Green

BRIEF SURVEY
of
STILLWATER PUBLIC SCHOOLS

by

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Introduction

The material for this brief survey of the Stillwater schools was collected by the writer and J.W. Bridges, now connected with the department of Education of the University of Oklahoma,-under the direction of the School of Education of the A. and M. College, and with the assistance of the city Superintendent and his corps of principals and teachers.

It has been our purpose during all this work to keep in mind the kind of survey work suggested by Dr. Bobbitt in his report of the survey of the schools of San Antonio, Texas; "(1) that systematically looks to the good that exists in the school system, (2) that sees this good not as an end of progress but as gains made that are steps to further progress, (3) that suggests constructive plans for further progress, and (4) that shows the reasons for the plans recommended so as to permit verification of their validity." (Bobbitt, 1).

We wish to express our appreciation for the efficient help and friendly cooperation of the city Superintendent, the principals, the teaching staff, the city officials and the Department of Education of the College. These people have not only made the work possible, they have made it a real pleasure.

a word about surveys.

School surveys as a means of testing the efficiency of a school system is yet in its infancy. Until the presnet time the testing has been for the two fold purpose of ascertaining the efficiency of the given school system and to arrive at a satisfactory method of applying such tests. Some of the important surveys have been made over the protests of the Supt. principals and teaching force. Such testing is probably usually val uless, and as a result many school people have come to the conclusion that the average survey is valuless.

It is the purpose of such surveys to doscover the defects in the organization and workings of a school system to the end that the efficiency of the school may be improved by rectifying such defects. The important question at once arises in the mind of the thoughtful skeptic; How are such defects determined? Is it simply a matter of judgment on the part of the investigator, or has he a systematic scheme which is universally applicable? If he has such a system, by what means and from whence has it been derived, and what is the evidence that it will apply to the school sysetm under investigation? Is it reasonable that a stranger can come into a school room and in an hour's time be able to pass judgement on certain phases of the work better than the teacher who has been working with these pupils for a number of months.

These are rational questions and until a staisfactory answer is given to them much that one might say about a given school system will fall on deaf ears. We believe a careful review of the following pages will help to answer many of them. It is seriously hoped that many teachers will give such attention to the matter of standards and tests that they will be better able to pass judgement on the general quality of their work than can any stranger.

The progress made by children as they pass through the grades of the common shcool depends largely on their ability to manage the fundamental tools of learning by means of which advancement in learning is possible. For this reason we have given the standard tests in reading, writing, spelling and the four fundamental principles of arithmetic, believing that the standard attained in these will give a fair index to the efficiency of the work as a whole being done by the school.

READING.

Everyone who has given any thought to educational matters recognizes the fundamental importance of the subject of reading in the school curriculum. The teachers of Stillwater appear to be aware of this importance and there is much effective work being done in the various rooms to solve the reading problem, but there is an alarming lack of equipment without which satisfactory results are impossible. There is evidently a feeling on the part of the shcool authorities that when a room and a teacher have been provided that all else will automatically take care of itself.

A few fundamental principals must be definately and uniformly established in the minds of the teaching force before the best results can be expected: (1) What are some of the basic reasons for teaching reading? (2) How well should children be able to read when they leave a given grade? (3) How much reading matter must the average child cover in order to gain this proficiency? (4) Since all of this reading cannot be done in the school room and in the presence of the teacher, how much direction and supervision is she to give to that reading which is done outside of school? (5) How many sets of supplimentary readers are furnished to the various grades in those school systems that measure up to the requirements? And (6) By what means does a teacher determine whether or not her pupils have reached this required proficiency?

Most of these questions have been answered satisfactorily in the minds of some Stillwater teachers, but many of them seem to be going forward without any definite goal of attainment in mind,

and certainly with a lack of system that is discouraging and expensive to say the least.

The following are the more important of a long list of reasons for teaching reading given by a large group of Denver teachers (Bobbitt,2) and are characterestic of the best answers usually given:

"Ability to gain thought from a printed page."

"Enlargement of the child's understanding."

"Accurate pronunciation of words."

"Ease and naturalness in the presence of an audience."

"An enlarged understanding of the complex world in which one lives."

"Effectiveness in presenting thought to an audience."

"Enlargement of the vocabulary."

"Ability to find information on any topic."

"A wider vision of the world and deeper human sympathies."

These are all proper worthy motives and doubtless represent the best types of reasons for teaching reading in the minds of Stillwater teachers. But there is almost no evidence that they, as a whole, have a common central purpose in mind, and if they had a common purpose they are not supplied with the necessary materials for carrying it out.

If we consider the fundamental reason for teaching reading to be to give, "an enlarged understanding of the complex world in which one lives," the schools must be equipped with a large quantity and variety of materials suited to the various grades. The upper grades must have available books, magazines and newspapers on industry, commerce, transportation, agriculture etc. They need materials on travel, lives of people in other lands, historical reading material and stories of great men and great peoples. and nothing about their own surroundings?!

One gets a broadened vision of the world by going out and seeing it.

If a pupil wishes to get a proper conception of Stillwater and its people he must go up and down its streets, see the people at their work, their play, their worship; visit the business houses, the the homes, the schools and the places of amusement. This information cannot be had from a few minutes study of a city map and a brief question and answer recitation.

It would perhaps be a fine thing if teachers were magicians, as some patrons have mistaken them to be, and could by a few passes of a text book and a few knowing phrases bring into the child's mind a knowledge of those important facts which lie beyond his horizon. The fact remains however, that information cannot be gained by this process. He must see it for himself.

To be sure he cannot hope to see with his material eyes all the things, about which he must acquire information, but by means of carefully chosen books and magazines he is able, through his imagination, to really mingle with the people of distant lands, to participate in their activities and be interested in and acquainted with their situations.

The materials by means of which these mental pilgrimages are made must be supplied to the pupils of the Stillwater schools if they are to measure up to the educational standards reached by pupils of the best school systems. It appears to be the concensus of oppinion by the best authorities on school standards and efficiency, that most of this reading material to produce the desired results must be supplied in sets and read simultaneously by the pupils of the various grades.

What sets of supplementary reading material should be supplied the various grades? In his recommendations on reading materials for the Denver schools Dr. Bobbitt gives (Bobbitt, 3) quite an extended list of materials used by the best systems of the country and

Founders of Our Country----------14
Stories of Industry----------13
Four Great Americans----------13
Stories of Columbus----------13
Old Stories of the East----------12."

Supplimentary materials for the sixth grade:

"Jungle Book----------30
Merry Adventures of Robin Hood----------24
Norse Stories----------23
Wonder Book----------20
Uncle Remus----------19
Heidi----------19
Tanglewood Tales----------18
Ways of the Wood Folk----------18
American Heroes of History----------18
Dog of Flanders----------18
Brooks of Brooks Basins----------16
Homeric Stories----------15
Stories of the Thirteen Colonies----------14
Kray and Johnnie Bear----------14
Stories of Industry----------13
Great American Industries----------13
Famous Men of Greece----------11
Story of Ulysses----------10

Supplimentary materials for seventh grade:

"Carpenter's Geographical Readers----------44
Tales From Shakespeare----------28
American Here Stories----------25
Grandfather's Chair----------21
Lives of the Hunted----------19
A Hunting of the Deer----------19
Adventures of Ulysses----------17
Miles Standish----------17
Treasure Island----------17
Little Men----------16
Little Women----------16
Birds and Bees----------15
Discovery of The Old Northwest----------15
English History Stories----------15
Hans Brinker----------15
Irving's Sketch Book----------15
Captains Courageous----------15
Story of the Romans----------14
Greek Stories----------13
Christmas Carol----------12
Boys of '76----------12
In the Boyhood of Lincoln----------10
A; B, C's of Electricity----------10

Supplimentary reading for the eighth grade:

"Man Without a Country----------28
Sketch Book----------23
Uncle Tom's Cabin----------16
Ivanho----------16
Last of The Mohicans----------14
Franklin's Autobiography----------14

Story of the Greeks----------14
Story of the Romans------- - -- -------- -----14
Julius Caesar-------- ---------- -13
Enoch Arden ---- ---------- -13
Dicken's Christmas Stories-------- ----------13
Merchant of Venice---------- -- ---- --- ---- 13
Building of the Nation-------- -- - ----------12
American Inventions and Inventors--- ----------12
Deer Slayer--- --- ---------- - ------ ---11
Two Years Before The Mast---------- -- --11."

None of the books in this long list are furnished in sets for any of the grades of the Stillwater schools. The first and second grades are much better supplied with reading materials than are any of the other grades. The third grade reads only one third reader each half of the year with no other assigned supplimentary material. The same is true for the fourth, fifth and sixth grades. A reasonalbe supply of this reading material in sets and partial sets will be less expensive than may at first appear. The cost of many hundred or a few thousand such books would be small as compared with the enormous waste, which now results from trying to teach facts of history, geography, civics, science etc. without adequate reading materials. By circulating these books from room to room and from building to building, (making one set serve the purpose of two grades when possible) as is now done with the small amount of material the school possesses, the purchase of one book per pupil would mean the reading during the year of perhaps a half dozen or more such books per pupil.

For the seventh and eighth grades we find this note in the course of study (Stillwater Course,4), "Have pupils consult encyclopedias, dictionaries and other reference works for notes on persons, places and incidents in the selection read. Work for a full appreciation of the selection read. Take no careless or sloven work". Notwithstanding the good intentions behind such a suggestion, we feel sure that it is unpedagogical and if followed systematically will cause many pupils to become discouraged and to lose that ravenous appetite for reading matter which it is the business of the school to foster.

Teachers must distinguish between word study, literary analysis, dictionary work and reading. All are improtant but the time and methods should differ, and the teacher who tries to accomplish several of these as supplimentary to, or coordinate with, the reading lesson will fail to make satisfactory progress in any of them.

Students must read much and read rapidly. After the earlier grades have supplied them with the mechanics for reading they are not to be encouraged to read painstakingly, looking up every reference as the course of study suggests. When one goes on a journey in person he does not understand thoroughly all he sees hears and feels. His experiences fly by rapidly and he gets the bigger things, those which come within the range of his interests and understanding, those he can use and the remainder is lost. The same facts hold when he goes on a mental journey as well. Suppose we, who have had more practice in reading, should be required, as we peruse the story of the Great war, to look up on a map every river and city mentioned, consult a dictionary for all the names we cannot pronounce and go to the library for all the historical facts referred to which we do not clearly recall. We would rebel, stop short our war story and turn our attention to some line of thought where the restrictions to progress would be fewer, and this is exactly what many boys do when they fall out with their teachers and leave school returning only in the evening after school hours to participate in the foot ball game or other sprots where their interest and enthusiasm can climb and soar without let or hinderence.

Let us close this somewhat lengthy criticism with a quotation from the San Antonio survey; "The things needed for the training (in reading) are books, magazines and newspaper articles. They

should be things of worth that can be so recognized by the pupils. They should be well written, interesting articles and suited to the pupil's comprehension. When these things are supplied, the things further needed are more books, more magazines and more well written suitable newspaper articles, and after these still more." (Bobbitt,5)

We have given considerable space to this rather severe criticism of the equipment for teaching reading, and it is encouraging now to note the splendid results this corps of teachers actually produce in spite of this great handicap. As we shall show presently, the application of the standard tests in reading proves that Stillwater pupils hold close to the average for all cities where these same tests have been given excepting the eighth grade which goes noticably above the average for these other cities.

Before we discuss the tests and the tabulation of the results, let us say a word concerning the methods employed in teachin reading. As we visited from room to room and listened to the reading lessons the following outline was kept in mind. (Finley,6).

(1) Does the teacher give attention to the position of the pupil while reading?

(2) Is the lesson taught, or merely heard? Does the teacher see that the pupils get the main content and thought of the lesson, or is the lesson simply a word repeating task?

(3) Does the teacher have the pupils do some silent reading to gain thought and interpretation, and then give it orally in his own words?

(4) Is any attention goven to phonics and word drill?

(5) Is there any use made of dramatization?

(6) With what grade does formal reading cease?

(7) How many books are read in the first and second grades?

(8) When is the primmer intorduced in the first grade?

(9) With how many words are the children familiar before they take up the book?

We visited reading classes in eight different rooms during one week and in five of these a sufficient amount of care was given to the position of the pupil while reading. In four of these rooms the pupils when asked to read passed orderly to the front of the room and read to the audience. In these rooms, the position of the pupils while reading was quite good with few exceptions and these seemed somewhat confused because of the visitors.

In two other rooms the positions were fairly good but not uniform. The pupils stood by their desks and read to the teacher rather than to their classmates. While the positions in these two rooms were not uniform it was evident that some instruction as to the proper position had been given. One of the two remaining rooms was a first grade where the pupils were struggling to master the management of their books and the other was an intermediate grade where system seemed entirely lacking.

In two of the rooms teachers seemed satisfied if the pupils could say the sentences correctly, and nothing whatever was said about the thought of the lesson. In four rooms some questioning was done at the beginning of the lesson to ascertain whether or not the pupils understood the story. In the remaining rooms what meager questioning was done was done at the close of the reading exercise. In one of these rooms the questioning revealed the fact that the pupil did not understand what they had read and the teacher realizing that she had lost the period turned to her visitors, and with some embarrasment made excuses for the poor showing they had made.

In one room pupils were asked to give in their own words the thought of the paragraph, but other teachers assured us that the practice is quite common in many rooms.

