENGELHARDT
SCORE CARD

Items Measured	Standard Score	Senior High School	Junior High East Ward School	Shawnee School
Location	55	50	47	47
Drainage	30	30	30	30
Size and Form	40	40	30	35
Total	125	120	107	112

No school in the Graham School System was given the

ranking equal to the possible score of 125 points. The Senior High School lacked only 5 points of receiving the highest possible score, but due to the fact it is located on the southeastern edge of the city, and is, therefore, quite a distance from some of the residential areas, it did not receive the maximum score on location.

All the schools received the maximum score on drainage.

The Senior High School received the maximum score of 40 points for size and form. This building is located on a tract of twenty acres and is adequate in size for the enrollment. The Junior High-East Ward received the lowest score on this item of the three schools as it is not large enough to meet the needs of the pupils enrolled. The eight acre tract has located on it not only the school building, but a teachers' dormitory, a seven bus garage, and the high school football stadium. This leaves a very small playground for the 650 children housed in this building.

School buildings.--The location, the exterior appearance, and adequacy are the items considered in the second part of the Strayer-Engelhardt Score Card.

Table 8 gives the ratings of the three buildings on each of the three divisions of the plan for measuring school buildings.

Table 8

THE RATINGS OF THE THREE PUBLIC SCHOOLS OF
GRAHAM, TEXAS, ON THE PHASES OF THE
SCHOOL BUILDINGS INCLUDED IN THE
STRAYER-ENGELHARDT SCORE CARD

Items Measured	Standard Score	Senior High School	Junior High East Ward School	Shawnee School
Location	25	22	20	20
Exterior	60	59	43	37
Interior	80	80	57	58
Total	165	161	120	115

The Senior High School lacked only four points of receiving the highest possible score. This building was completed in 1939 and is, therefore, in excellent condition both internally and externally. This building has a celotex ceiling and celotex between the floors and sub-floors for the purpose of eliminating as much sound as possible. The building is semi-fire proof; the corridors are fire proof and the doors to the classrooms are of one hour fire resisting material. All corridors are equipped with panic hardware so that any pressure on the door from the inside opens it.

Rooms on the sunny side of this building are calcimined

a light green color. Seven feet of the walls nearest the floor are of white brick that can be easily washed.

The Shawnee School received the lowest score of the three buildings. This building is two and one-half stories in height and its square foundation gives it the appearance of an almost perfect cube.

All buildings have either been constructed or remodeled within the past few years and all of them are kept in an excellent state of repairs.

School service system.--The phase of the Strayer-Engelhardt Score Card covering the largest number of items is that of the school service systems, which is divided into the following factors:

1. Heating and ventilating system.
2. Fire protection, including type of apparatus used in the building, the degree of fire-proofness of the building and distribution of heat and air through the building.
3. Cleaning systems, with vacuum installation recommended.
4. Artificial lighting--kind, amount, and number and location of switches and outlets.
5. Electric service system, including clocks, bells, gongs and telephones.

6. Water supply, including drinking, washing, and bathing facilities.

7. Toilet system--including distribution, fixtures, adequacy, seclusion and sanitation.

Table 9 shows the ratings given to each of the three schools with relation to the items listed above.

Table 9

THE RATINGS OF THE THREE PUBLIC SCHOOLS OF
GRAHAM, TEXAS, ON THE PHASES OF SCHOOL
SERVICE SYSTEMS INCLUDED IN THE
STRAYER-ENGELHARDT SCORE CARD

Items Measured	Standard Score	Senior High School	Junior High East Ward School	Shawnee School
Heating and ventilation	80	68	55	52
Fire protection	65	39	30	27
Cleaning	20	19	15	16
Lighting	20	19	15	12
Electric system	15	12	9	9
Water supply	30	25	23	18
Toilets	50	47	39	39
Total	280	229	186	173

The newest school in the system, the Senior High School, received the highest score of the three buildings.

The heating systems in the Senior High School and the Junior High-East Ward building are hardly adequate, as in the most severe weather it is impossible for all the rooms to receive a sufficient amount of heat.

The absence of fire escapes caused all the buildings to receive a relatively low score on fire protection. The Senior High School is well constructed of semi-fire-proof material and has an adequate alarm system. All the schools have regular fire drills and the pupils are well trained as to what to do in case of an alarm.

The Senior High School received the highest score on lighting of any of the three schools. As mentioned before, the rooms on the sunny side of the building are calcimined a light green in order to make a soft light. All classrooms in the three buildings are equipped with four or more ceiling lights and opaque shades. The lights near the windows are controlled by a separate switch from the lights nearer the inside walls.

A very few of the rooms in the Junior High-East Ward or Shawnee buildings have adequate outlets for use with the opaque projectors, the strip film projectors, or the eye testing machines which the school system owns.

All the schools have telephones with an extension from the main office to the cafeterias. No school has a bell

system controlled by a clock. The ringing of the period bells is handled by some teacher or the principal by the push button method. This causes irregularity and does not contribute to the promptness on the part of either teachers or pupils.

Classrooms.--The Strayer-Engelhardt Score Card provides for rating classrooms by their location, construction, illumination, cloakrooms and their accessibility, and classroom equipment.

Table 10 shows how the three schools were rated on their classrooms.

Table 10

THE RATINGS OF THE THREE PUBLIC SCHOOLS OF GRAHAM, TEXAS, ON THE PHASES OF CLASSROOM ADEQUACY INCLUDED IN THE STRAYER-ENGELHARDT SCORE CARD

Items Measured	Standard Score	Senior High School	Junior High East Ward School	Shawnee School
Location	35	33	25	25
Construction	90	88	78	71
Illumination	85	85	76	63
Cloakrooms	25	23	15	13
Equipment	55	44	33	33
Total	290	283	227	205

The Senior High School received the highest rating of any of the three schools on location of classrooms. The only thing that prohibited it from receiving a perfect score was the fact that the orchestra room is rather close to the other classrooms. The band room is unusually well located. It is in a sound proof room separated from the other classrooms.

