1921

A comparative survey of Montana high schools

H. H. Sauers
The University of Montana

A COMPARATIVE SURVEY

of

MONTANA HIGH SCHOOLS.

By

H. H. SAUERS

MISSOULA *** MONTANA.

1921.

TABLE OF CONTENTS.

Sources.

The data for the study made in this report was gathered from the following sources:

1. Annual reports from high schools in the office of the State Superintendent of Public Instruction in Helena. See form on following page, referred to as A. R.

2. Questionaire sent to High School Principals. Returns were received from eighty. Referred to as Q.

3. Historical Sketches of individual schools obtained from High School Principals. Thirty sketches were supplied.

4. Personal visit and inspection of five typical Montana high schools.

INTRODUCTION.

The following report represents an investigation of the secondary schools of Montana. An attempt has been made to gather data which would be useful to the school men of the state.

The present survey covers such phases of Montana secondary schools as enrollment, holding power, per capita cost, distribution of enrollment, per cent of average daily attendance, courses of study, teachers salaries, departmental equipment in high school, and school finances.

Where possible, a comparison was made between the County high schools and the large and small district high schools. The points of divergence between the typical county high schools, and the larger city high schools were particularily noticed.

Much of the report is composed of statistics in the form of tables and charts. The aim of the report was to make a study of present day conditions as existing in the Montana high schools, and to present the data in an understandable way. The task of interpreting the data is left for the most part to the reader.

It may appear from some of the facts pointed out in the following pages, that some Montana high schools are run more economically than others, or that in some isolated cases attempts have been made to organize high schools, where the number of children did not justify the enterprise, but that is no purpose of this report. It simply aims to gather helpful material concerning our present day high schools, in the hope that some useful facts may be presented for the use of the school men of the state.

Due acknowledgement is hereby expressed to the many high school principals who kindly assisted in making this material available, and especially to the Department of Public Instruction, for its very kind co-operation, and for the privilege of using the high school reports for the past school year.

Note I. The data cited above was obtained from the annual reports of the State Department.

Part One.

HISTORICAL SKETCH.

The history of the Montana High Schools extends over a period of approximately fifty years. From available records, it appears that Butte was the first city to have a regular four year high school. In that city, their high school had a regular commencement program in 1886, and one lone student graduated at that time. Mr. Sylvester, now of Butte, has the distinction of being the first graduate from a Montana high school.

Dillon had a class graduating from ~~their~~ high school ~~two years later~~. ~~Their high school had a senior~~ class of seven students in 1888. Two months before commencement, it was announced that each graduate would be required to deliver an oration on commencement eve, and this caused five of the seven to quit school, rather then face that ordeal. Within five years, four more schools were having graduating classes from the twelfth grade, and since that time more schools have been added to the list every year. Not a single year has passed in the last twenty five years, but some new Montana high school has been added to the list.

One of the outstanding features of Montana high school history, is the rapidity of its growth. One lone school, with one lone student graduate in 1886; 28, in 1910; and 203, in 1920. Nor is this phenomenal growth confined to the number of high schools. On the contrary, the growth in the individual schools has been even more marked. Butte's graduating class has grown from one in 1886 to 188 in 1920. This is the largest single class on record as graduating from any one Montana high school, but there are several others coming well up to the 100 mark. Billings stands second with 96; Great Falls, 82; Missoula Co. H., 73; Fergus Co. H., 72; Butte Central, 67; Helena, 67; Flathead Co. H., 65; Gallatin, 65; and ten other high schools with 50 or more graduates the last year.

The five year period from 1910 to 1915 witnessed the most rapid growth in number of high school students, and the five year period from 1915 to 1920 witnessed the greatest increase in the number of individual high schools.

Summary of historical sketches sent to the writer by thirty high schools of Montana and nineteen Co. H.s

The history of the high schools of Montana shows the same general tendency as the ~~political~~ history of the state. When the state was enjoying its greatest era of prosperity, the schools were likewise prosperous. In some instances, the schools prospered even when the state was suffering its keenest reverses. These are isolated instances, and do not represent the general trend.

In almost every city or community of Montana, it was only a short time after the first settlement of the place, when some kind of public school was established to supply some opportunity for the children to obtain the rudiments of an education. The need of a high school was not felt so early nor so keenly.