Only two of these eight teachers were observed to pronounce words phonetically or to assist the pupils in doing so. It was observed that the pupils in these rooms were able for the most part to master words unaided and required very little help from the teacher. One teacher's low question, "Who can sound the second word in the third line for William?" brought a ready response and correct answer, with a confusion that was negligible when compared with some other methods we observed in other rooms. Many Stillwater teachers could profit greatly by the splendid example of this teacher and their attention should be called to her methods.

One teacher spent the entire ten minute study peridd in pronouncing words for her pupils. She stood at her desk and as pupils raised their hands, she called them by name and they stood and spelled the word in question and she pronounced. This certainly was poor teaching. The method was perhaps parallelled in quality by one other teacher who adopted the convenient method of appointing three children to pass quietly about the roon and pronounce for the other pupils. During the entire study period these three gave all their time to teaching and none to their own work. One primary teacher who is giving splendid attention to phonics mentioned with some pride that she had pronounced but one word in her room during the entire year. We are sure that in some of the lower grade rooms an average of some hundreds of words are pronounced daily. If the attention of these teachers could be called to the methods of some who are doing splendidly in this matter, as many are, it would be a startling revelation and perhaps the biginning of a helpful revolution.

A reasonable amount of dramatization is done in the first and second grades. Teachers in these grades are aware of its values and most of them know quite well how to use it to advantage, but these rooms have an average of about thirty-five pupils,--

these in three divisions--, and under these crowded conditions it is impossible to give the proper amount of time to this important phase of the work. Some dramatization is done in some of the third and fourth grade rooms. We found no evidence that any work in dramatization is done above the fourth grade.

Formal reading is continued through the eighth grade. Many cities do not continue formal reading beyond the seventh year and this doubtless accounts for the fact that the eighth grade in Stillwater exceeds the standard aberage by a noticable margin.

The amount of reading material covered in the first and second grades is very satisfactory. The first grade reads two primers and two first readers in the regular class work. Some primary rooms read one other supplimentary set besides a considerable amount of sight reading.

The second grade reads two second readers in their regular class work and a supplimentary set is furnished for sight reading. Some other material should be supplied this grade. In the first grade the book is taken up at the beginning of the seventh week. This is the requirement of the course of study and it is adhered to for the most part. By way of experiment one of the teachers continued the script through eight full weeks before taking up the book, while one other took up the book at the beginning of the fifth week. The teacher who took up the book at the beginning of the nineth week reprots that this class made more satisfactory progress than have either classes in her room, which took up the book at an earlier date.

The number of words taught before the books are taken up are not uniform, but ranges from fifty to one hindred thirty-four, the latter being the number learned by the class which took up the book at the beginning of the nineth week. The average number from year to year

is perhaps some less than seventy-five. Some systems have two hundred as the standard number of words to be mastered before the book is taken up and allowed twelve weeks if necessary as the time in which to accomplish this. Since one of these systems has a state wide reputation for its work in primary reading, it would seem that Stillwater might increase to advantage the time and the number of words to be matered. To say the least the longer period should have a real test.

There is a tendency on the part of some teachers of the lower grades to yield to the temptation to have the pupils take their books home and have their mothers or other members of the family teach the reading lessons to them and thus relieve the teacher of her greatest task and responsibility. Teachers as far down as the second and third grades were heard to say to pupils, by way of excusing their poor work to the visitors, as well as to reprove, "I am afraid you forgot to take your book home last night." It is a well established fact that pupils under twelve years of age should do no home studying whatever, and that grade pupils over twelve should not be expected to do outside study for more than one hour a day (Moore, 7). True, it is a very convenient arrangment for the teacher to give all of her time to hearing the pupils recite that which they have been taught at home, but these home people are not qualified to do this teaching and pupils are seriously handicapped in their progress because of the poor methods employed.

We mention in passing that the teachers of Stillwater do much oral reading to their rooms, and that their examples, almost without exception, are most worthy of imitation. In one intermediate room visited the teacher read the entire lesson, a selection of poetry, to the class before calling on the pupils. She is a splendid reader and it was noticable with what distinctness of

enunciation and fineness of inflection many of the pupils imitated her splendid example. If the rather common criticism is true that teachers as a whole fail to get results in reading largely for the reason that they lack ability to read well themselves, it does not apply to the grade teachers of Stillwater. The ability of these teachers together with their zeal for results is doubtless the reason why Stillwater pupils are up to the standard average in reading ability, in spite of the lack of sufficient material with which to teach reading properly.

TESTS IN READING

Because of the greater rapidity with which the tests can be given, and the simplicity with which they can be accurately rated silent, rather than oral, reading tests were given. The tests used are known as "The Kansas Silent Reading Tests" and were devised by Prof. F. J. Kelly of the Emporia Normal School. Although these tests are comparatively new, they have been tried in dozens of cities and with thousands of pupils and the average results from testing such large numbers may be accepted as standards since they will likely not vary more than a small fraction of a percent by averaging the results of their future use.

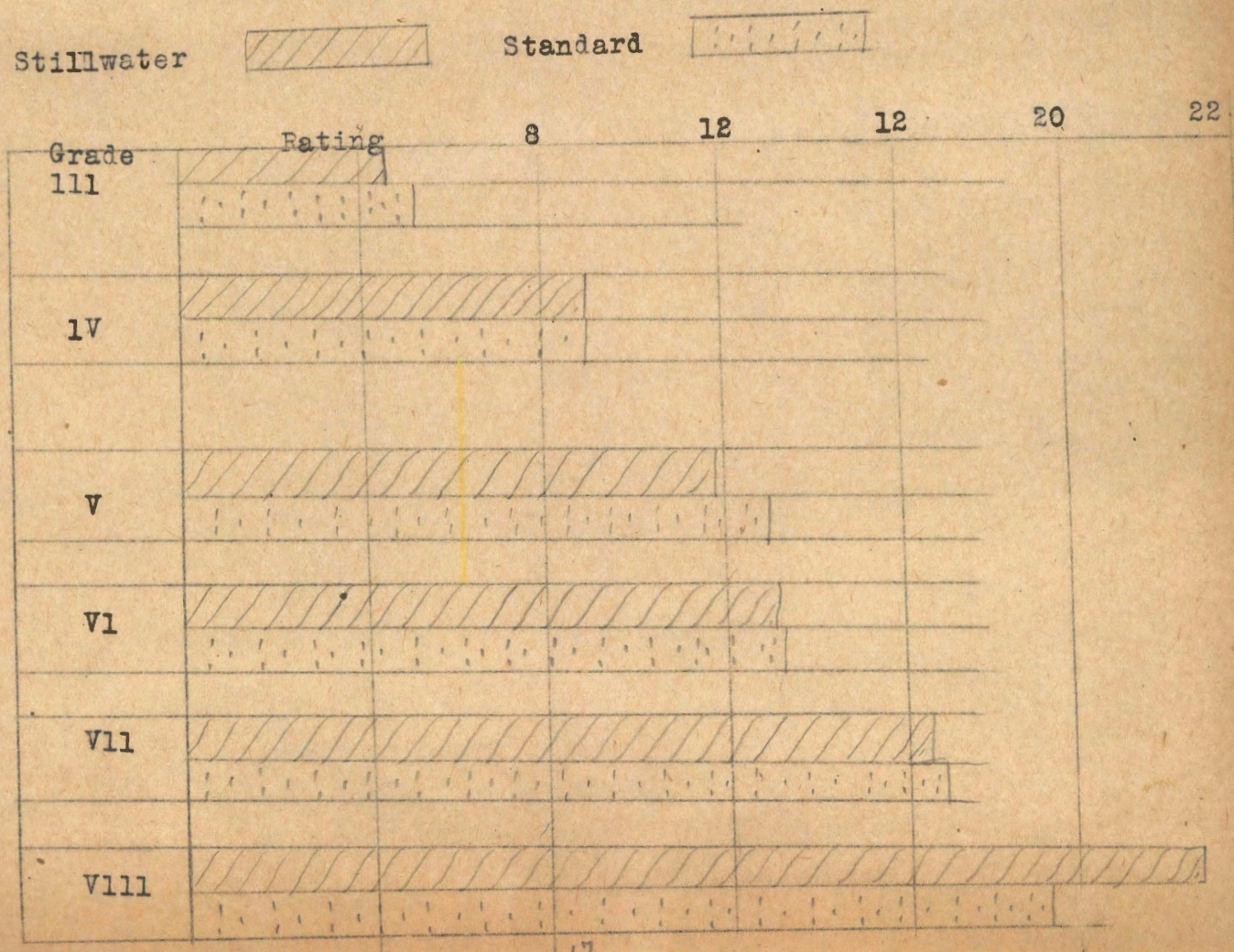
These tests were designed to measure the threefold reading ability of the pupil: (1) his ability to read rapidly, (2) to read with comprehension, and (3) to give continuous attention during the exercise.

Results of the Tests.

Grade	111	1V	V
Stillwarer	4.6	9.4	12
Cushing	1.4	6.8	13.7
Standard	5.	9.4	13.4

Grade	V1	V11	V111
Stillwater	13.7	16.4	22.6
Cushing	13.3	12.3	22.1
Standard	13.8	16.5	19.2

Good work - CC



The tabulation and diagram shows that Stillwater pupils read almost as well as the average of the other cities whose pupils have been subjected to this same test. We have already mentioned the fact that Stillwater continues formal reading through the eighth grade while most cities stop formal reading with the completion of the seventh year. The results would indicate that this method of Stillwater's, is a paying practice.

It must be mentioned here that the tests given at Cushing were given to only one room of each grade while in Stillwater they were given to all the rooms.

SUMMARY and SUGGESTIONS.

Additional suitable reading material should be supplied in sets for all the grades. The first and second grades are better supplied than the other grades, but some additional material is needed.

Pupils are expected to do too much home study. No home study should be required of pupils under twelve years of age.

Most of the teachers are good readers and this fact is creditably reflected in the reading of their pupils. There is much value in the practice of doing a reasonable amount of reading to the pupils.

The practice of continuing formal reading thourgh the eighth grade is producing very satisfactory results, and is to be most highly commended.

Many teachers pronounce far too many words for their pupils. These teachers could profit greatly by observing the splendid methods employed by some other Stillwater teachers.

Pupils must not be asked to give their time to assist in pro-

nouncing words for their classmates. This practice robs them of their opportunity to study, and their qualifications are too limited for them to be permitted to assist others.

A longer period of script reading in the first grade, before the book is taken up, should have a real test.

More attention must be given to phonics and word drill by some teachers. This work should be given separate from the regular reading lesson.

In many rooms more attention should be given to questioning the pupils for the purpose of ascertaining whether or not they understand what they have read.

The average reading ability of Stillwater pupils is as high as the average for the other cities where these same tests have been used.

ARITHMETIC

The tests in Arithmetic are somewhat less satisfactory and reliable than the tests in the other three subjects. This results from the fact that the material used was the "Studebaker Practice Exercises," the applications of which are supposed to be repeated at various times throughout the school year, whereas we applied them only the one time. However, records of their first application in a number of other school systems have been tabulated and a comparison of the results obtained from Stillwater pupils with these averages gives a reasonably accurate comparison of the ability of Stillwater pupils with the averages obtained from many other systems.

The Studebaker Practice Exercises deal only with the four fundamentals of arithmetic, addition, subtraction, multiplication, and division. The sets are progressively arranged, those coming later in the series being more difficult although they are to be completed in the same time as the simpler sets coming toward the first of the series. For our tests we selected sets near the bottom of the series, which parallelled in difficulty, so far as we could determine, some of the standard tests in the fundamentals which pupils of a given grade are expected to complete in the same given time.

These Studebaker exercises have been carefully compiled and have been revised from time to time as information on their application has accumulated, until the exercises in all four divisions of the fundamentals parallel each other throughout the series. That is a pupil should rate as high in any one of the fundamentals as he does in the others, and failure to do so would indicate that his preparation lacks balance and that a larger proportional amount of drill should be spent on that phase of the work in which his showing is poor until he has gained proficiency in this equal to his ability in the other fundamentals.

If our comparison between the Studebaker problems and the standard tests are correct, a pupil should complete twenty-two of the addition problems in the time allowed in order tomake a grade of one hundred percent. (The problems are the same for all the grades but less time is allowed in which to complete the expecises as we pass up the grades.) Therefore to show an ability of seventy percent, a pupil must complete at least sixteen of the addition problems in the time. He is given credit for problems that are completed and whose answers are correct.

The results were determined by piling the papers of each grade in the order of their rating. The score of the middle sheet or the average of the two middle sheets,-if the number was even-, was taken as the median score for the grade. The tests were given only to the grades above the third, and the results were as follows.

MEDIAN SCORE OF THE GRADES IN THE

FOUR FUNDAMENTALSI

ADDITION.