Cloakroom and wardrobe space is not available in many of the classrooms of the Junior High-East Ward building. There is a definite need for more equipment in the elementary schools. The ratings of both these schools could be improved by the installation of such classroom equipment as maps, charts, globes, and reference material suited to the programs carried on in the various rooms.

Special rooms in the school.--The Strayer-Engelhardt Score Card divides special rooms into three classes as follows: large rooms for general use, rooms for school officials, and other special service rooms. The ratings received by each of the schools on this phase of the score card are shown in Table 11. This table shows that the high school building ranks much higher on special rooms than does either of the other two buildings.

Table 11

THE RATINGS OF THE THREE PUBLIC SCHOOLS OF GRAHAM,
TEXAS, ON THE ADEQUACY OF SPECIAL ROOMS
INCLUDED IN THE STRAYER-ENGELHARDT
SCORE CARD

Items Measured	Standard Score	Senior High School	Junior High East Ward School	Shawnee School
Rooms for general use, (auditorium, gymnasium, library, and lunchroom)	65	60	50	40
Rooms for school officials, (teachers, officials, medical suite, janitor)	35	30	30	25
Others (laboratories, storage, etc.)	40	40	35	35
Total	140	130	115	100

All schools are equipped with the most modern cafeterias. Each has an auditorium which is adequate for the enrollment in the respective schools, and the Senior High School and Junior High-East Ward School have excellent gymnasiums. The Shawnee building does not have a gymnasium.

The Senior High School and the Junior High-East Ward buildings have excellent rooms for officials and teachers. The Junior High-East Ward building has a special medical room containing two beds and first aid equipment for caring for ill or injured children.

The Senior High School has ample laboratory facilities for the courses now given in the school. Neither of the other schools has such facilities.

Comparison of the total ratings of the school plants in the Graham public school system.--The total score of each building gives a comparative ranking of the buildings of the Graham School System.

Table 12

THE TOTAL RATINGS OF THE GRAHAM PUBLIC SCHOOL PLANTS AND THEIR RANK WHEN MEASURED BY THE STRAYER-ENGELHARDT SCORE CARD

School	Total Rating	Rank
Senior High School	923	1
Junior High-East Ward School	755	2
Shawnee School	705	3

The Senior High School with a rating of 923 fell only 77 points below the possible total of 1,000 points.

Each of the other buildings received a much lower score than the Senior High School building. These buildings are much older than the Senior High School building.

Summary and Recommendations

All of the school sites were judged to be satisfactorily located within the city. The Junior High-East Ward School was rated low on the size of the site in consideration of the enrollment and of the other buildings located on the site. The Senior High School is on the edge of the residential area, thus causing many children to walk quite a distance to school. However, as practically all residential building within the past few years has been in the vicinity of this building, it will probably, within a few years, be near the center of the residential area.

All buildings were rated as adequate in their present forms. There are no crowded conditions within any buildings.

All the schools were scored low on school service system.

The mean score for the three buildings was 794. In terms of the Strayer-Engelhardt Score Card the school plants are very satisfactory.

It is recommended that additional space be provided for the playground at the Junior High-East Ward School and that instructional materials be added to the equipment of both elementary schools.

CHAPTER IV

THE CURRICULUM

Introduction

In this chapter a study is made of the curricula of the Graham Schools. Comparisons are made with the subject offerings in the high school with the subject offerings of nine other high schools in the same area.

Many surveys have been made and published of different school systems, yet few have given much thought or attention to what the school is doing in the matter of educating the pupil. These surveys usually cover such tangible things as school finance, school plant, teaching personnel, and pupil accounting.

The layman is more interested in the school curriculum than is usually thought. In a study of what newspaper editors think of the school curriculum, Stabley says:

Newspaper editors are very much concerned about the curriculum of the public schools. Indeed, as shown by a study of editorials on American education in ten outstanding metropolitan papers over a twenty-seven year period, the curriculum receives more comment than any other field except administration. Subjects, courses,

programs, and to some extent, philosophies of curriculum are given much scrutiny.¹

It is sometimes said that the schools neglect the fundamentals of reading, writing, and arithmetic because of the time given to the so-called "fads and frills." Graduates are described as being ignorant, unable to think, and unfit for useful work. Those who criticize the present day graduates often compare them with those who graduated a generation ago. It is very difficult to make an objective comparison of these graduates, but a study made of 500 children of the Boston Schools in 1845 and a study of 12,000 pupils in schools from all parts of the United States in 1919 gives the following results:

1. Present-day children tend to make lower scores on pure memory and abstract skill questions and higher scores on thought or meaningful questions.
2. The modern school teaches not only the subjects covered by these tests but many additional topics which were not considered at all by the schools of a generation or more ago.
3. The efficiency of present day instruction, even at its best, although higher than 1845, is still far from satisfactory.²

¹Rhodes R. Stabley, "Newspaper Editors Look at the Curriculum," Curriculum Journal, Vol. 14, No. 2, Feb., 1943, p. 61.

²Otis W. Caldwell and Stuart A. Courtis, Then and Now in Education: 1845-1923, p. 85.

The Graham Elementary Schools

The curriculum of the Graham Elementary Schools follows very closely that prescribed by the State of Texas.

When the six-year old child enters school, he goes through a period of adjustment for the first six to twelve weeks. Many children, either because of superior home training or differences in personality, adjust themselves to school activities much more readily than do other children. After this adjustment period, number work, manuscript writing, and reading are introduced.