Butte had many hundred children in its public schools, before it had one lone graduate from its first high school. Belt had large classes in all its eight grades for twenty years, before it finally manged to get a graduating class of two from its high school in 1910. Billings now has the second largest high school in the state, but ten years ago, it had only a very small number enrolled beyond the eighth grade, and they were housed in a high school building, which does not compare at all favorably with their present splendid high school building.

It is during the past ten years that the growth of Montana high schools has been so marked. The increase in the number of high schools in that decade being 725%." The increase in the nuber of students is even greater, and the increase in the number of high school teachers is almost as great.

One cannot but be impressed with the strenuous efforts made by the various communities to provide their children with ample means for securing a secondary school education. It almost appears as though every community is determined to have the best high school in the state. The magnificent buildings erected and equipped by some small communities call to mind the efforts of the European villages in erecting their time honored and renowned Cathedrals.

I - Q

II — A. R.

The data for the historical sketch in this study, was obtained from thirty reports from the different high schools, and one outstanding feature of all the reports, was the points of similarity of all. Whether it was the historical sketch of the largest high school or of the smallest its experience seemed much the same. This is simply another proof that the early experiences of communities are much the same.

High schools in this state, and perhaps in all the states of the union, usually originated as the result of the active work of some man in the community who had just a bit more vision than the others. He foresaw a need of such an institution, and by his efforts, aroused interest in other public spirited citizens. In almost all cases, the high schools started with more or less opposition on the part of some citizens. This opposition lasted longer in some communities than in others, but in no report available did it appear that the opposition had any noticeable effect after ten years' of high school experience.

A great impetus was given Montana high schools, by the enactment of the Smith-Hughes, and the Smith-Lever Acts. This is particularily true of thos high schools situated in the rural sections of the state. It still remains to be seen just what the permanent result of this accelerated impetus will be. In some cases it appears already that possibly too great a stride was taken to adopt additional courses in many small schools, and it is altogether likely that a reaction will take place in many of such schools. Be that as it may the fact still remains, that many of the courses have added vastly to the vitality of the institutions, and many have proven themselves so valuable and altogether in answer to the needs of the time, that they will become permanent departments of the schools. It now appears that the Normal Training courses have enjoyed a steadier growth than any of the others. In 1919, there were 19 schools giving Normal Training courses, and at the present time there are twenty-five schools, with fully established courses in this department.

Part Two.

for operation

OUR HIGH SCHOOL INVESTMENT.

The combined value of all Montana high school buildings, June 30, 1921, was $12, 548, 500. Their total bonded indebtedness was $4,540,900, and the fund raised for the year ~~as maintenance~~ money amounted to $1,815,743.

The value of the ninteen County high school buildings was $7,970,000; their bonded indebtedness was $792,000, and they raised $492,000 for ~~a maintenance~~ operation budget.

The value of the buildings of the 33 larger city high schools at the same time was $2,820,500; Their bonded indebtedness, $1,929,900; and their fund for maintenance amounted to $793,743.

The 151 smaller district high schools reported the value of their high school plants as amounting to $2,748,000; their bonded indebtedness, $1,809,000; and their maintenance budget, $456,000.

In the above summary, the high schools are divided in three classes. The ninteen County high schools form one class by themselves; the city high schools with an enrollment of seventy five or more, another class; and those district high schools with an enrollment of less than seventy five, forming the third class.

In subsequent pages of this report, the high schools which are accredited for less than four years' high school work, are separated into three respective classes, but in this first summary, they were grouped with the smaller high schools, into whichever group they all fall.

The average per capita cost for all high school students during the past year was $198.00*. The highest per capita cost for any one school was $600.00; The lowest per capita cost was $74.00. Barber paid the highest per capita for its high school students, and the Flathead County High School ranked lowest. The little high school at Lothair ranked second highest, with a per capita cost of $582.00

* This average is computed on the basis of average daily attendance. The average based on straight enrollment is $173.75

The total high school enrollment in the 203 high schools for the past year was 14684. In addition to this number there were 528 students enrolled as special students. Of this number, 6232 are enrolled in the 9th grade; 3812 in the 10th grade; 2784, in the 11th grade; and the 12th grade contained 1858 regularly enrolled students, of which number 1685 received their diplomas as high school graduates. I

Of the above number of graduates, 328 came from the small high schools; 535, from the County high schools; and 822, from the large high schools. The number graduating the past year exceeded the number of the previous year by 164. The students in institutions of higher learning from among this group were 339 for 1919, and 389 for 1920. In 1919, 213 attended institutions within the state, and 126 attended school out of Montana. In 1920 the number of that year's graduates attending higher institutions within the state had increased to 270, while the number going out of the state for their college and university work had decreased to 119.