Grade--	1V	V	V1	V11	V111
%-----	68.18	68.18	68.18	63.63	77.27

SUBTRACTION

Grade--	1V	V	V1	V11	V111
%---	59.9	68.18	81.81	68.18	90.9

MULTIPLICATION

Grade	1V	V	V1	V11	V111
%-----	72.8	78.07	82.44	87.50	66.77

DIVISION

Grade--	1V	V	V1	V11	V111
%-----	73.21	69.02	63.77	87.11	93.77

The following are samples of the problems used in the tests in arithmetic;

ADDITION

67	78	74	65	33	24
98	98	49	79	38	26
23	03	56	56	10	30
48	27	66	60	94	72

SUBRTACTION

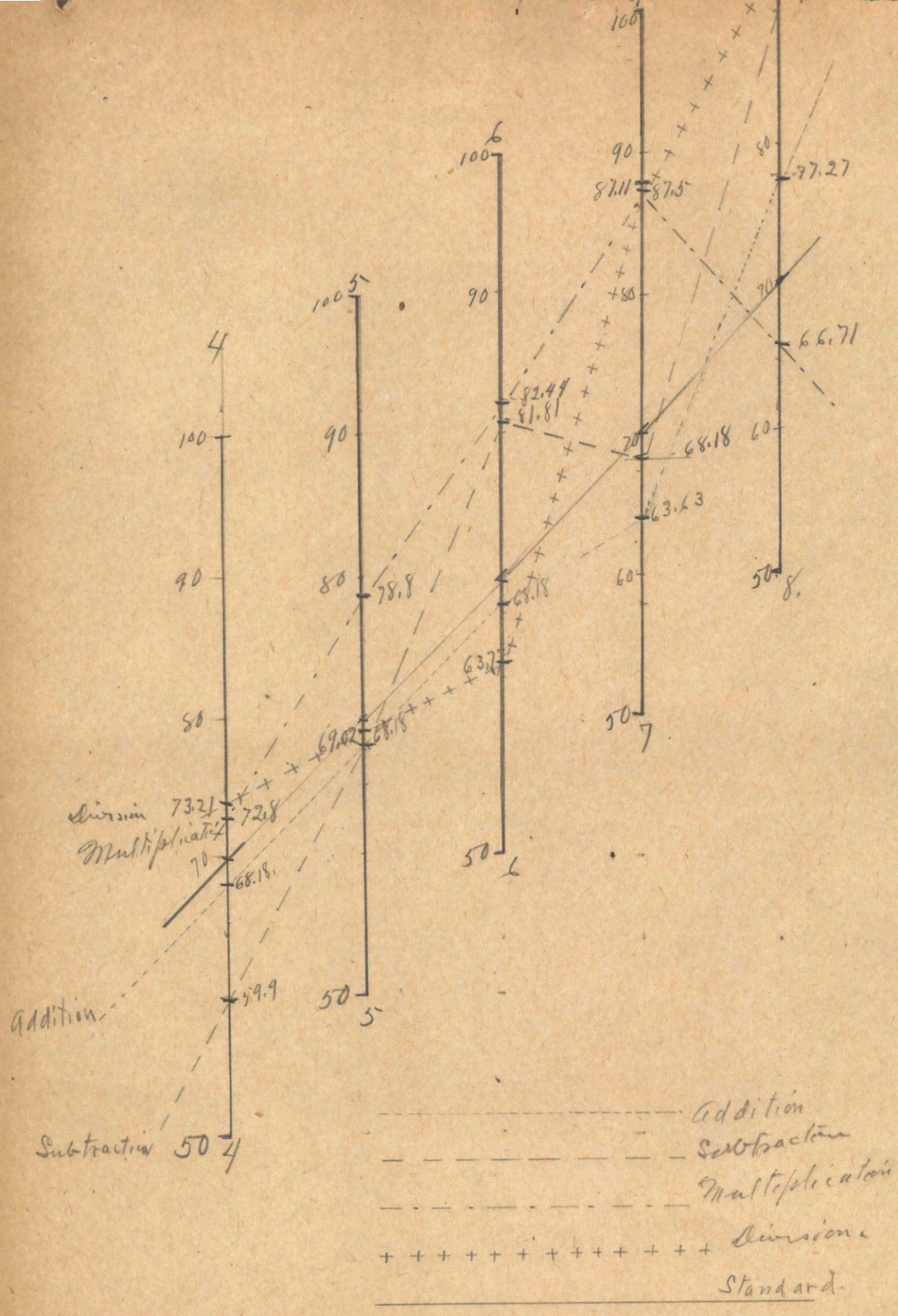
904	847	784	506	1324	1258
357	692	375	284	618	709

MULTIPLICATION

426	812	963	507	496	627
45	37	78	94	39	60

DIVISION

8)2416 4)9456 6)1794 7)3563 5)1100 3)5592 .


4
5
6
7
8
100
90
80
70
60
50
73.21
72.8
68.18
69.9
78.8
69.02
68.18
82.44
81.81
68.18
63.27
87.11
87.5
68.18
63.63
77.27
66.71
Division
Multiplication
Addition
Subtraction
Addition
Subtraction
Multiplication
Division
Standard

If we observe the plot of this information on the accompanying graph, we notice that pupils of the Stillwater schools are as a whole above the average in ability to use the four fundamentals of arithmetic. We observe also, that they multiply and divide with greater skill than they add and subtract. In addition they fall slightly below the standard in all the grades below the eighth. Only two grades are above the standard in subtraction, and there is greater variation here than in addition. In division the fifth and sixth grades fall below the seventy percent line, and all are above the standard in multiplication save the eighth grade. The eighth grade has made such a favorable showing in all the other tests, including the other three fundamentals of arithmetic, that we feel sure that the conditions were in some way abnormal and that the showing of the test in multiplication does not do them justice.

Both the outline in the course of study and the practice in most of the rooms would indicate that the Stillwater schools are abreast of the best methods for accomplishing results in arithmetic. The course of study gives the following excellent advice: "The elements of arithmetic are best taught by means of actual objects. Avoid the purely abstract and deal in the concrete, ---- Rapidity is essential in mathematical calculations. To attain this there should be frequent drills in addition, subtraction, multiplication, and division and similar problems." Speaking of the first grade, the outline continues: "Remember that the great thing to be accomplished in this grade is reading and writing. Do not worry if some pupils do not seem to take to numbers."

The best authorities (Moore,6) are suggesting that no number work be taught in the first grade excepting the few combinations that come up incidentally in the other regular work, while some authorities

offering the same suggestion, would continue this practice through the first half of the second year, as well. In practice we find some of the first grade teachers giving more time to number work than either the course of study or recent authorities recommend.

For the second grade, we find the course of study suggesting that: "Primary number book (be placed) in the hands of the pupils." This suggestion certainly is not backed up by recent authority or the best practice.

Most of the teachers seem to have mastered quite well the all important art of keeping all the pupils busy during the exercises in arithmetic. Some few, however, could profit greatly by the examples of the majority in this respect. Large coordede rooms cannot be managed to adbantage without systematic preparation of the work on the part of the teacher. Some few Stillwater teachers are evidently failing to make this preparation. Their work is not sufficiently thought out to make the least possible waste of time on the part of the pupils. These teachers should be allowed, even required, to observe the methods of those teachers whose results are more satisfactory. Such visiting is now encouraged by the Superintendent, but a more satisfactory method of providing time for these visits should be worked out as soon as possible.

We have noted that Stillwater pupils make a good showing in arithmetic. It must now be observed that this efficiency is bought with a considerable rice. The intermediate grades spend approximatley one eighth of the school time on arithmetic while the seventh and eighth grades devote one sixth of the entire time to this subject, and yet there are more failures in arithmetic than in any other subject. More than ten percent of the enrollment are repeating in the grades, and more largely because of failures in arithmetic than from any other one cause.

Let us express this cost in dollars and cents. The time devoted exclusively to arithmetic, by these grades tested, will

average very near one seventh of the entire time. This means that more than four thousand dollars are annually expended for the purpose of teaching arithmetic to the grades. But over ten percent fail to pass in arithmetic, and therefore four hundred dollars or more are spent annually in teaching pupils what they have already been taught but failed to learn. This loss is too great for the number of pupils involved, and must lessined if possible. The loss in money is the smallest item. The loss of time by the pupil is the greatest concern but the lost effort on the part of the teacher is also an important matter. This effort which is now spent in teaching what the pupil has once covered must be more largely spent in the direction of absolute progress.

How can this loss be remedied? The course in arithmetic, and in other branches as well, should be so arranged that a small percent of the brighter pupils will be able to gain one or two years as they go up through the grades. (Almost none do this now.) This gain will tend to offset the loss occasioned by the repeaters. **Strayer suggests, (Strayer, 9)**, that the ideal situation is one in which the number who gain a geade any given year is equal to the number who repeat in the work they have onced covered.

There seems to be a common feeling among teachers that the number of duller pupils is always larger than the brighter ones, but if the term "average pupil" means anything it means that there are as many pupils above the average as there are pupils below it. If the courses of study were made out with the ability and needs of the "average pupil" more clearly in mind, and some special help given to these brighter pupils, as well as the duller ones, the number of pupils who complete two grades in one year will tend to equal the number of pupils who must spend two hears to complete the work of one grade. The large number of repeaters would suggest that the work is outlined for a gourp of pupils whose ability

ranks considerably above the average standard. The school tries to do more in a year than the "average student" can do under the circumstances and donditions and the system sustains this great loss in time and money as a result.

A second suggestion is; that the rooms be supplied with printed sheets containing problems in the four fundamental operations of simple numbers and fractions ready for solution. Too much time at present is spent by teachers in copying drill work of this character on the boards, and by the pupils in recopying it from the board to their paper. Copying long lists of figures from the board is altogether a proper exercise occasionally for the penmanship period, but such work has no value as an exercise in arithmetic, The cost of teaching arithemtic in Stillwater is too great for any of the time to be unnecessarily wasted by this present copying process.

These sheets can be obtained from any house dealing in school supplies, and their cost is very nominal, if bought in lots of a few thousand. In urging the use of such material in the schools of San Antonio Texas, Bobbitt says; "The twenty-five percent increased efficiency in the drill in the fundamental operations will pay the added expense many times over. The same results now had can be had in considerable less time."

SUMMARY and SUGGESTIONS.

The tests in arithmetic are slightly lass satisfactory than the tests in the other subjects.

Tests were given in addition, subtraction, multiplication and division. These tests were applied in all the grades above the third.

As a whole Stillwater pupils show an ability in the fundamentals of arithmetic above that of the fifty cities, whose average makes up the standard.

Stillwater pupils multiply and divide with greater skill than they add and subtract.

In addition they are below the standard in all the grades, tested, excepting the eighth. Only the sixth and eighth grades are above the standard in subtraction.

In division the fifth and sixth grades are below the standard. All excepting the eighth grade are above the standard in multiplication.

Both the directions in the course of stude and the methods observed in most rooms indicate that Stillwater is abreast of the better methods of teaching arithmetic.

Somewhat more attention is given to numbers in the first grade than the best recent authorities recommend.

Many teachers do not plan their arithmetic lesson sufficiently well to make the best possible use of the time, given to the subject.

The school spends about one seventh of its entire time on arithmetic and yet there are more failures in arithmetic than in any other subject. This indicates that too much is

expected of pupils in arithmetic as compared to other subjects. The course should be modified so as more nearly to fit the needs of the "average pupil".

Too much time is at present lost by teachers copying problems on the boards, to be recoppied by the pupils. The school should furnish printed sheets of practice problems for the grades. The time now lost in copying is worth many times the cost of this material.

11 J.H.B.

SPELLING

From the thousand word list compiled by Dr. Ayers, "by computing the aggrigate of 1400000 spellings by 70000 children in eighty four cities," we selected for each of the seven grades above the first the first twenty words of the lists on which the average rating for these eighty four cities was eighty-four percent. The words of the list are the commonest in English writing and are such as Stillwater pupils of the given grades are familiar with, and their ability to spell the words they are likely to have occasion to write, as compared with the average pupils of other systems, can be reasonably well determined by how much their average rating goes above or below eighty-four percent.

The lists of words were pronounced by the teachers in order to avoid the slight loss usually oc casioned by haveing the words pronounced by a stranger.

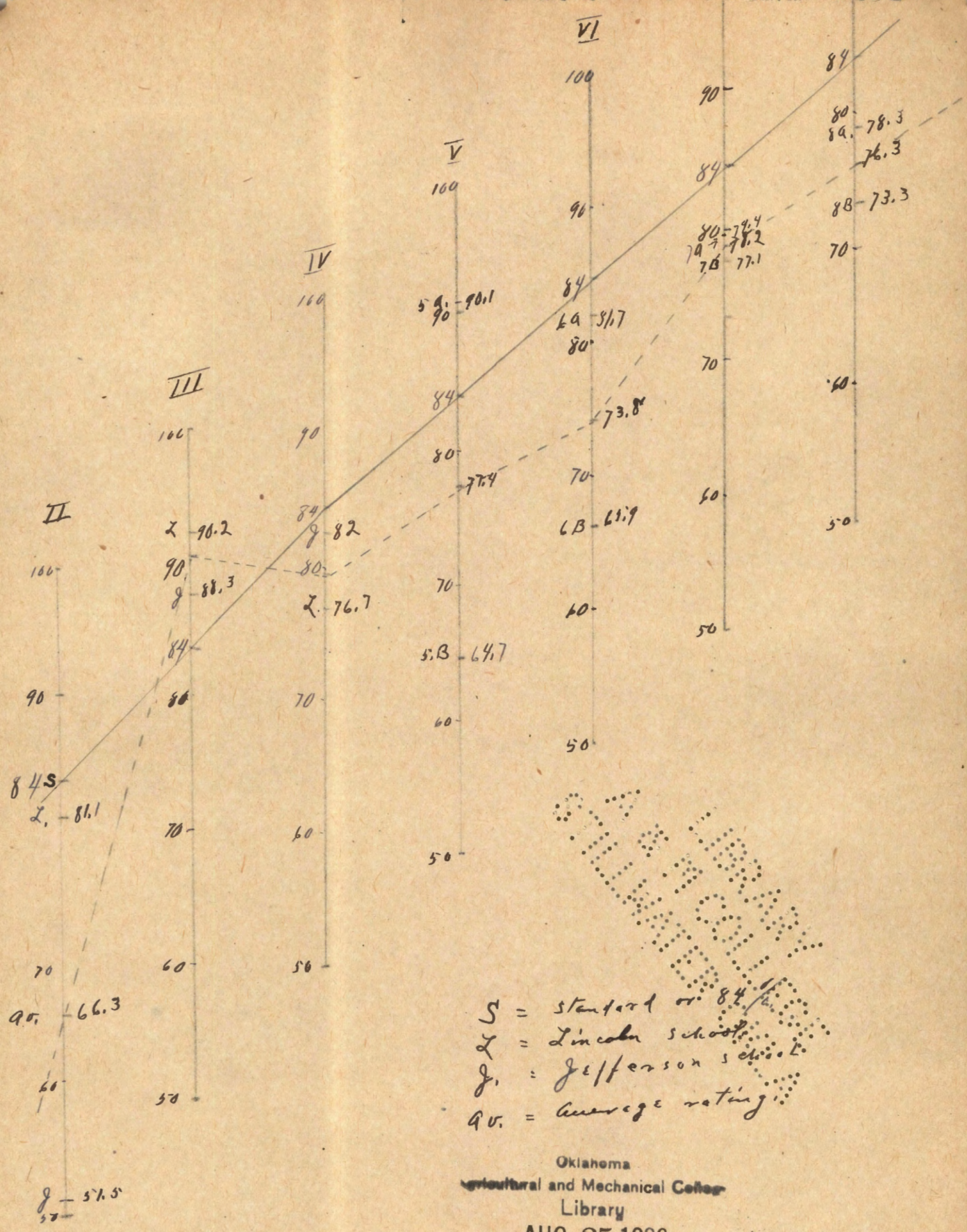
The List of Words.