Spelling is introduced in the second grade. The change from manuscript to cursive writing takes place in this grade. Reading, number work, language arts, art, music, health, nature study, and physical training are also taught in this grade.

The content in the third, fourth and fifth grades is very much the same as the content in the second grade, except it is on higher levels. The study of geography is introduced for the first time in the fourth grade. Beginners' History of the United States is introduced in the sixth grade.

The work of the seventh and eighth grades is organized differently from that of the lower grades. Departmental work is used in these grades. Subject matter is

organized into the following groups: language arts, social studies, arithmetic, arts and crafts, and health and physical education. Each pupil is allowed to spend one hour each day in the library.

The Curriculum of the Graham High School

The Graham High School offers forty-four units of credit to its 610 pupils enrolled.

These forty-four units are grouped into the following fields: English and Speech--5 units; Social Studies--3½ units; Mathematics--4 units; foreign language--4 units; Vocational Education--14 units; Business Education--5½ units; Music--4 units.

A pupil who graduates from the Graham High School must have completed the following work: English--4 units, Mathematics--2 units, foreign language or natural science--1 unit, and enough additional units to make 16.

Table 13 gives the subject offerings of ten high schools located within the same area as Graham.³

³ Texas State Department of Education, Standards and Activities of the Division of Supervision, 1941-1942, pp. 171-229.

Table 13--Continued

Subjects Offered	Number of Units of Credit Held by Each High School									
	Wichita Falls (1941)	Graham (610)	Bowie (438)	Electra (432)	Olney (420)	Burkburnett (415)	Seymour (328)	Henrietta (375)	Jacksboro (275)	Noccona (240)
Safety Education	-	-	-	-	-	-	-	-	-	-
Public Speaking	3	1	1	1	2	1	2	1	1	1
Journalism	-	-	-	1	1	1	-	-	-	-
Physical Education	-	-	-	1	1	1	$\frac{1}{2}$	$\frac{1}{2}$	-	1
Art	3	-	-	1	-	-	-	-	-	-
Music	1	1	-	-	-	-	2	-	-	-
M	1	3	2	2	2	1	1	2	-	1
Mi	1	-	-	1	-	-	1	1	-	-
Mo	1	-	-	-	-	-	-	-	-	-
MA	1	-	-	-	-	-	-	-	-	-
Total	49	44	42	43 $\frac{1}{2}$	38 $\frac{1}{2}$	42	38	39 $\frac{1}{2}$	33	34

*Texas State Department of Education, Standards and Activities of the Division of Supervision, 1941-1942, p. 160-161.

#Number in parenthesis under city indicates the high school enrollment.

Wichita Falls High School has the largest enrollment of any of the schools studied, and it also offers the largest number of units of credit. The Graham High School is second in enrollment and second in the number of units of credit offered.

The two schools with the smallest enrollment offer their students the least number of subjects from which to choose.

All schools in the group offer four years of English. The number of credits in Speech ranges from one to three units.

All of the schools have some foreign language in their curricula. Latin and Spanish are the only foreign languages offered. All but two schools offer both of these languages.

The amount of vocational and commercial training offered ranges from $9\frac{1}{2}$ units of credit in Seymour to $19\frac{1}{2}$ units in Graham. The Graham curriculum contains four units of credit in home making, four in vocational agriculture, four in diversified occupations, two in industrial arts, and five and one-half in commercial work.

Credit is given for some form of music in all the schools except Jacksboro. Graham and Wichita Falls each offers four units of credit in music.

Physical education is offered for credit in only one-half of the schools studied.

The number of units of credit in social studies ranges from three and one-half in Graham to six and one-half in Electra.

The number of units of credit offered in the mathematics and science group ranges from eight in three of the schools to ten in Electra.

Conclusions and Recommendations

A study of the units of credit offered in the ten high schools shows that there are many problems which might be brought to the attention of school administrators regarding their subject offerings. Ten to twelve units of credit of the sixteen required of all pupils for graduation are prescribed. This allows a pupil from four to six elective units and indicates that from two-thirds to three-fourths of the pupil's time is spent on required work while from one-fourth to one-third of his time is spent on subjects of his own choosing. In order that the pupils may have instruction in the required work, approximately three-fourths of the faculty must be assigned to this work and one-fourth assigned to the elective work. If the number of electives offered by the school is large,

there must be an increase in the number of faculty members above that normally needed if all work were required. In the high school with a small enrollment and a large number of elective subjects, the class size in electives would be so small that the per pupil cost of instruction would be completely out of line with the cost of the required subjects.

The Wichita Falls High School with an enrollment of 1941 can economically offer approximately three times the number of elective courses that Graham can offer with its enrollment of 610. Wichita Falls can economically offer approximately seven times as many electives as can Nocona whose enrollment is only 240. A study of the units offered by these schools shows that the majority of them offer more elective subjects than is economically justifiable.

In the Graham High School, instructional cost per pupil ranges from \$9.05 in required English to \$79.30 in elective part-time training. The instructional cost of teaching mathematics in the Graham High School is \$9.36 per pupil, whereas in agriculture, which is an elective, the cost is \$22.80. These figures indicate that there is a wide range in the cost of teaching the required and elective subjects. This wide range is

caused by the differences between the enrollment in the required and elective subjects and in the salaries received by the teachers of these subjects. Five hundred seventy-two pupils were enrolled in English whereas only 31 were enrolled in part-time training. The teachers of English received an average annual salary of \$1260 whereas the part-time training teacher received \$2460.

It is recommended that the school authorities give much study and consideration to the number of electives included in the curriculum. This study should indicate the subject matter which is of value and can be economically justified.