The teachers employed in all the Montana high schools, either for part or full time number 982; 370 in the 151 smaller high schools; 242 in the 19 County high schools; and 370 in the 33 larger city high schools. The smaller high school employed 53 teachers who were not college graduates. The County high schools employed 12 of the same class, while 37 such teachers were employed in the 33 larger city high schools.

The libraries contain 139,227 volumes. 35,339 I were reported as contained in the smaller high school libraries; 33327, in the County high school libraries; and 70,561 in the larger high school libraries. ~~From~~ of these books, 16,515 are English references; and 10,601 are History references. In most of the high schools, a large percentage of the books are classified as English references, but in a few isolated cases, a very undue proportion of the references belong to some vocational group. In many of these cases it appears that those schools are making strenuous efforts to come under vocational schools and are overlooking the old standard courses in their efforts to qualify for government subsidy.

I - Q

II - A.R.

Part Three.

COURSES OF STUDY.

This part of the survey seemed most difficult. So many schools use different names for the same kind of courses, that one is never sure that correct results follow as a consequence of the survey. Many schools offer part of courses in various departments. Some offer some work in the Agricultural, Commercial, Home Economics and other departments.

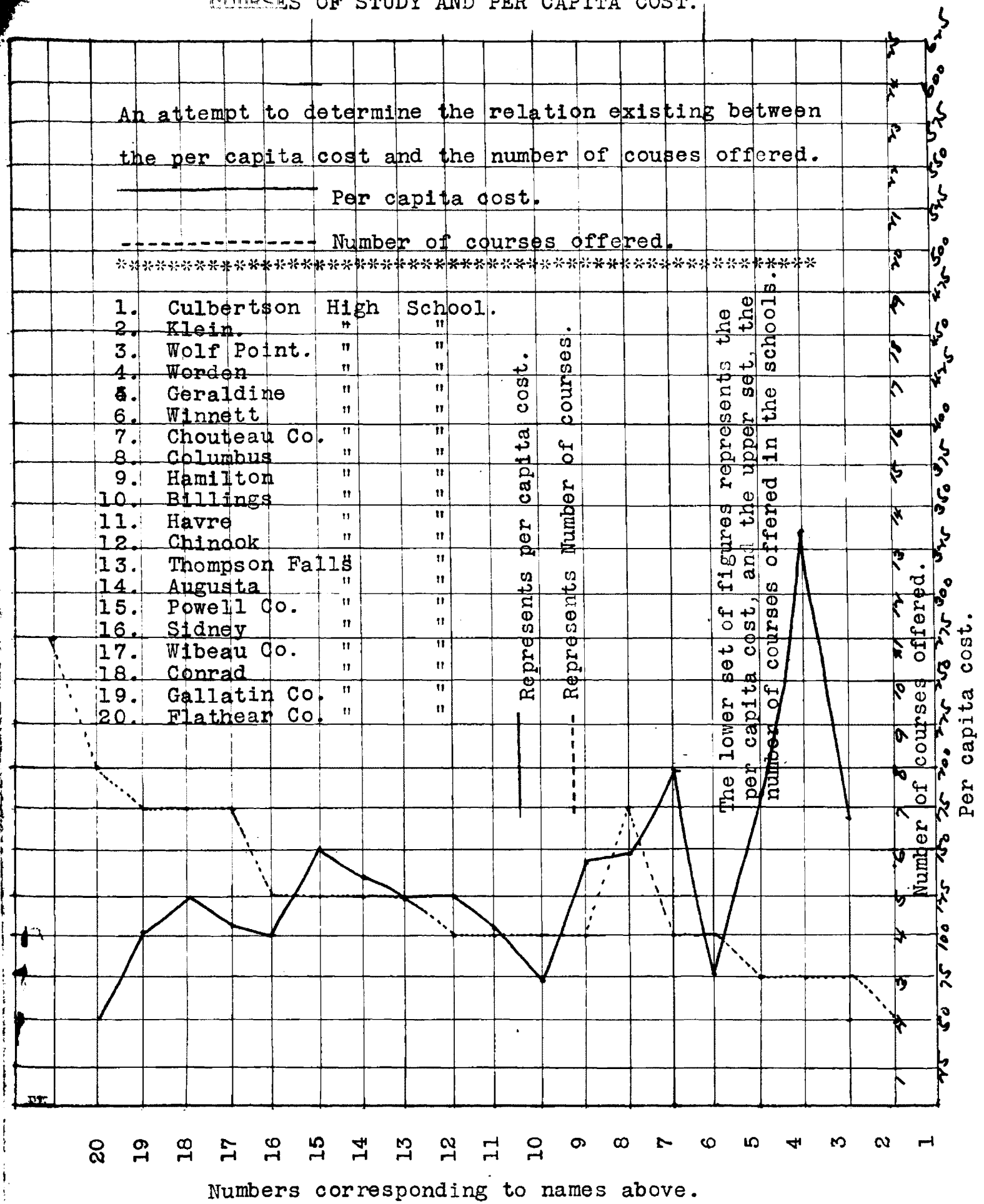
In the chart connected with this study, only such schools are listed as sent in definite reports on complete courses. This makes the study very incomplete, but it is hoped that from the twenty typical cases, some logical comparisons may be made. So many of the schools hesitated in stating the number of courses offered in their institutions, as many of them were incomplete.