Second	Third	Fourth	Fifth
by	seven	trust	eight
hand	forgot	extra	afraid
have	happy	dress	uncle
ring	noon	beside	father
are	think	teach	comfort
live	sister	happy	elect
had	cast	begun	aboard
kill	card	collect	jail
over	south	file	shed
late	deep	provide	retire
must	inside	sight	refuse
let	blue	stood	district
make	post	fix	restrain
big	town	born	royal
school	stay	goes	objection
mother	grand	hold	pleasure
street	outside	drill	navy
three	dark	army	fourth
say	band	pretty	population
	game	stole	proper
come			
hand			

Sixth	Seventh	Eighth
sometimes	often	meant
declare	stopped	earliest
engage	motion	whether
final	theater	distinguish
terrible	improvement	consideration
surprise	century	colonies
period	total	assure
addition	mention	relief
employ	arrive	occupy
property	supply	probable
select	assist	foreign
connection	difference	expense
firm	examination	responsible
region	particular	beginning
convict	affair	application
private	course	difficulty
command	neither	scene
debate	local	finally
crowd	marriage	develop
factory	further	circumstance

Results of the test in spelling.

Building: Lincoln		Alcot		Jefferson	
Grades	%	Grades	%	Grades	%
2,A and B	81.1	7,B	77.1	2,A	51.5
3,A and B	92.2	7,A	81.5	3,A	90.3
4,A and B	76.7	7,A	77.3	3,A	86.3
		8,B	73.3	4,A	77,7
		8,B	84.1	5,B	64.7
		8,A	74.6	5,A	90.1
				6,B	65,9
				6,A	84.9
				6,A	78.5



S = standard or 84 %
L = Lincoln school
J. = Jefferson school
Av. = average rating

The above table shows how the spelling ability of Stillwater pupils compares with the Ayer's standard. For the large number of cities, whose agerabe is the basis for this standard, the average rating on this same list of words was eighty-four. It will be noted that all the grades average below the standard excepting the third. We are unable to ascribe other than general reasons for this rather poor showing in spelling, but some of the rooms whose aberage is exceptionally low should be looked into.

It is noticable that one of the second grades made the poorest showing in the entire test, and that a third grade room in the same school made the highest record. If these third grade pupils were as poor when they came to the third grade as were the pupils of the second grade tested, this third grade teacher must have done one of two things; either she has devised a workable plan for improving their spelling very rapidly, or she has given too much attention to spelling and has made progress in this branch at the expense of other subjects. It would be well to make careful inquiry into the methods employed by this teacher and see that some other teachers, whose pupils made an unsatisfactory showing, profit by her splendid example.

The graph of the results is so arranged that it shows the increased difficulty of the list of words as we pass up the grades. With this in mind it will be observed, that there was not only no advancement in ability to spell when we compare the third and fourth grades but there is an actual loss. This means that if the same list of words had been pronounced to these grades that the third grade would have averaged above the fourth. The list for the fourth grade were only ten percent more difficult than the third grade list, yet the difference of the averages is eleven and nine tenths percent.

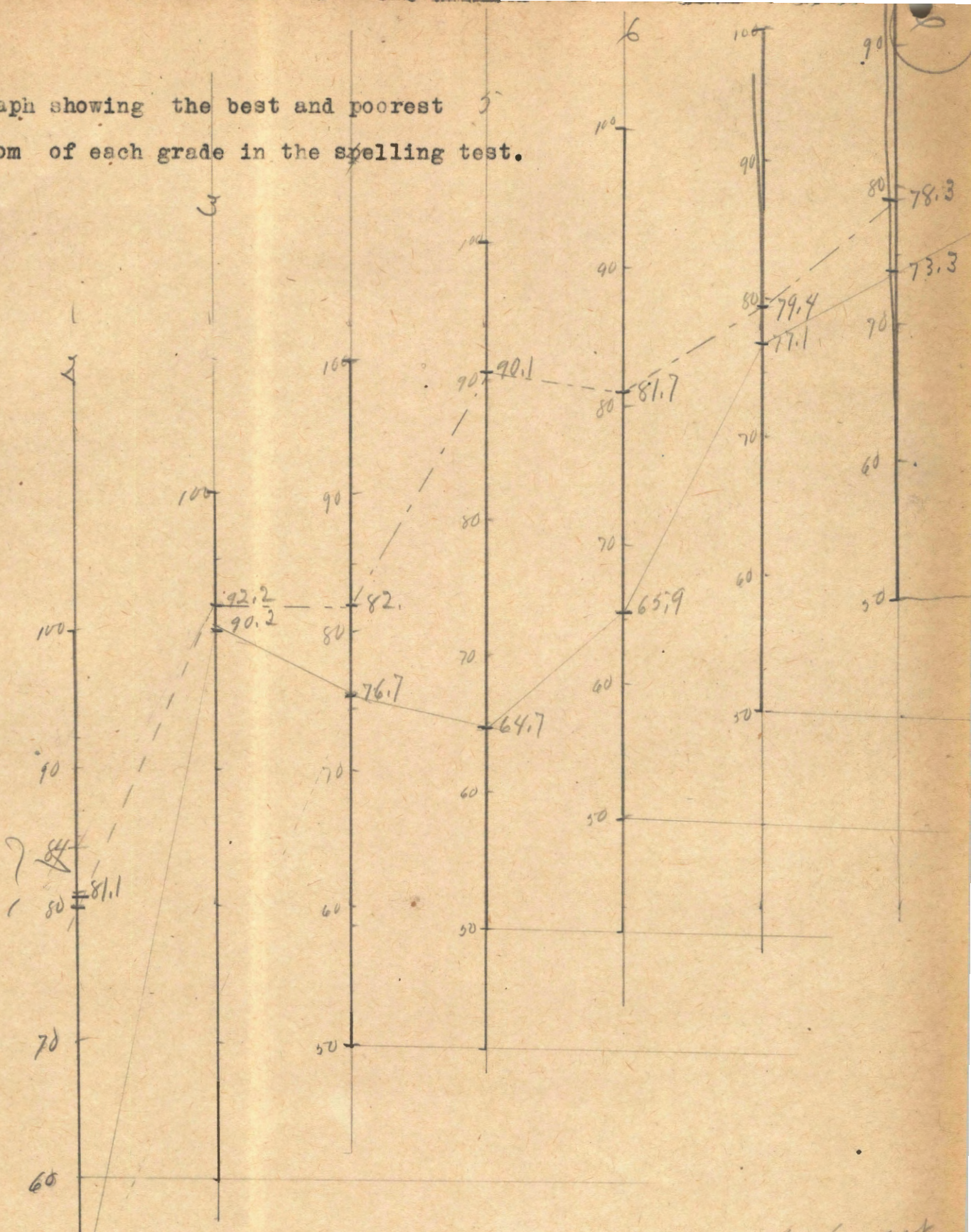
The importance of this serious loss will be more apparent if we follow the graph further. The advanvement from grade to grade through the remainder of the grammar school is very uniform and almost parallels the Ayer's standard. However, they are never able to make up this loss and they finish the eighth grade about a year behind what the standard expects of them. If the fourth grade had made the same progress as did the grades above them instead of being a year behind they would actually be above the standard throughout the course after passing the second grade.

If we refer now to the graph on the following page, we observe that one of the two fourth grade rooms just held the ground gained in the preceeding grade, while the other room of this grade had actually lost ground in spelling ability. But more alarming yet, (if we follow the graph for the poorest showing), when pupils are passed from the fourth grade to one fifth grade room they continue to go backward. One B fifth room averaged sixty-four and seven tenths which is more than ten percent less than the poorest fourth grade averaged. This means that this fourth grade room of whose spelling ability we have been complaining, could have made a better showng than this B fifth room on the same list of words. It is only when the showing of this B fifth grade is averaged with the splendid record of the two A fifth divisions that there is a showing for progress.

We note that there is a noticable rise of the graph for the seventh and eighth grades, which we account for by the fact that in these grades there is departmental instruction, and one teacher hears all of the spelling.

Spelling is taught for the purpose of giving pupils the necessary ability to put down in proper form the words they will likely have occasion to write. For this reason practically all spelling lessons should be written and the words should be confined

Graph showing the best and poorest room of each grade in the spelling test.



Graph showing the best and the poorest room of each of the grades, in the spelling test.

to the few thousand, at most, which the pupils are most likely to have use for in their future writing. The first of these suggestions are now followed rather closely by the Stillwater teachers as a whole. However, we saw some long lines of grade pupils spell-orally in some rooms. No teachers, so far as we know, follows this method regularly but we are convinced that much valuable time is lost by this method in some rooms. The key note in all teaching is to keep all the pupils busy, and when their pupils stand in a line each waiting his turn to spell the two or three words pronounced to him each day, there is an appaling loss of time.

The second suggestion, that the words be kept within the probable range of the pupils needs are not adhered to so closely. There is no choice in texts, as that matter is fixed by law, and we are sure that the Oklahoma adopted text is as good as any and above the average. Yet, some discrimination on the part of teachers is necessary in order to make the best use of the spelling time. So far as we could learn the lessons were assigned as wholes or parts, just as the words come with no discrimination whatever among the words.

By way of experiment, we selected from the adopted speller the following ten words:

kaleidoscope	suzerainity
delicatessen	kinetoscope
chinquapin	dephlegmator
tonneau	sarcenet
debeige	pellagra.

This list was pronounced to ten representative business and professional men of the city with the following result; The whole number of words of the list spelled correctly was three, two men did not remember having heard of a single word in the list. Two had heard of one word each and no individual of the ten had an acquaintance with more than four words of the list.

No school can afford to use its time and money to master words of this character. We would suggest that a committee be appointed to go through the adopted speller and eliminate those words which the pupils are least likely to need, thereby reducing the long list of words now covered by the grades and thus raise the standard of spelling ability of the pupils for the words they will be sure to need.

SUMMARY AND SUGGESTIONS

When compared with the Ayer's standard, the test shows the spelling ability of Stillwater pupils to average about a year behind what the standard expects of them.

Since the gain is fairly constant after the fourth year and since the third grade rating is above the standard, it would seem that the second and fourth grades are more largely responsible for the poor showing, for the school as a whole, than are the other grades.

One fourth grade room and one fifth grade room made a poorer showing than did the next grade below each of these rooms.

In the seventh and eighth grades, where we find departmental teaching, the results approach the standard more closely than do the grades below these.

Too much oral and too little written spelling is done is some rooms.

A committee should be appointed to eliminate a number of the more uncommon words from the speller and thus save time for the words ~~from the speller~~ for which they are more apt to have use.

Some Stillwater teachers are doing splendid work in spelling, far above the aberage for the teachers of the city as a whole. Their methods should be ascertained and the information made avainable for those teachers whose work is now noticable below the standard.

PENMANSHIP

Samples of writing were secured from all the pupils of the fifth, sixth, seventh and eighth grades. A short selection was dictated to each room, the pupils committing it to memory before beginning to write. In order to make sure that all understood, the first samples of their work were collected, examined and destroyed and a second sample collected for record.

When each pupil had his materials ready and had commited the selection he was to write, the following instruction were given: "Write the stanza of the poem you have learned. Write it just as you would in a composition or ordinary exercise. If you finish the stanza write it over again and keep on writing until I tell you to stop. Write on only one side of the paper. We must start together and stop together. Lay your paper on your desks in position. Have pen and ink ready. When I say "Get ready" Place your hands in position to write but do not begin to write until I say "Start". Then all begin at once. When I say 'Stop' I want you to all stop at once and raise your pens so that I can see that you have stopped."

When these instructions had been given the examiner, watch in hand, gave the order "Start" and the pupils continued to write for three minutes. The papers were collected and graded in the following manner. The number of letters formed on each paper in the three minutes was determined, after the papers of each room were piled one upon another, in order of their rating for speed. The middle paper of such a pile, (or the average of the two middle papers if the number was even), was taken as the mean average rating for the speed of that room. That is, as many pupils exceeded this rate as there were pupils who fell below it. The mean score for speed for each room of a given grade was determined in this manner

and these means were averaged, and the result divided by three. This gave the mean average number of letters per minute for that grade.