A school can easily over balance its curriculum toward the vocational and commercial subject matter. Many times students are given a little training in some vocation in which they can find immediate employment. The thrill of earning money tends to discourage them from continuing in school and causes students to continue in a job which has no future. In other cases students receive training in vocation classes which encourages them to seek further training and to continue their school work beyond graduation from high school.

As the Graham High School offers more vocational and commercial work than any of the ten schools studied,

it is recommended that a study of the pupils who have been enrolled in these courses for the past several years be made in order to determine the extent to which these subjects should be offered in the high school.

There is a definite need for an objective evaluation of each subject taught in a school, and it is recommended that this evaluation be made in the Graham High School. It would be possible through such an evaluation to eliminate subjects which have little value and subjects which duplicate offerings. Such an evaluation would cause the school administrators to think of the curriculum in terms of the quality rather than the quantity of the subjects taught.

CHAPTER V

THE TEACHING STAFF

Introduction

In this chapter a study will be made of the staffs of the elementary and high schools as to training, experience, tenure and salary. A comparison will be made between the Graham staff and requirements as set up by the state committee for accrediting schools.

Administrative Staff

The administrative staff consists of a superintendent, a high school principal, and two elementary school principals, three of whom hold a master's degree and one a bachelor's degree. The total years of experience of these four administrators is fifty-one years or an average of 12.75 years, with a range from three to twenty-four years. Their total tenure is thirty-six years or an average of nine years, with a range of from two to eighteen years. The average annual salary of this group is \$2548 with a range from \$1260 to \$4060. If the administrator in the Graham School System could be described in averages, he is a man holding the master's degree, with 12.75 years

teaching experience, nine years tenure, and receives an annual salary of \$2548. Table 14 shows the training, experience, tenure, and salary of the administrative staff.

Table 14

THE TRAINING, EXPERIENCE, TENURE AND SALARY
OF THE ADMINISTRATIVE STAFF OF THE
GRAHAM SCHOOLS

Administrater	Training (Degree)	Experience	Tenure	Salary
A	Bachelor's	3	2	\$1260
B	Master's	8	7	2060
C	Master's	16	9	2810
D	Master's	24	18	4060
Mean		12.75	9	\$2548

High School Teachers

Table 15 shows the training, experience, tenure, and salary of the high school teachers. This table also shows sex of the faculty members. Fifty per cent of the faculty members are men which is more than is usually found in the high schools.

Table 15
 THE TRAINING, EXPERIENCE, TENURE, AND SALARY
 OF THE HIGH SCHOOL TEACHERS OF
 GRAHAM, TEXAS

Teacher	Sex	Training (Degree)	Experience	Tenure	Salary
A	F	Master's	10	2	\$1200
B	M	Bachelor's	3	3	2460
C	F	Bachelor's	8	4	1140
D	F	Bachelor's	7	2	1260
E	M	Master's	4	3	1595
F	F	Bachelor's	22	7	1260
G	F	Master's	15	4	1260
H	M	Master's	5	5	1260
I	M	Bachelor's	2	2	1260
J	F	Master's	12	2	1260
K	F	Bachelor's	11	2	1660
L	M	Bachelor's	12	10	1560
M	M	Master's	17	6	1260
N	M	Master's	13	7	1356
O	F	Bachelor's	19	14	1260
P	M	Bachelor's	9	3	2560
Q	M	Bachelor's	7	6	1200
R	M	Master's	4	4	2460
S	F	Bachelor's	10	10	1260
T	F	Bachelor's	14	8	1560
Mean			10.2	5.2	\$1505

The high school faculty meets all state requirements as to training.¹ All the teachers hold at least the bachelor's degree and eight, or 40 per cent, hold the master's

¹State Department of Education, Bulletin No. 416, Standards and Activities of the Division of Supervision, 1941-1942, p. 133.

degree. The mean number of years experience of these teachers is 10.2, and the mean tenure is 5.2 years. There is no teacher in the system who had not previously had experience, and only four have had less than five years. There were no beginning teachers for the year, although five were teaching their second year in the system. The range of experience is from two to twenty-two years and the range of tenure is from two to fourteen years. The annual salary range is rather great, being from \$1140 to \$2560.

Elementary Teachers

Table 16 shows the training, experience, tenure, and salary of the elementary teachers.

Table 16

THE TRAINING, EXPERIENCE, TENURE, AND SALARY
OF THE ELEMENTARY TEACHERS OF
GRAHAM, TEXAS

Teacher	Sex	Training (Degree)	Experience	Tenure	Salary
A	F	Bachelor's	15	8	\$1080
B	F	Bachelor's	2	1	1020
C	F	Bachelor's	8	3	1020
D	F	Bachelor's	1	1	960
E	F	Bachelor's	17	5	1080
F	F	Bachelor's	12	8	1080
G	M	Bachelor's	4	4	1760

Table 16--Continued

Teacher	Sex	Training (Degree)	Experience	Tenure	Salary
H	F	Bachelor's	8	6	\$1080
I	F	Bachelor's	17	15	1080
J	F	Bachelor's	10	2	960
K	F	Bachelor's	15	12	1080
L	F	Bachelor's	17	12	1080
M	F	Bachelor's	4	2	1020
N	F	Bachelor's	10	6	1060
O	F	Bachelor's	3	3	1020
P	F	Bachelor's	6	4	1020
Q	F	Bachelor's	1	1	960
R	F	Bachelor's	3	2	1020
S	F	Bachelor's	5	3	1020
T	F	Bachelor's	17	14	1080
U	F	Bachelor's	8	5	1020
V	F	Bachelor's	3	2	960
W	F	Bachelor's	8	6	1080
X	F	Bachelor's	15	10	1080
Mean			8.3	7.3	\$1063

The training of the teachers in the elementary schools of Graham is slightly less than that of the high school teachers. Every teacher holds the bachelor's degree, but none holds the master's degree. The average number of years experience of the elementary teachers is slightly less than that of the high school teachers. The average is 8.3 years for the elementary teachers and 10.2 years for the high school teachers.