Three of the twenty schools reporting offered only one course; four offered two courses; six, three; eight, four; four, five; four, six; one, seven; one, ten and one, eleven. The Fergus County High School and the Flathead County High School offered the richest curricula and the smaller and newer schools confined their work to one course. The large City High Schools, seem to have standardized pretty well on five courses. Among the County High Schools there appears to be no such standardization.

The size of a school cannot be taken as an index to the number of courses which it may offer. While it is true that the two schools named above which offer ten and eleven courses respectively, are fairly large schools; still it is also true that schools much larger than these offer only five and six courses, as compared to ten and eleven. The second largest high school in the state lists five courses, and the school ranking sixty-fourth in the point of enrollment, ranks third in the number of courses offered.

From the chart in connection with this study, it may be seen that the number of courses offered does not determine the per capita cost, the school offering the most courses, ranking lowest in per capita cost. It may be safely concluded none the less, that the number does affect the cost in all cases. The case above is clearly a special, special conditions keeping down the per capita cost.

COURSES OF STUDY AND PER CAPITA COST.



Part Four.

HOLDING POWER.

It has often been said that the vitality of a school depended on its ability to hold its larger boys. If the enrollment of a ninth grade class was large and its graduating class invariably small, it was taken for granted that such school was not to be rated among the best high schools.

Thinking that it might be of interest to make a comparison of our Montana schools on this point, the following study has been inserted. It will not be fair to judge schools strictly on these criteria. There have been so many circumstances to interfere with the ordinary life and growth of our schools, that some allowance must be made.

Our new high schools will naturally suffer unjustly by this comparison. Some of them have just commenced on their educational program. Their first class would naturally be small. Then as the school became more firmly established, the classes would become larger from year to year. Those will inevitably show large enrollment in the ninth grade in comparison with the number enrolled in the twelfth grade. Economic conditions must be taken into consideration during the past four years. Wages were high and many of the larger boys had of necessity to leave school and engage in some more immediately remunerative work. The war too drew many of the larger boys into the service of their country.

Taking into consideration the above factors, and making liberal allowance for the differences caused by them, it may of interest to make some comparisons. In the first chart the general average by grades for all our high schools has been noted. In the succeeding comparisons, the three classes of high schools have been taken separately to determine if any one class shows up to better advantage over the other two classes. In order to be perfectly to the County high schools, the short course and special students were not listed in with the regular grades. It appears that in all schools the falling off by grades is very large.

****

Part Four.

HOLDING POWER.

LARGE CITY HIGH SCHOOLS.