The rating for quality was done by means of the Ayer's Scale in the following manner: A sample of penmanship was placed on the scale, (one of which accompanies this discussion), and moved along the samples of the scale to determine which speciman of the scale it resembled most in quality, and the grade of this speciman of the scale was placed on the pupils sheet. After all the papers of a room had been rated in this manner the average of all the ratings were taken to determine the average quality of the penmanship for that room. An average was then taken of the rating, for quality, of all the rooms of this same grade to determine the average quality of the writing for the grade.

Since this rating for quality is wholly a matter of comparison and judgment, and since the papers were graded by persons of little experience in such work, we have made an effort to give the pupils the benefit of every doubt. We are enclosing an Ayer's Scale ~~samples~~ by which the papers were rated and with it are specimans of writing from Stillwater pupils which have been rated at the various percentages. A comparison of these, we think, will evidence the fact that if justice was not done the pupils, it was because the grading was liberal rather than the reverse.

The standard set by the Ayer's Scale for both speed and quality are somewhat higher than the averages for speed and quality for fifty larger cities of the country and also above the aberages attained by 27000 pupils of the Iowa schools as rated by Ashbaugh. (Ashbaugh, 10). For this reason we have made comparison in our graph between the rating of Stillwater pupils and the averages obtained from those fifty larger cities, rather than between the Stillwater rating

and the standard which is some higher than the showing of these other cities. Therefore, our standard for comparison is not a standard of perfection to be attained if possible but is based on what the average of many thousands of pupils of the country are actually doing.

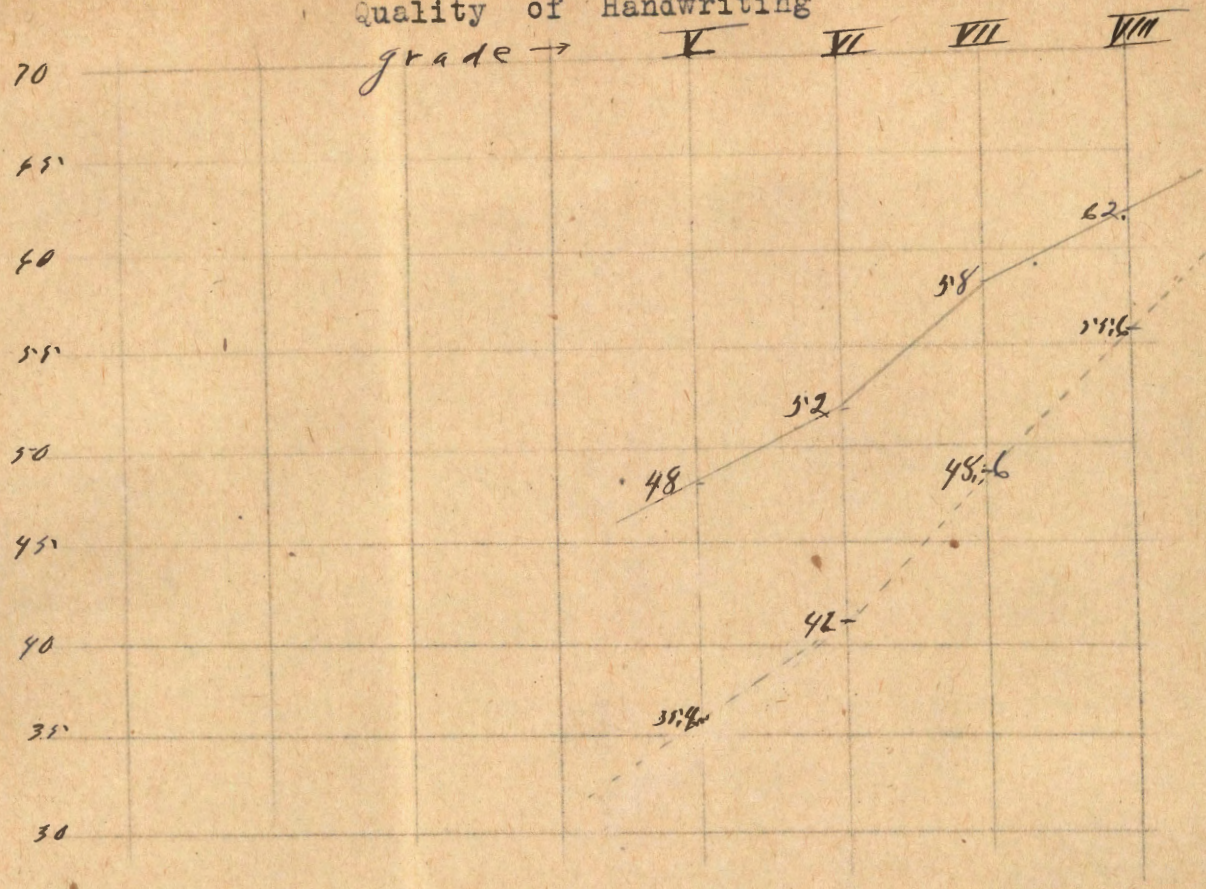
The following tables and graphs show the comparisons:

	Speed	Standard	Quality	Standard
Fifth B	55.1	57	36.1	48
Fifth A	69.6		34.7	
Sixth B.	55.6	63	40	52
Sixth A.	56.6		44	
Seventh B.	67.6	67	45.4	58
Seventh A.	72		51.9	
Eighth B.	77.6	73	53.6	62
Eighth A	81		57.6	

Average by Grades

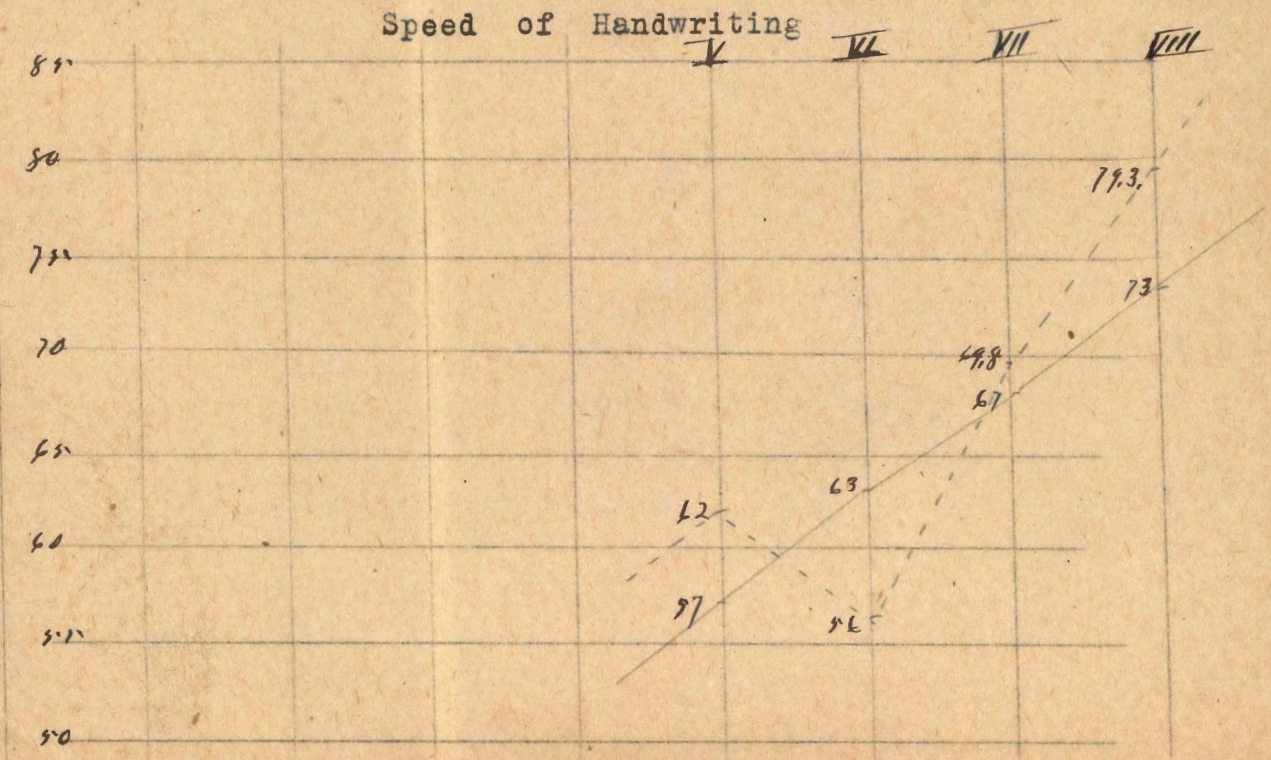
	Speed of 50 Cities	For Stillwater	Quality 50 Cities	Quality Stillwater
Fifth Grade	57	62.3	48	35.4
Sixth Grade	63	56.1	52	42
Seventh Grade	67	69.8	58	48.6
Eighth Grade	73	79.3	62	55.6

Quality of Handwriting



Average 50 cities - - - - - - - Average Stillwater

Speed of Handwriting



If the samples of penmanship collected are fair representations of what the schools of Stillwater are accomplishing in writing, the general quality is considerable below what other systems are accomplishing. All grades examined excepting the sixth are above the average for the other cities in the matter of speed, while all are below the other cities in quality. This would indicate that the pupils write too rapidly. We believe they exceeded their ordinary rate when writing the test, and thereby sacrificed quality of work for speed. We are sure that if specimans of their regular class work in writing would lower the record for speed and increase the quality of their work proportionately. This would brig the graph for both speed and quality nearer the standard.

It must be remembered that these cities, the average of which forms the basis for our standard, are larger cities which employ special supervisors of penmanship while Stillwater has none.

An examination of the papers signifies that there is a woeful lack of uniformity and system as a result of having no director for the work in writing. Form, slant and style vary to all extremes as one passes from room to room and grade to grade. Often in the same room there is the greatest variation in all these matters. It is questionalbe perhaps whether or not a city the size of Stillwater should employ a special instructor in penmanship, but some sort of leadership and system must be had.

Some teacher who is able to give directions and get results in penmanship should meet occasionally with teachers of given grades and explain her methods. The teachers as a whole need help in the matters of economizing time, proper materials, posture, proper exercises for correcting certain errors, as well as to the quality of owrk to be expected of the pupils.

It seems evident that many Stillwater teachers need such help, and it is also evident that there are some others abundantly able to supply the needed assistance, if some sort of plan were worked out. This could be done with very little additional cost in time and money, and cerrainly with great advantage to the work.

The graph for quality seems to place the responsibility of the rather poor showing in this subject on the teachers of the lower grades. It will be observed that pupils of the fifth grade are almost two years behind in the quality of their work, and although they make uniform progress, even gaining some on the standard as they proceed up through the grades because of this great handicap they are still a year behind when they finish the work of the common school. This matter should be looked into. We are convinced that with just a little assistance as to standards, methods and uniformity of purpose, these teachers will be able to bring the work of their rooms up to a satisfactory standard.

We shall not go into the large question as to how well children should write when they leave the grades, nor whether the quality of writing attained by Stillwater pupils is sufficient to meet the demands of life outside the school. Since Stillwater cannot hope to set the standards for society, we are taking it for granted that Stillwater students are doing satisfactory work in writing only when they do as well as the average pupils of the other cities of the country.

SUMMARY and SUGGESTIONS.

The tests in penmanship were given and graded according to the instructions of the Ayer's penmanship tests.

Since the Ayer's standards are slightly higher than ~~the~~ for fifty larger cities of the country, the average for these cities is used as the standard in our graph.

Stillwater pupils are considerably below the average for the fifty cities in the quality of their writing, but are some above their average for speed in writing.

There is too much lack of uniformity in both system and method of teaching penmanship. If a special supervisor for this subject cannot be had, some other method of giving general uniform direction to the work of the teachers must be worked out.

The teachers, as a whole, lack a proper conception of the standards to be attained by their given grades.

Since the graph shows ~~that~~ that the pupils make progress about as rapidly as the standard calls for after they pass the fourth year, it would seem that the teachers of the lower grades are largely responsible for the poor showing in penmanship.

FINANCES

"The perpetual problem of any city is, how many of its children is it willing to educate and how well, " says Dr. Ayers. This statement applies to Stillwater and it is proper to consider in this discussion of how well educational work is done in Stillwater, how much it is costing, and see if there is the proper relation between expenditures of money and results. In the minds of authorities on school matters it is pretty well established fact that education is a commodity that can be bought and paid for. It follows then, that within limits which have never yet been reached, that this community may secure for its children as much education and of such a quality as it is able and willing to pay for.

Stillwater spends on her schools about $28,500.00 annually. Of this amount approximately $3000. comes from the state school fund and the remainder is raised locally. This $25500. raised locally amounts to thirty-seven and forty-four hundredths percent of the total annual expenditure for all purposes of the city government, if we except the paving tax. The following table shows that if we compare Stillwater with nine larger western cities as to the percent of total city expenditures used for school purposes that she stands fifth from the bottom. The same comparison with ten eastern cities shows that she again stands fifth from the bottom.