The number of years of tenure of the elementary

teachers, however, is greater than that of the high school teachers, as the mean of their tenure is 7.3 years as compared with 5.2 years for the high school teachers. The fact that the average tenure of the elementary teachers is greater than that of the high school teachers appears to be very unusual when considering the fact that the mean annual salary of the high school teachers is \$448 greater than that of the elementary teachers. Ten, or fifty per cent, of the high school faculty are men whereas only one of the twenty-four members of the elementary school faculty is a man. This probably very largely accounts for the great difference between the average salary of the two groups. However, the maximum salary received by a woman in the elementary school is below the minimum salary received by a woman in the high school.

Salaries as Compared with the National Average

The data in Table 17 enables one to make a comparison of the average salaries received by the Graham teachers and the average salaries received by the teachers in cities of similar size.

The salaries of the administrative officials of the Graham School System compare very favorably with the salaries paid administrators in cities of 5,000 to 10,000

population.² Salaries of the teachers, however, are much lower in Graham than the salaries that teachers receive in the cities of the same size in the United States as a whole.³

Table 17

THE AVERAGE SALARIES RECEIVED BY THE SCHOOL EMPLOYEES
IN GRAHAM, TEXAS, AND THE AVERAGE SALARIES
RECEIVED BY THE SAME EMPLOYEES IN
CITIES OF SIMILAR SIZE

Employee	National Average 80 Cities	Graham Average	Difference in U. S. Compared with Graham
Superintendent	3780	4060	+280
High School Principal	2596	2810	+214
Elementary Principal	2081	1660	-421
High School Teacher	1626	1505	-121
Elementary Teacher	1289	1063	-226

Summary and Recommendations

In the Graham Schools the qualifications of the administrative and teaching staff more than meet the state

² Salaries of City School Employees, Research Bulletin of N. E. A., Vol. XXI, No. 1, February, 1943, pp. 9-10.

³ Ibid., p. 9-10.

requirements⁴ for accredited schools. Each of the forty-eight members of the staff holds a bachelor's degree, with eleven also holding a master's degree. Data compiled from the Superintendent's annual report to the Deputy State Superintendent show that many of the remaining thirty-seven staff members have completed much of the work toward the master's degree.

The mean number of years experience of the entire staff is 9 years, and the mean number of years tenure is 6.5 years.

The minimum salary requirements of the state of Texas are as follows:

All non-state aid fully accredited two year and four year high schools shall pay to all teachers including those in both elementary and high school positions, a minimum salary of \$100.00 per month, any increase in salary above the minimum of \$100.00 per month for teaching in the elementary and high school systems shall be based on college training, teaching experience, and extra-curricular assignments rather than on the level of instruction to which the teacher may be assigned, provided that salary adjustment in districts which are not already on the single salary schedule be made by a gradual increase in the salary in elementary and junior high school schedules to meet the senior high levels of 1937-1938, and provided also, that the high school salaries are not lowered.⁵

⁴State Department of Education, Standards and Activities of the Division of Supervision, 1941-1942, p. 133.

⁵Ibid., p. 136.

The salaries in the Graham Schools exceed this requirement in that all salaries are above the \$900 per year minimum. The part of the requirement which states that salaries shall be adjusted to bring the elementary teachers to the level of high school teachers of equal training, experience, and tenure should be given careful consideration by the school authorities.

It is recommended that the Board of Trustees carefully consider the advisability of inaugurating a salary schedule which will adequately compensate teachers for their training, experience, tenure and special assignments.

CHAPTER VI

THE PUPILS

Introduction

This chapter deals with the pupils of the Graham Schools. Data regarding the enrollment, attendance, and age-grade distribution will be given. A special study will be made of the school marks received, with particular attention to the differences in the marks of the bus and town pupils.

Enrollment, Attendance and Age-Grade Distribution

Of the 1606 white pupils enumerated in the scholastic census for the school year of 1941-1942 the majority, it appears, were enrolled in school at some time during the year as a total of 1791¹ pupils enrolled in the school during the year. However, only 1436 were enrolled at the close of school. Of the number enrolled at the end of the year, 530, or 36.9 per cent, rode buses to school while 906, or 63.1 per cent, did not ride a bus.

¹The large number of pupils transferred into Graham District from other districts accounts for the enrollment figure being larger than the scholastic figure.

Table 18
 DATA RELATIVE TO ATTENDANCE IN THE
 SCHOOLS OF GRAHAM, TEXAS

Item	Elementary School	High School	Total
Original entries	991	654	1645
Re-entries	127	19	146
Losses	240	115	355
Membership	878	558	1436
Aggregate days attended	141,799	90,875	232,674
Aggregate days absent	20,216	8,697	28,913
Total days membership	162,015	99,572	261,587
Average membership	922	566	1,488
Average daily attendance	806	516	1,322

Losses in high school were unusually high in comparison with re-entries. This indicates that many high school pupils were dropping out of school. In the elementary school the losses were approximately twice that of the re-entries. This was largely due to people moving to

Table 19

AGE-GRADE DISTRIBUTION SHOWING THE NUMBER OF
AT-AGE, ACCELERATED, AND RETARDED
CHILDREN IN EACH GRADE OF THE
GRAHAM SCHOOL SYSTEM

Age	Grade												Total	
	1	2	3	4	5	6	7	8	9	10	11	12		
6	99	2	2											103
7	10	26	54	5										95
8	1	7	32	62	5									107
9		3	9	30	62	8	1							113
10			4	13	37	62	2							118
11			3	10	22	27	49	3						114
12					8	12	47	80	10	1				158
13				1	6	3	21	20	79	2	2			134
14					3	4	3	15	62	52	8	1		148
15						2		9	16	88	22	12		149
16								2	3	12	92	32		141
17										2	6	43		51
18											2	13		15
19												1		1
Total	110	38	104	121	143	118	123	129	170	157	132	102		1447

defense areas, although twenty-two pupils did drop out of school.