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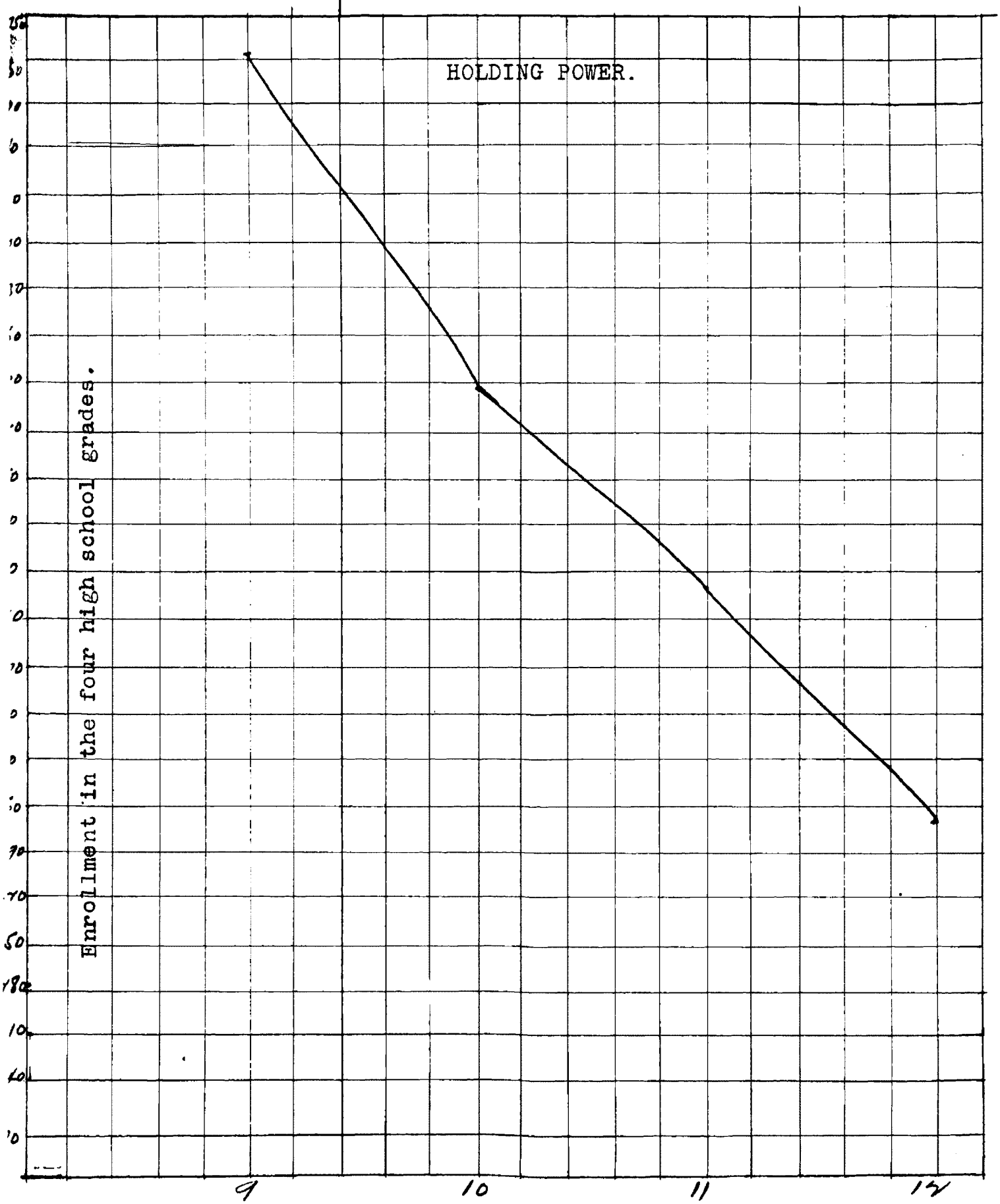
Name of School	9th. Gr.	10th. Gr.	11th. Gr.	12th. Gr.
Forsyth	31	33	21	3
Glasgow	52	34	19	23
Great Falls	305	247	188	110
Hamilton	51	32	21	22
Harlem	38	15	12	7
Harlowton	38	28	15	14
Butte	553	323	260	125
Chinook	40	23	19	14
Columbus	23	31	17	11
Conrad	42	34	16	15
Belt	30	17	35	10
Billings	258	191	155	107
Laurel	35	16	14	10
Libby	21	28	25	10
Malta	40	29	14	10
Sidney	54	28	32	14
polson	33	40	12	21
Stevensville	44	28	19	16
Total Number***	1683	1177	894	546

LARGER CITY HIGH SCHOOLS.



Attendance by grades for 18 larger city schools.

Part Four.

-2-

COUNTY HIGH SCHOOLS.