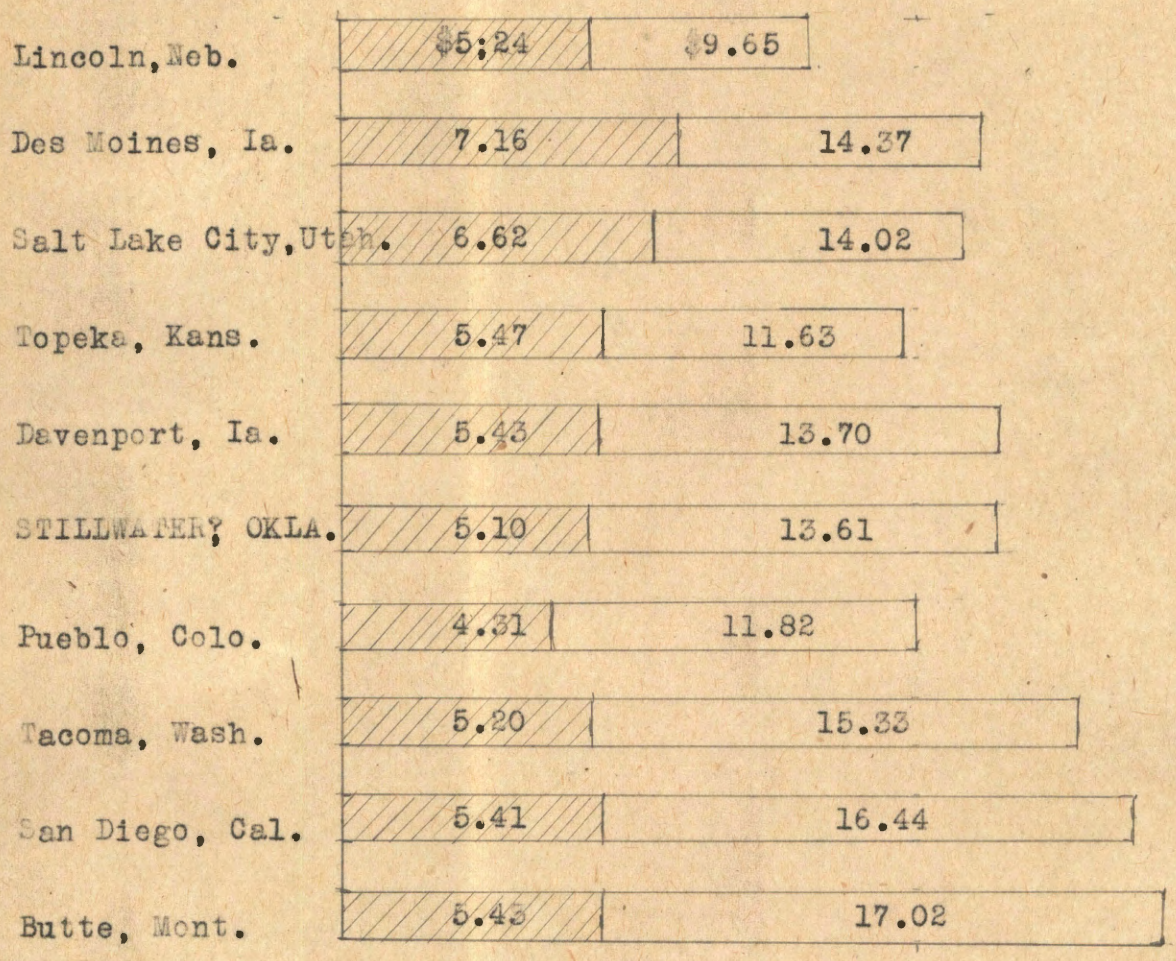
The same table shows that in percapita cost of schools that Stillwater comes third from the top in the western group and sixth from the top in the eastern group

TABLE SHOWING THE PERCAPITA COST OF EDUCATION AND PERCENT OF CITY EXPENDITURES FOR SCHOOL PURPOSES IN STILLWATER AND IN NINE WESTERN AND TEN EASTERN CITIES.

	Percapita cost of education.	Percentage of total expenditures used for school purposes.
Western Cities:		
Pueblo, Colorado	4.31	36.5
Tacoma, Washington	5.20	33.9
Lincoln, Nebraska	5.24	54.2
San Diego, California	5.41	32.9
Butte, Montania	5.42	31.8
Davenport, Iowa	5 .43	39.6
Topeka, Kansas,	5.47	47.
STILLWATER, OKLAHOMA,	5.70	37.4
Salt Lake City, Utah,	6.62	47.2
Des Moines, Iowa,	7.16	49.8
Eastern Cities:		
Fall River, Massachusetts,	4.06	34.4
Scranton, Pennsylvania,	4.45	47.2
Hoboken, New Jersey,	5.27	39
Bayonne, New Jersey,	5.60	48.1
STILLWATER, OKLAHOMA,	5.70	37.4
East Orange, New Jersey,	6.15	34.5
Yonkers, New York,	6.35	32.9
Springfield, Massachusetts,	6.86	34.9
New Rochelle, New York,	7.04	37.5
Mt. Vernon, Virginia,	7.25	35.4

(Strayer,11).

If we compare Stillwater again with the same nine western cities, by means of the following diagram we find that she stands near the median when we consider the total cost of city government percapita, and that only three are lower in local expenditures per capita for educational purposes.



The bars indicate the annual expenditure per inhabitant for municipal government, and the shaded portions indicate per capita expenditure for school purposes.

The $5.10 for Stillwater schools does not include the $3000. received annually from the state, but only the amount which is raised directly by the community.

There is a general feeling in Stillwater, as in most other small cities, that standard buildings and equipment can be better afforded by the larger cities, but this diagram would indicate that the larger cities, afford these things only by increasing the per-capita cost to a point above that which the average smaller city is willing to pay. Under proper management this increased equipment together with better salaries is always accompanied by increased efficiency of the schools. Therefore we conclude that Stillwater can have for her children, both in amount and quality, an education commensurate with the amount of money she is willing to spend on her schools.

SOME COMPARISONS BETWEEN STILLWATER AND EIGHT OTHER OKLAHOMA CITIES.

A number of inquiries were sent out to Oklahoma cities, corresponding in size with Stillwater, concerning their school finances. Following are tabulation os the results:

K

	Population	Sch'l tax	Teachers	Total Exp.	Total enrollment	% Attendence	Supt sal.	Prin. Sal
Keifer	800	5.7	26	$39717	1016	90.2	2200	
Ardmore	10000	5	45	62218	2533	79		
Marietta	2300	--	15	14000	700	94	1800	1000
Lawton	8000	6.5	40	37990	1900	95	2000	1200
Durant	8000	10.5	35	31428	1653	92	1800	1125
Ponca C.	3300	10	27	25000	920	92	1800	1050
Vinita	5000	8	30	29372	1220	94	2000	1200
Stillwater	5000	13	33	28500	1030	82.2	1500	1000
Blackwell	5000	15	32	52000	1684	86	2200	1350

	Investment in Bldgs., sites & equipment per pupil	Annual cost per pupil (grades)	Annual Cost per pupil (H. S.)	Number of pupils per teacher. (Total enrollment)
Keifer	$46.33	$46.25	$58.50	43.5
Ardmore	146.65	20.35	51.18	52.5
Marietta	30.70	24.	36.	47
Lawton	196.	18.80	48.	49.8
Durant	55.50	21.77	60	50.3
Ponca City	85.85	21.	71.93	29
Vinita	70.75	13.76	32.59	48
Stillwater	66.25	20.71	28.97	33.63
Blackwell	70.94	15.12	48.96	37.3

Salaries of Stillwater teachers (by grades) and of the teachers of eight other Oklahoma cities

	Grades								
	I	II	III	IV	V	VI	VII	VIII	H.S.
Kiefer	87.50	87.50	77,50	76	76.00	77.50	80.00	85.00	102.00
Ardmore	70	62.25	65	60	60	57.50	58.75	105	----
Marietta	65	60	60	60	60	60	75	70	80
Lawton	67	65	60	60	60	60	60	65	83
Durant	65	55	60	55	65	65	65	105	88.33
Ponca City	70	55	55	55	55	65	75	75	81
Vinita	70	57.50	56.25	55.83	68.75	53.75	72.50	69.50	92.77
STILLWATER	62.5	55	55	55	55	57.50	60	60	76.85
Blackwell	58	53	52	50	50	56	70	70	90

Several matters of interest are revealed by a study of these charts. Stillwater has a smaller percentage of her total population enrolled in the schools than have any of the other cities. The presence of the college with its long list of courses, enrolling students below the freshman year will account for this in a measure, but the number enrolled in these courses is too small to account wholly for this difference.

The annual cost per pupil is considerably less for Stillwater than for the average of the other cities. This is accounted for in three ways: (1) The percapita wealth is doubtless some less in Stillwater than in the average of these other cities, (2) the school buildings and equipment of Stillwater are inferior to the buildings and equipment of the average of these other cities, and (3) Stillwater pays lower salaries than do the average of the other cities of the list.

Doubtless the citizens of Stillwater can offer many excellent excuses and explanations for this lack of buildings and equipment. However, experience has taught many cities that increased facilities and equipment, when the money has been wisely expended, has made for increased efficiency in educational progress to such an extent that the increased expenditure of money proved an asset even from the financial standpoint. We are convinced that an additional investment of $75000 to $100000 in school buildings, repairs and equipment would increase interest and enthusiasm and the possibilities for educational progress, by increasing the enrollment and attendance, to such an extent that very large dividends would be realized on the investment.

Although Stillwater pays smaller salaries than most of the cities in the list, we are sure than the quality of her teaching force is considerably above that of most

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cities of the state. Numbers of students are graduated from the college each year whose home is Stillwater, and many of these are willing to take positions in the local schools at salaries, smaller than their services warrant. Some other excellent teachers are glad to come to these schools at a sacrifice in salary because of the added intellectual and social attractions of a college town..

However, we believe that an increased investment in salaries could be made to advantage. At present some rooms are too crowded and an increase in the teaching force would tend to increase the efficiency of the work. Again, increased salaries will increase the tenure of teachers, a matter from which the schools of Stillwater are suffering. The San Antonio survey (page 206), gives the length of time teachers of twenty-five cities have been in their presnet positions, and the average tenure is over six years. When we compare this statement with the fact that approximately fifty percent of the teachers of Stillwater are now,.(school year 1917-18), teaching their first year in their present positions the situation is little short of alarming.

It is proper to mention in this connection that Stillwater raised the salaries of all her teachers this year ten percent and that plans are in progress to make another salary raise next year.

How much does it cost to educate pupils in Stillwater as compared with the other eight cities of Oklahoma? The above table ~~page~~--- shows that the annual cost per pupil in the grades of Stillwater is $20.71. This is the mean for the nine cities,four paying more and four less than this amount. The cost is based on the total enrollment for the year. Based on the average daily attendance it would be some higher for all the cities. The average

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cost per pupil for maintaining the high school is $28.97. This is considerably less than any other city in the group pays, the average for the other cities being about twice as great.

We have noted in another place that Stillwater pupils are poorly housed compared to most other cities. If we consult the table we find that three cities of the list have asmaller investment in buildings per pupil than has Stillwater, while two of the remaining five have an investment more than twice as great.

Stillwater schools are not crowede when comparison is made with the cities in the table, since she stands next to the bottom in this particular. The figures are based on the enrollment for both grades and high school, and since the enrollment in the high school is only about twenty pupils per teacher, the number per teacher in the grades is some larger than the figures would indicate. Several rooms have over forty, whereas the standard requires the number never to exceed thirty.

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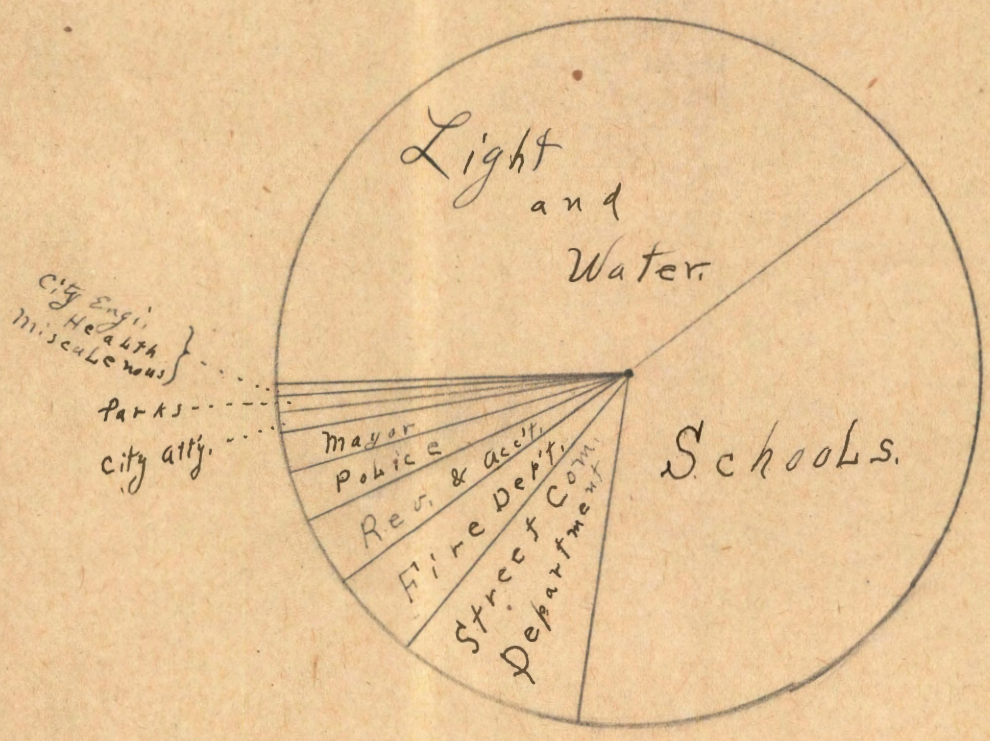
Stillwater spends annually for all purposes of city government approximately $68051.00. The city records show that this money is expended for the following purposes:

	Total Cost.	% of total tax	Cost per capita
Light and Water-------	$27450.	40.33	$5.49
Schools----- ----------	25500.	37.44	5.10
Street Commissioners Dep't--	5449.50	8.01	1.09
Fire Department----------	2551.50	3.74	0.51
Dep't Revenue & Accounting--	1907.	2.91	0.38
Police----------	1658.	2.44	0.33
Mayor---------- -------	1207.	1.77	0.24
City Attorney----------	480.	0.70	0.09
Parks----------	380.	0.55	0.07
City Engineer----------	270.	0.39	0.05
City Health----------	270.	0.39	0.05
Miscellaneous---------- ------	928.	1.36	0.18
Total	$68051.00	100%	$13.61

(From books of the city clerk.)