A study of the age-grade distribution table show that there are more accelerated pupils than retarded pupils. The first grade shows no accelerated pupils, but the other grades, due to the introduction of the twelve grade system into the school and the double promotion of a large number of the pupils, show a large number of accelerated pupils.

Data from the age-grade distribution table shows that 52.4 per cent of the pupils are at the normal age for the grade in which they are enrolled. Grade one has 99 per cent of the pupils at normal age, and only 1 per cent retarded. The fifth grade has 12 per cent of its pupils retarded. This is the highest percentage of retarded students of any grade. Only 4.9 per cent of the entire school are retarded, but 42.7 per cent of the pupils are accelerated; this no doubt is an unhealthy situation which may cause trouble later.

Table 20 shows the number and per cent of pupils of each grade who are at-age, accelerated and retarded.

Table 20
 NUMBER AND PER CENT OF CHILDREN IN GRAHAM SCHOOL SYSTEM
 WHO ARE AT-AGE, ACCELERATED AND RETARDED

Status	Grade											Total	
	1	2	3	4	5	6	7	8	9	10	11		12
Number at age	109	33	41	43	59	39	68	35	78	100	98	56	759
Per cent at age	99.0	86.8	39.0	35.5	41.2	33.0	55.3	27.0	46.0	63.7	74.2	54.0	52.4
Number accel-erated	0	2	56	67	67	70	52	83	89	55	32	45	618
Per cent accel-erated	0	5.2	53.0	55.3	46.8	59.0	42.6	64.0	52.3	55.0	24.2	44.1	42.7
Number retarded	1	3	7	11	17	9	3	11	3	2	2	1	70
Per cent retarded	.9	8.0	6.6	9.0	12.0	7.7	2.1	8.6	1.8	1.3	1.6	1.0	4.9

School Marks

Since 36.9 per cent of the pupils enrolled rode buses to school, a study was made to determine any difference which might be found in the marks received by the bus pupils and those pupils residing within walking distance of the school. In the elementary schools, 881 pupils received final marks for the year. Of this number, 294, or 33.4 per cent, rode buses. Of the school marks² received by these pupils, the town children showed a distinct advantage in that 33.9 per cent of the marks they received were A's, or superior, while 26.2 per cent of the marks received by the bus pupils were A's. It is further found that the advantage lies with the town pupils in regard to failures since only 9.1 per cent of the marks they received were failing while 10.8 per cent of the marks received by the pupils who rode the bus were F's.

Table 21

THE PER CENT OF THE MARKS RECEIVED BY THE BUS PUPILS
AND THE TOWN PUPILS IN THE ELEMENTARY SCHOOL
THAT WERE A, B, C, AND F, RESPECTIVELY

Pupils	A	B	C	F
Bus Pupils	26.2	38.3	25.0	10.8
Town Pupils	33.9	38.5	18.3	9.1

²Graham Schools use the following grading system: A--90-100; B--80-90; C--70-80; F--Below 70. F is the only failing grade.

In the high school the differences in marks received by the bus pupils and those pupils living in town were even more pronounced than in the elementary school. A greater percentage of the high school pupils ride the bus than do the elementary pupils. This is due to many of the high school pupils coming from outlying districts which still maintain an elementary school but transfer all of their high school students to Graham.

In the high school, of the marks received by the bus students, 13.9 per cent were A's, while 18.1 per cent of the marks received by the town pupils were A's.

In the matter of failures, again it is found that the pupils living in town fared much better than did the boys and girls who rode a bus. More than 19.03 per cent of the marks received by the bus students were failures, while only 14.9 per cent of the marks received by the town pupils were failures.

Table 22

THE PER CENT OF THE MARKS RECEIVED BY THE BUS PUPILS AND THE TOWN PUPILS IN THE HIGH SCHOOL THAT WERE A, B, C, AND F, RESPECTIVELY

Pupils	A	B	C	F
Bus Pupils	13.9	32.09	34.9	19.03
Town pupils	18.1	30.76	36.2	14.9

Since the above tables show that there is a difference between the marks received by the pupils in these two groups, a study was made to determine whether any of the causes for these differences could be found.

Special Study of Bus and Town Pupils

As it was impossible to make an individual survey of every pupil attending the school, 213 elementary pupils were chosen at random, and a study was made of them and their environment in order to obtain information which might explain, in part, as to why the marks received by them varied so widely.

Of the 213 pupils used in this special study, 69, or 32.4 per cent, were bus pupils and 144, or 67.6 per cent, were town pupils. This was about the ratio of distribution of bus and town pupils of the student body as a whole.

For the purpose of determining the intelligence quotient of this group, the Otis Self-Administering Mental Test was used. The results of this test are shown in Table 23.

This table shows the number of pupils tested, the median score, the mean score and the mean deviation of each group.

Table 23

THE MEAN AND THE MEDIAN SCORES ON THE OTIS MENTAL
ABILITY TEST GIVEN 213 PUPILS IN THE
GRAHAM SCHOOL

Pupils	Number Tested	Mean Score	Median Score	Mean Deviation
Bus pupils	69	94.0	94.8	8.58
Town pupils	144	101.5	102.2	10.86

The mean score of the bus pupils was 6 points below normal and 8 points below that made by the town pupils. Approximately the same difference was found in the median score of the two groups. The range between the low and high scores was less for the bus students than was the range for the town students. The highest score of town pupils was 130 and the lowest score was 62, whereas, the highest score for the bus students was 120 and the lowest score was 63. The scores of the bus pupils were more uniformly grouped around the mean than were the scores of the town pupils. The mean deviation of the bus pupils was 8.58 compared with 10.86 for the town pupils.

Seventy-eight and four-tenths per cent of the special group of town pupils had made normal progress, 20.8 per cent were retarded, while .8 per cent were accelerated. Of the

bus pupils, 55 per cent had made normal progress while 45 per cent were retarded and none was accelerated.

In addition to the tests given the special group of 213 pupils, a series of questions were asked them. These questions were designed to discover some of the home factors which might have a bearing upon the marks received in school. It was thought that the educational status of the parents might affect the child's work in school, so this factor was studied. It was found that the parents of the town pupils were better educated than were the parents of the bus pupils. Of the town pupils, 25.7 per cent of the mothers and 20.1 per cent of the fathers had attended college. Only 1.4 per cent of the fathers and 4.3 per cent of the mothers of the bus pupils had attended college.

Table 24

THE PER CENT OF THE PARENTS OF THE TOWN PUPILS AND THE BUS PUPILS THAT HAD REACHED EACH EDUCATIONAL LEVEL

Educational Level	Town Pupils	Bus Pupils
Fathers		
Attended elementary school only	36.8	48.1

Table 24--Continued

Educational Level	Town Pupils	Bus Pupils
Fathers		
Attended high school only	43.0	50.7
Attended college	20.1	1.4
Mothers		
Attended elementary school only	27.1	23.2
Attended high school only	47.2	72.4
Attended college	25.7	4.3

Daily papers were found in a larger percentage of the homes of the town pupils than in the homes of the bus pupils. Eighty-four per cent of the town pupils indicated that there was a daily paper in their homes whereas only 46.3 per cent of the bus pupils indicated that a daily paper was received in their homes. The percentage of those taking two or more current magazines was in favor of the town group, as 54.8 per cent of the town group compared with 33.3 per cent of the bus group indicated that two or

more current magazines are found in their homes. More than 30 per cent of the bus pupils indicated that one or more of the "pulp" magazines are read regularly in their homes, while only 13.9 per cent of the town pupils indicated that these magazines were received in their homes.

Table 25 shows the percentage of the different types of reading material found in the homes of the 213 pupils questioned.

Table 25

THE PER CENT OF 213 BUS AND TOWN PUPILS OF THE GRAHAM SCHOOL THAT REPORTED EACH OF THE DIFFERENT TYPES OF READING MATERIAL FOUND IN THEIR HOMES

Reading Material	Town Pupils	Bus Pupils
Daily paper	84.0	46.3
Weekly paper	45.1	59.4
No magazines	20.8	21.7
Two or more current magazines	54.8	33.3
"Pulp" magazines	13.9	30.4

It is often thought that the rural sections are composed only of farmers and their families and that all the children who come to school on buses are farm children; however, from the questions asked, it was found that fewer

than one-half of the children riding the bus came from homes where farming was the principal occupation. Table 26 shows the occupation of the fathers and mothers of the bus pupils and the town pupils.

Table 26

THE NUMBER AND PER CENT OF TOWN PUPILS AND THE NUMBER AND PER CENT OF THE BUS PUPILS WHOSE PARENTS HAD EACH OCCUPATIONAL STATUS

Occupational Status	Town Pupils		Bus Pupils	
	Number	Per Cent	Number	Per Cent
Father				
Professional	13	10	0	0
Oilfield worker	14	10.8	17	24.6
Farmer	0	0	33	47.8
Skilled laborer	40	30.7	2	2.9
Business man	35	26.9	5	7.3
Common laborer	25	19.8	12	17.4
Armed services	3	2.3	0	0
Total	130	100.0	69	100.0
Mother				
Housewife	121	87.0	65	100
Secretary-bookkeeper	8	5.8	0	0
Teacher	2	1.4	0	0
Clerk	4	2.9	0	0
Unskilled laborer	4	2.9	0	0
Total	139	100.0	65	100

From the data presented, it is evident that there are several factors which might explain the reason for the boy or girl who rides a bus making lower marks in school than do the pupils who live in town: However, there is much study which should be done and much additional information that should be obtained on this question in order that the school administrators might plan a program that will meet more effectively the needs of all the pupils.

Although the evidence does show that the bus pupils earn lower marks than the town pupils, it should not be concluded that the bus pupils did not receive greater opportunities than they would have received had they remained in their local one- and two-teacher schools. It is evidence, however, which the school authorities should consider carefully in planning a program to fit the needs of all the pupils.

Summary and Recommendations

There are three very important pupil problems which confront the authorities of the Graham Schools.

The first problem is the number of accelerated pupils. Table 20 shows that 42.7 per cent of the pupils in school are accelerated. This problem was caused in 1941 when the

State of Texas changed from an eleven to the twelve grade system and permitted the majority of the pupils to skip one grade. This double promotion has resulted in an unusually large number of failures during the past two years. Many of the mistakes of this double promotion cannot be corrected, but it is recommended that a testing program be inaugurated in the school in order that the faculty may have more objective information upon which to base their recommendations for grade placement of pupils.

The problem of pupil failure is closely related to the problem of pupil acceleration. Many failures are the direct result of previous acceleration. There are other causes of failure which should be given consideration. The failures in the upper elementary grades are primarily boys and girls who are slightly over-age for their group. These boys and girls have very little interest in the subject-matter which they are required to take. It is suggested that courses in home economics, woodwork and shop, or similar courses be added to the curriculum in order that these boys and girls may have a choice in selecting subject-matter which appeals to their interest. In the high school the greatest percentage of failures³

³ Thirty-four per cent during the first semester 1941-1942.

occurs in first year algebra which is required of all students when they enter the high school. It is recommended that this subject be placed in the second year and a course in general mathematics be placed in the first year of the high school.