SUMMARY and SUGGESTIONS.

Stillwater spends on her schools annually $28500. Of this amount $3000. comes from the state fund, the remaining $25500.00 being raised locally.

Of the entire cost of local government, 37.44% of all expendatures is for educational purposes. This is some less than the average percentage for ten larger western cities.

The percapita expendature for education in Stillwater is $5.70, which is lass then the average for the same ten western cities.

If we compare Stillwater with eight other Oklahoma cities we find that; The percentage of school levy is more for Stillwater than for the average of the other cities: The salary of the High School Principal is below the average: The salary of the Superintendent is the lowest in the list: The percapita investment in buildings is below the average.: The annual cost per pupil in the grades is less than the average, while the cost per pupil in the high school is the lowest in the list.

Stillwater has fewer pupils per teacher than the other cities with one exception. Teachers salaries are less in Stillwater than ~~for~~ the average for the other cities.

In spite of the low salaries Stillwater teachers rank well both in scholarship and ability.

Within limits that have never yet been reached, Stillwater can have for her children as much education and of such a

quality as she is willing to pay for. If her schools are to keep pace with the best, they must have, more supervision, more and better buildings, more teachers with better salaries, longer tenure for teachers, and better equipment. All of which means she must have more money for her schools.

A GENERAL SURVEY OF THE SCHOOLS

AND

THEIR EFFICIENCY.

Classification, Retardation and Promotion.

According to the latest report of the school census, there were in the indipendant school district of Stillwater 1218 children of school age. This means those between the ages of six and twenty-one. The following table shows the number of these children enrolled in the public schools and their classification according to age:

ENROLLMENT AND SCHOOL CENSUS

Ages	School census	School Enr't	% of Enr't
Under 8 years	152	129	84
Between 8 & 14	492	440	93
Between 14 & 16	186	134	78
Between 16 & 21	388	327	84
(This includes both grades and high school)			

The table shows that the enrollment equals eithty-four percent of the scholastic census. We note also that the percentage between the years of sixteen and twenty-one is up to the average. This is somewhat misleading since the enrollment includes some over twenty-one and many pupils from out of the district, neither of which is included in the enumeration. The same is true in a lesser degree for the other grades, and yet with due allowance for these modifications, the percentage of children in school is gratifying.

One test of the efficiency of a school system is to note whether or not it is able to hold the pupils which come to it. Gaged by this test Stillwater would rank very high. We see by the above table that almost exactly one fourth of the enrollment for the grammar school is enrolled in the last two years of the course. For the United States as a whole almost seventy-five percent of the pupils have dropped out by the time they reach th these grades. Too much cannot be said for the showing Stillwater is making in this particular.

We have noted already that a larger proportion of pupils from out of the district enroll in these grades than in the others, and therefore the real facts would be a slight modification of the splendid showing of the table.

A similar table and diagram sets forth the important facts concerning promotion and nonpromotion. The percentages are based on the number in school at the end of the semester, and does not include the number which dropped out during the year. Based on the entire enrollmnt the percentages would have been some higher.

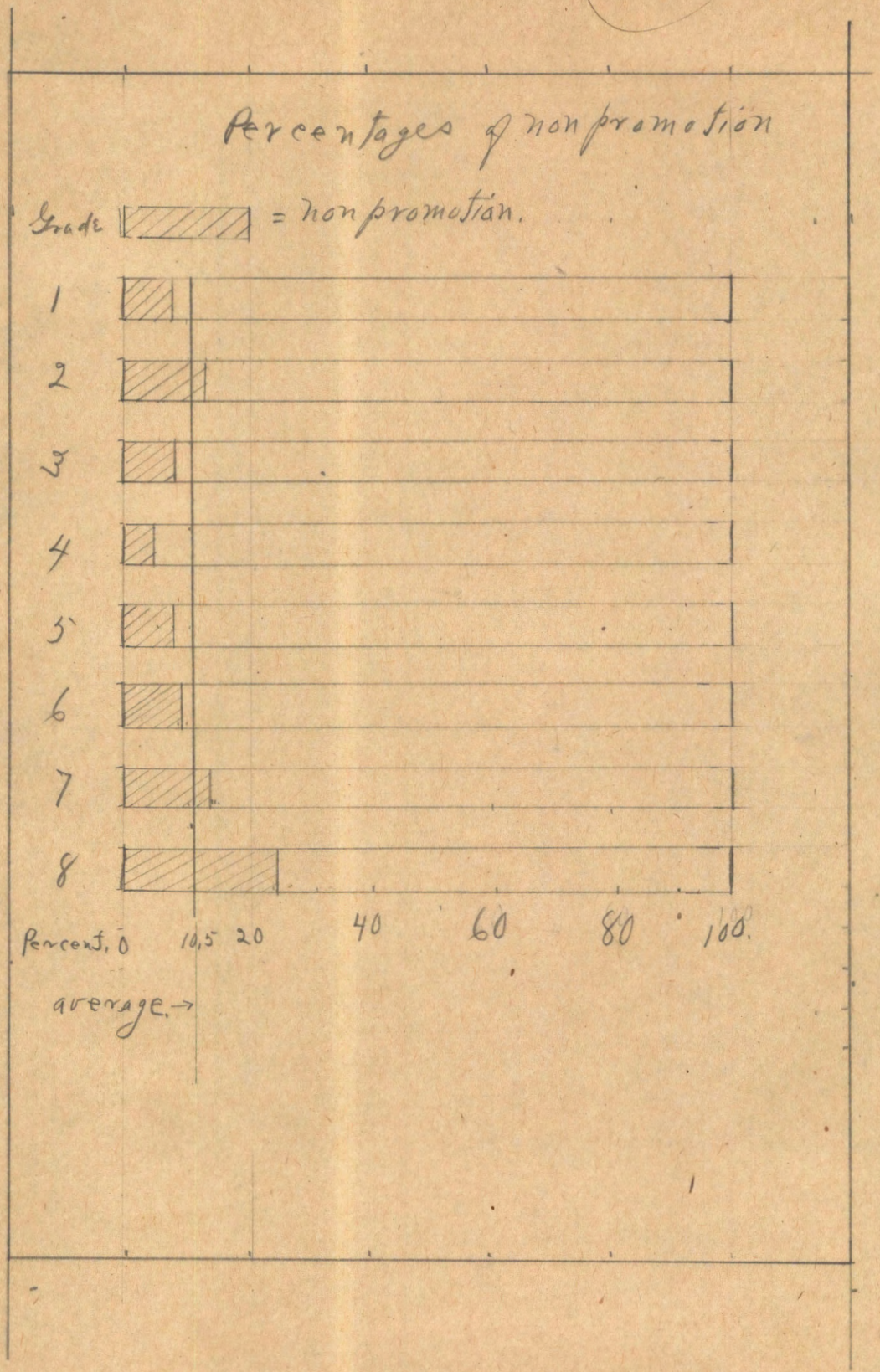
PROMOTION AND NONPROMOTION

The following tabulation is based on the number in school at the close of the year.

Grade	No, in class.	Promoted.	Not promoted.	% of promotion.
1	58	54	4	6.98
11	76	66	10	13.15
111	85	79	6	7.06
1V	102	98	4	3.97
V	82	76	6	7.31
V1	89	81	8	8.98
V11	98	82	13	13.66
V111	74	57	17	22.97
TOTAL	661	593	68	10.50

failed (?) or non-promotion

4

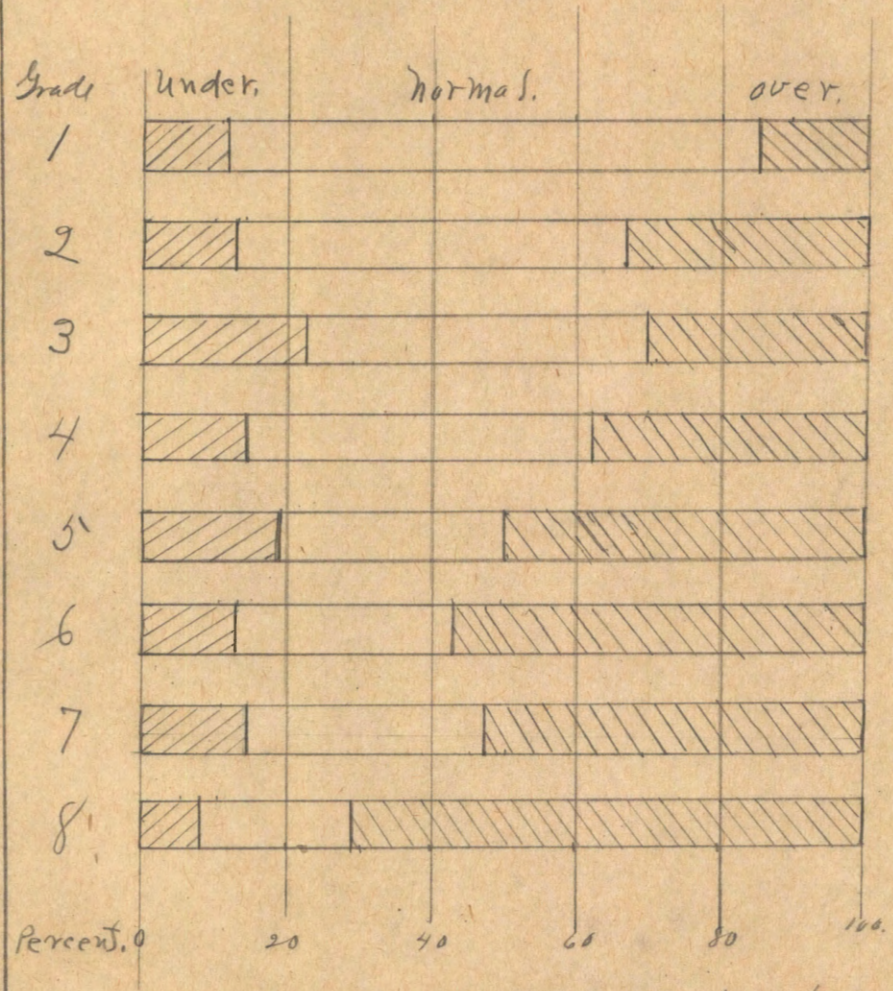

Percentages of non promotion
Grade = non promotion.
1
2
3
4
5
6
7
8
Percent. 0
10,5
20
40
60
80
100.
average.→

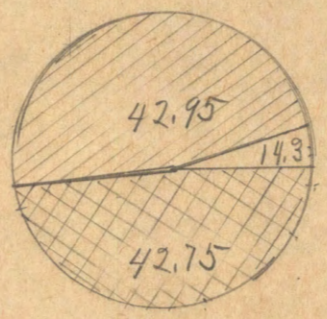
The following table and diagram show the number of pupils under age, of normal age and over age, in the various grades ,not including the high school.

Grade.	No of Pupils	Under age.		Of normal age.		Over age.	
	Total in the grade.	No. under age.	% under age.	No. normal age.	% normal age.	No over age.	% over age.
I	77	8	10.37	57	74.02	12	15.57
II	87	12	13.79	46	52.87	29	33.55
III	90	19	21.11	48	53.33	23	25.55
IV	100	15	15.	46	46	39.	39.
V	78	15	19.23	28	35.89	35	44.87
VI	86	11	12.79	25	29.07	50	58.13
VII	97	14	14.43	31	31.95	52	53.61
VIII	78	6	7.69	16	20.51	56	71.77
Total.	699	100	14.4	297	42.4	302	43.2

(5)

Percentage of pupils who are under age - normal age and over age.





Total, all grades
Under age 14.3 %
of Normal. age 42.95 %
Over age. 42.75

Age distribution by grades.

Dr. Strayer in his reprot of the Butte Montana survey suggests eight percent as "the probable maximum normal rate of non-promotions" and considers any number greater than eight percent of the enrollment to be excessive. On this basis Stillwater schools makes a good showing in all the grades excepting the eighth. The Superintendent explained that there are some pupils promoted each year largely for the reason that they have been two years in the preceeding grade. Since these pupils could not do satisfactory high school work there is a tendency for them to "stick" in the eighth grade. Until such time as Stillwater feels able to provide special courses for such children we see no satisfactory methods of relieving the situation.

SUPERVISION

THE work of supervision is done by the Superintendent, the principals of the various buildings and the director of music and drawing, who has complete charge of these subjects.

The work of the principals of the various buildings is primarily teaching, as each of them has a room for which she is responsible, and whatever they do in the way of overseeing the work of the other teachers must be done as a side issue to their teaching. While we believe these principals are as efficient in the work of supervision as the circumstances will permit, it is impossible for them to watch the work of their buildings from day to day to see whether or not the instructions of the Superintendent are carried out at all, much less to observe and assist in the methods employed.

The Superintendent makes personal visits to every ~~system~~ room about once each week and sometimes more often, but his visits are

so hurried that he cannot get such a conception of the nature of the work as he should have. These hurried visits do not, and cannot give the effective assistance that must constitute so large a portion of any really valuable classroom supervision.