The third pupil problem is that of losses. This is closely related to the failure problem, but there are other reasons than failure which cause pupils to drop out of school. The high school now employs a dean of students who, through consultation with the students about their problems, has done much to reduce the number of losses. This type of work should be extended into the elementary field where it could be handled by the principals.

CHAPTER VII

SUMMARY AND RECOMMENDATIONS

The following is a brief statement of the more important findings and recommendations presented in this study.

The Graham School ranks favorably with nine other schools in the same area in regard to its financial ability to support its schools. It ranks fourth, in the group of ten, in true wealth per scholastic as shown by the tax records of the districts. According to the district tax collector's records, Graham has \$4768 of true wealth per scholastic. The median wealth per scholastic for the group is \$4610. Since much property is never placed on the tax rolls, the real wealth as shown by the tax records does not give the true situation regarding the wealth per scholastic. It is recommended that the authorities of the Graham Independent School District put forth every effort possible to place all taxable property on the tax rolls.

A study of the percentage of actual value used by the different districts for assessment purposes and the rate on each \$100 of assessed value shows that there is

a wide range in the amount of tax paid on property of the same actual value in the different districts. A taxpayer in the Bowie Independent School District must pay \$1.20 on each \$100 of property he owns; while in both Henrietta and Nocona each taxpayer must pay only 50 cents on each \$100 of property. Graham taxpayers must pay 75 cents on each \$100 of property.

The Graham District receives a larger percentage of its funds from local sources and from the Federal Government than do the districts of Texas as a whole. The district receives less funds from the state than do the districts of the state as a whole.

The funds of the Graham District are expended in accordance with an annual budget which is comparable to budgets recommended by experts in the field of school finance. It is recommended that efforts be directed toward reducing the percentages of all items in the budget except that of instructional service which should be raised.

The plant of the Graham School is adequate for the needs of the pupils enrolled. The high school building is the newest and most complete of the three buildings in the system. It received a score of 923 out of a possible 1000 points on the Strayer-Engelhardt Score Card for rating school buildings. The average score of the three

buildings was 794. The greatest need of the school plant is additional instructional equipment, and it is recommended that such equipment be added as soon as possible.

The curriculum of the Graham High School is very similar to that offered by other high schools in the same area. Graham offers more vocational and commercial work than any of the schools studied. The greatest number of subjects are offered in the high school which has the largest enrollment. Graham ranks second in enrollment and second in the number of units of credit offered.

It is recommended that an extensive study be made of those students who have been enrolled in the vocational and commercial subjects in the Graham High School in order to determine the value of this work, as the Graham School offers more of this type of subject-matter than does any other one of the ten schools studied.

It is also recommended that the problem of the number of subjects offered in the high school be studied carefully with the idea of eliminating those electives which are not educationally and economically justifiable.

It is recommended that elementary science, junior home-making, and elementary shopwork be added to the work of the seventh and eighth grades.

The administrative staff and faculty of the Graham Schools rank high in training, experience, and tenure. Each member holds an academic degree.

The administrative staff receives salaries comparable to the average in similar size cities in the United States. The high school teachers receive \$121 per year less and the elementary school teachers receive \$226 less per year than do teachers in similar size cities in the United States. It is recommended that the salaries of the classroom teachers be raised at least to the levels of that received by teachers in similar size cities in the United States.

This study has made evident some important pupil problems, in the Graham Schools. The first problem is the number of accelerated pupils. The study shows that 42.7 per cent of the pupils enrolled are accelerated. This is largely due to the double promotion system used in the school in 1941 when the State of Texas changed from an eleven to a twelve grade system.

The second problem is that of pupil failure. Many failures are caused by previous acceleration, but lack of interest and inability to do work are some of the other causes of failure. It is recommended that a testing program be inaugurated in the school system in order that

the faculty may have more objective information upon which to recommend grade placement of the pupils.

The average mark received by a pupil who rides the bus is not as high as that received by a pupil living in town. Many things which cause this difference in marks was revealed from a study of 213 pupils, of which 32.4 per cent were bus pupils and 67.6 per cent were town pupils.

The intelligence of the pupils, education of the parents, and occupational status of parents were some of the factors studied with all factors being in favor of the town pupil. It is recommended that additional study be made of this problem in order that the school officials may have more information for use in planning a program which adequately provides for the bus pupil.

APPENDIX

A copy of the questionnaire filled out by 213 pupils of the Graham School.

Please help in this study by answering every question you possibly can.

Name _____
Do you ride a bus to school? Yes _____ No _____
Grade _____ Age _____ Years in school _____
(Include this year)
Is your father living? _____ Age _____ Mother living _____ Age _____
If both father and mother are now living, are they living together? _____
Number of brothers and sisters _____ Number at home _____
Grade father reached in school _____ Mother reached _____
Do your parents own or rent your home? _____
Occupation of father _____ Occupation of mother _____
Do you have a daily paper in your home? _____
Do you have a weekly paper in your home? _____
Check the magazines below which your parents subscribe for or buy regularly.
American Magazine _____ Popular Science Monthly _____
Cosmopolitan _____ Reader's Digest _____
Collier's _____ True Confessions _____
Liberty _____ True Story Magazine _____
Life _____ Others: _____
McCall's _____
National Geographic _____
Newsweek _____
Parent's Magazine _____

A copy of the form received from ten school tax collectors regarding the percentage of actual value of property used for tax purposes in their districts.

H. A. Hefner
Graham, Texas

_____ % of actual value is used by the _____
Independent School District for tax purposes.

Assessor-Collector

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