The Superintendent attempts to meet this difficulty in the only possible way under the circumstances. This is to call together groups of teachers doing similar work, as the teachers of the first two grades for example, and talk over the work with them, calling attnetion to these matters he wants stressed, as well as explaining why they are important and giving suggestions as to how the work can best be carried out. He here has opportunity to inquire as to what they are doing in certain lines, and thereby judge whether his policies and specific instructions are being properly executed.

In addition to this, suggestive outlines are furnished the teachers from time to time to guide them in certain phases of their work. These notes are often so full of encouragement and inspiration for both teachers and pupils that their value cannot be overestimated.

As we went from room to room we were convinced that there is a great difference in the efficiency of the methods used. Some of these methods are far better than others, and we believe that it would be helpful to discuss methods at these meetings allowing the better teachers to lead the discussions as much as possible. This method is employed to some extent now, but more use could be made of it to great advantage to some of the teachers.

At present the Superintendent gives some time to regular teaching. He is a splendid instructor and his services in this capacity are very valuable for the particular class involved.

However, his time is too valuable for purposes of supervision for any of it to be given to the hearing of classes regularly.

Although we appreciate the value of the large number of helps, tests and questionaires which are sent out by the Superintendent, we feel sure that many pupils repeat in the grades because of a lack of that kind of supervision which enables one to keep up with the progress of the various rooms from week to week.

BUILDINGS AND EQUIPMENT

We have already noted that Stillwater pupils are comparatively poorly housed. This will be mentioned again under ventilation and heating. We wish to mention here that the buildings and rooms are well cared for and are attractive and homelike almost without exception.

The seats and arrangement of the blackboards are far too uniform to meet the needs of the pupils, In some of the primary rooms the bottom of the blackboards lack but a few inches of being entirely out of reach of the smaller pupils. This could be remedied at small cost and should be attended to at on ce.

There is considerable variation in the size of the pupils in almost every room and for this reason a reasonable number of adjustable seats and desks in needed. If these cannot at present be had, a careful study should be made as to the number of seats, both larger and smaller than the regular size, needed for the various rooms and this need supplied by shifting the furniture now possessed by the school, together with the addition of such new furniture as will meet the demands of health and comfort.

The toilet facilities are inadequate for the present needs. Standard practice, founded on the experience of many cities ,

demands that there shall be at least one seat for every fifteen girls, and one seat and one urinal for every twenty-five boys. The supply in all the schools excepting the Lincoln are below the standard of this requirement. At presnet most of the stalls have no d oors. "This is a thoroughly bad practice and should be remedied. No citizen would tolerate such a practice in his home and there is no reashon why his children should be subjected to it at school." (Strayer, George B. 12). Toilets should be provided with short doors set well up from the floor and arranged with a spring so that they will swing in when not in use.

The Lincoln and Jefferson buildings are not supplied with cloak rooms. While there seems to be no convenient method of remeding this matter, the present method of caring for the wraps is very unsatisfactory.

None of the grade schools are provided with an assembly room. This is another failing which cannot be easily remedied. Although some cities, haveing failed in this partiuular in planning their buildings, have later erected a special assembly building for certain schools, such a suggestion would find little support in Stillwater at present. When all the members of a school can sit down together it gives each pupil a sense of the size and importance of the undertaking in which they are engaged. Such gatherings not only furnish opportunity for cooperative activity but stimulates pride and mutual interest and helpfulness. "There is no more profitable lesson of the day than that which the pupils get by sitting together in opening exercises", (East Orange N. J. report)

It must be remembered that good buildings are in themselves helpful educational influences. Children spend a large portion of the formative periods of their lives in these school buildings and their ideals as to proper housing conditions, conveniences,

sanitation etc. are unconsciously bourn in on them by their surroundings at school. No information they gain from books is more important and lasting than that which a splendid well furnished building is able to teach.

By the use of such decoratings as pictures and flowers, as well as in general order and cleanliness, Stillwater is doing a real well with the building equipment at hand. In time Stillwater will build other buildings. She must remember that these buildings are more than shelter and place to learn and recite lessons. They are to be the homes of her children, and must be built accordingly.

To close with a quotation from Prof. Moore of Yale; "It was the conviction of one of the wisest of teachers that youth should be nurtured in pleasant places in the midst of refined surroundings, in order that the breeze of health and beauty might blow over their souls and gently and unconsciously harmonize their lives and win them to the true beauty and orderliness which are the objects of all our striving." (Moore,13).

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PROTECTION OF HEALTH

Heating.

One serious defect which must be remedied as soon as possible is a lack of satisfactory methods of warming the buildings. On days of exteeme cold when the wind is high it is next to impossible to keep many of the rooms sufficiently warm. For this reason rooms were repeatedly dismissed for one or two days at a time. The Superintendent estimated that for the year 1916-17 the time lost from this cause would amout to an average of one week for the entire system. Many bad days when the rooms are in cession, children are kept at home by their parents because of the unsatisfactory conditions.

Perhaps as much time is lost for this reason as from dismissal of the rooms. The regular running expenses of the school amounts to $2185 per month, and the actual money loss for the week lost by dismissal was $546. If another week was lost by reason of absences when the rooms were not dismissed, the total loss amounted to more than $1000. This loss continues from year to year, while the proper expendature of the amount lost in two or three years would do much toward correcting the condition entirely.

The writer called at one of the buildings on a cold snowy morning to find that the heating system had gone wrong, and there was no fire in the building. The principal and some of the teachers were on hand to tell children that there would be no school. Little children came, some of them a mile or more, and arrived numb with cold,-several of them crying-, only to receive the news that there would be no school and that they must return the mile home without an opportunity to warm. The health and comfort of these children is a matter of too great importance for this condition to be tolerated, and some one must shoulder the responsibility and ~~remove~~ rectify the condition at the earliest possible moment.

Ventilation.

The lack of ability to warm some rooms sufficiently in cold weather, together with the fact that there is no system of ventilation other than that afforded by manipulation of windows, necessarily causes the ventilation of the rooms to be far below the standard. While it is true that science has not as yet devised a satisfactory system of ventilating school rooms, any improvement in the efficiency of the heating system will also improve the possibility of properly ventilating the rooms. When we are reminded that "it has been calculated that foul air destroys 75% of the efficiency of school work." (Moore, 14).

14

(Moore's survey of East Orange N. J.)- we appreciate the enormous loss which the tax payers of Stillwater are sustaining in their effort to curtail expenses.

The two rooms at the Jefferson building which are situated just above the furnice room are too warm during all the months fire is needed. There seems to be no convenient way or remedying the situation at present, but the condition is a donstant menace to the health of the pupils, and at the same time must eifect the quality of their work.

Fire Escapes.

Fire escapes are lacking at all the buildings. A fire near one of the buildings last year caused considerable anxiety on the part of some parents and it was thought that the matter of fire excapes would be attended to but nothing has been done as yet. The habit of procrastination in such matters is extremely dangerous, and Stillwater should profit by the sad example of some other cities rather than pay the penalty of neglect with the lives of her children.

The buildings are ~~supplied with~~ very satisfactorily equipped with apparatus for giving fire signals and the pupils and teachers are well drilled for emptying the buildings. The practices are sufficiently frequent that there is no alarm or excitement. There is no running or crowding, the children remain orderly, and the buildings are emptied bery quickly. However, the stairways which are quite narrow in some cases, are all of wood and these are oiled often and it is not improbable that the only avenue of escape might be cut off for some rooms before the fire would be discovered and the alarm given.

Drinking Water.

The present method of supplying drinking water for the schools is unsatisfactory, and yet there seems to be no convenient remedy. Since the city water is unfit for drinking purposes, the schools are

supplied by pumps from wells on the school premises. The requirements of the law are observed in that the school supplies no common drinking cups, but this matter is of little importance so long as the pupils insist on lending their private cups until they in fact become public property.

The Superintendent takes every precaution as to the quality of the water, having it analyzed at least twice each year for all the schools. If there is the slightest showing for typhoid, the pump is locked and no further risks are taken until the condition has been thoroughly corrected. However, some system must be worked out as soon as possible whereby the schools can be supplied with sanitary drinking fountains.

Medical Inspection.

There is at present no system of medical inspection whatever. While we have no statistics to bear us out, judging from the experiences of cities where considerable precaution is taken, there must be a considerable loss in the efficiency of the Stillwater schools because of the contagion of minor diseases.

A greater loss doubtless is sustained because of defective vision, hearing, adenoids, etc. Using the percentages given in the Springfield, Illinois survey, which is based on the conditions found in the better class of residnece cities in the United States, it is probable that of the 1000 (approximately) pupils enrolled in the Stillwater schools that: 50% or 500, have defective teeth, which is the known cause of a large percentage of disease. 15%, or 150, have or have had obstructed nazal passages, with which is nearly always accompanied the fact of retardation. Ten percent, or 100, have vision defective enough to require glasses. Five percent, or fifty, have seriously defective hearing. One and one-half percent, or fifteen, have defective speech.

If this loss could be stated in dollars and cents, we feel sure that the sum would be so alarming that some solution of the problem would be immediately sought. There would doubtless be some opposition to any move looking to medical inspection, but the lives of children are too important for authorities to wait until the entire community is convinced.

At present the Superintendent cautions teachers to be on the lookout for any sympton of disease, and urges them to send all suspicious pupils home until the case can be looked into, while this is a commendable practice it is insufficient..

We are unable to say just what arrangements should be made to correct this weakenss, but we have no doubt there is some simple, local and satisfactory method, It should be discovered and applied as soon as possible.

Some Signs Of Progress.

Courses in Manual Training and Domestic Science have been added to the curriculum.

A special instructor for Agriculturel subjects is now regularly employed.

A special supervisor of drawing and music is in charge of this work.

Departmental instruction has been introduced in the upper grades.

A substantial addition has been made to the Jefferson building, and other additions to buildings are now planned.

Plans are being developed for the construction of a new high school building. Just now these plans have been halted because of the war.

There is considerable interest in the present Teacher's association.

Considerable playground equipment has been added.

The salary of all school employees were raised the present year, and plans for an additional raise for next year are under way.

Additional fire prevention equipment has been installed; and more attention is being given to fire drills.

Rooms are regularly disinfected as a sanitary precaution.

All drinking water is tested at least twice each year.

Home gardens and childrens bank accounts have multiplied in the last few years.

The minimum standard for teachers' qualifications has been gradually raised.

SUMMARY and SUGGESTIONS.

The latest school census shows the independent school district of Stillwater to have 1218 children of school age. The enrollment in the schools is 84% of this number.

Almost exactly one fourth of the pupils are above sixteen years of age. The ability of a system to hold its pupils in school is the best possible indication of satisfactory conditions.

The percentage of nonpromotion for the grades is 10.5% of the total enrollment. The standard as determined by Dr. Ayers would require this number to be reduced to 8%. To do this the course of study must be modified so as to more nearly fit the needs of the average pupil than it does at present.

The percentage of grade pupils over age is 43.2; under age 14.4 and of normal age 42.4 . For the eighth grade these percentages are as follows; over age 71.77; under age 7.69; normal age 20.54 . This again indicates that the course is outlined for a group of students considerably above the average ability of Stillwater pupils.

SUPERVISION. The general organization and management of the Stillwater school system is good. There is a lack, however, of close supervision of the work in the various rooms. This is because all of the principals have rooms which occupy all of their time, and because the Superintendant gives a portion of his time to teaching.

The Superintendant should give all of his time to supervision and one additional capable person should be employed to assist

in this work. There is at present a lack of uniformity in system and method too great for the accomplishment of the best results.

Suggestive outlines, questionaires and sheets for general testing of the work, sent out by the Superintendant, does much to make good this loss but it is not sufficient.

BUILDINGS and EQUIPMENT. Compared to other cities of like size, the children of Stillwater are poorly housed.

The seats and blackboards are too uniform to meet the needs of the pupils. Both matters could be remedied at small cost, and greatly to the advantage of the work and comfort of the pupils.

The present toilet facilities are inadequate for the needs of the school. All toilet stalls should be provided with short doors, which will swing in when the stall is not in use.

None of the grade buildings have assembly rooms, and the assembly room of the high school is inadequate for the needs of the school. As new buildings are erected suitable assembly rooms should be provided.

With few exceptions, the rooms are neat in appearance, decorated with pictures and flowers and are made attractive and homelike. This is a most commendable practice.

PROTECTION of HEALTH. The heating system is insufficient for the demands of the severest weather. There is a heavy annual loss sustained because of the necessity of dismissing builgings occasionally, in the colder months.

This lack of ability to keep rooms warm in the coldest weather causes the windows to be closed most of the time and thus interferes with proper ventilation.

The window shades in many of the rooms lower from the top and a proper distribution of light is impossible, when the curtains are partly drawn. Some rooms are supplied with curtains which roll both from the top and the bottom. These are much more satisfactory and should be supplied for all the rooms.

Two rooms at the Jefferson school, situated just above the furnace, are too warm during much of the year.

All of the buildings lack fire escapes. This lack is the more alarming since some of the buildings have but one stair way, since the stair ways are narrow for the most part, and since they are constructed of wood and are kept well oiled.

DRINKING WATER . The drinking water for all the schools is supplied from wells. The water is tested at least twice each year, and when signs of impurities are discovered the well in question is locked until the condition is corrected.

Children do not supply themselves properly with private drinking cups.

The schools should be supplied with sanitary drinking fountains as soon as possible.

MEDICAL INSPECTION. At present there is no system of medical inspection, by a physician for the schools. However, every precaution is taken by the principals and teachers

to see that children showing signs of illness are eliminated ~~if~~ from the schools until their cases are looked into. Some definate system of medical inspection by a competent physician must be worked out and put into operation as soon as possible.

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