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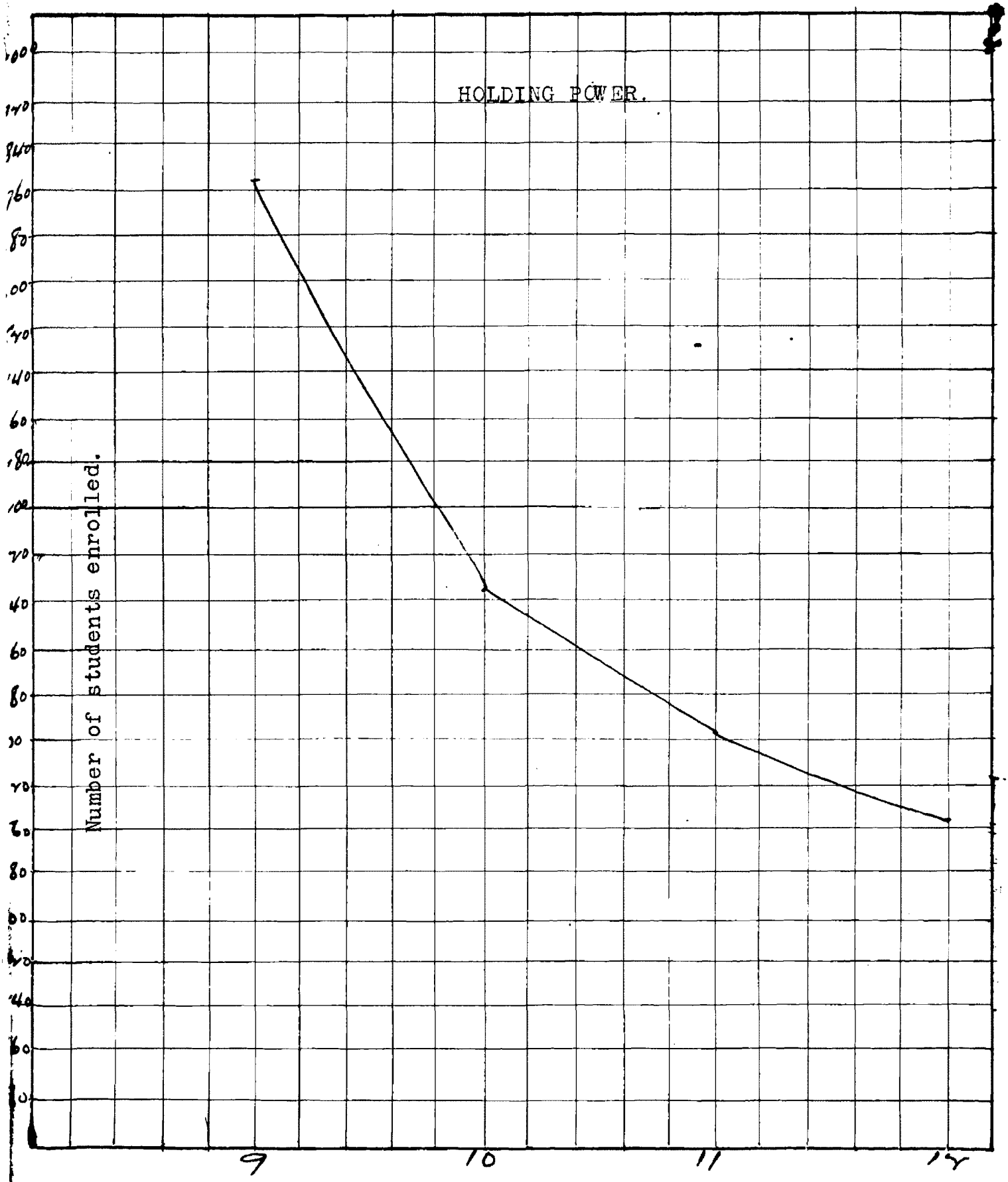
Name of School	9th Gr.	10th. Gr.	11th. Gr.	12th. Gr.
Beaverhead Co	72	42	36	15
Broadwater	25	17	12	8
Carbon	60	67	41	38
Dawson	89	52	25	22
Fergus	235	145	114	78
Flathead	317	162	138	65
Gallatin	190	107	105	72
Granite	42	23	19	14
Jefferson	41	21	14	14
Lincoln	51	26	19	11
Missoula	287	166	126	82
Park	121	57	55	48
Powell	83	41	21	12
Sweet Grass	45	19	22	21
Teton	46	36	21	14
Wibeau	27	18	15	11
Custer	125	62	44	40
Chouteau	34	25	13	13
Total Number	1890	1086	840	578

COUNTY HIGH SCHOOLS.



Averages by grades for 18 County High Schools.

SMALLER HIGH SCHOOLS.

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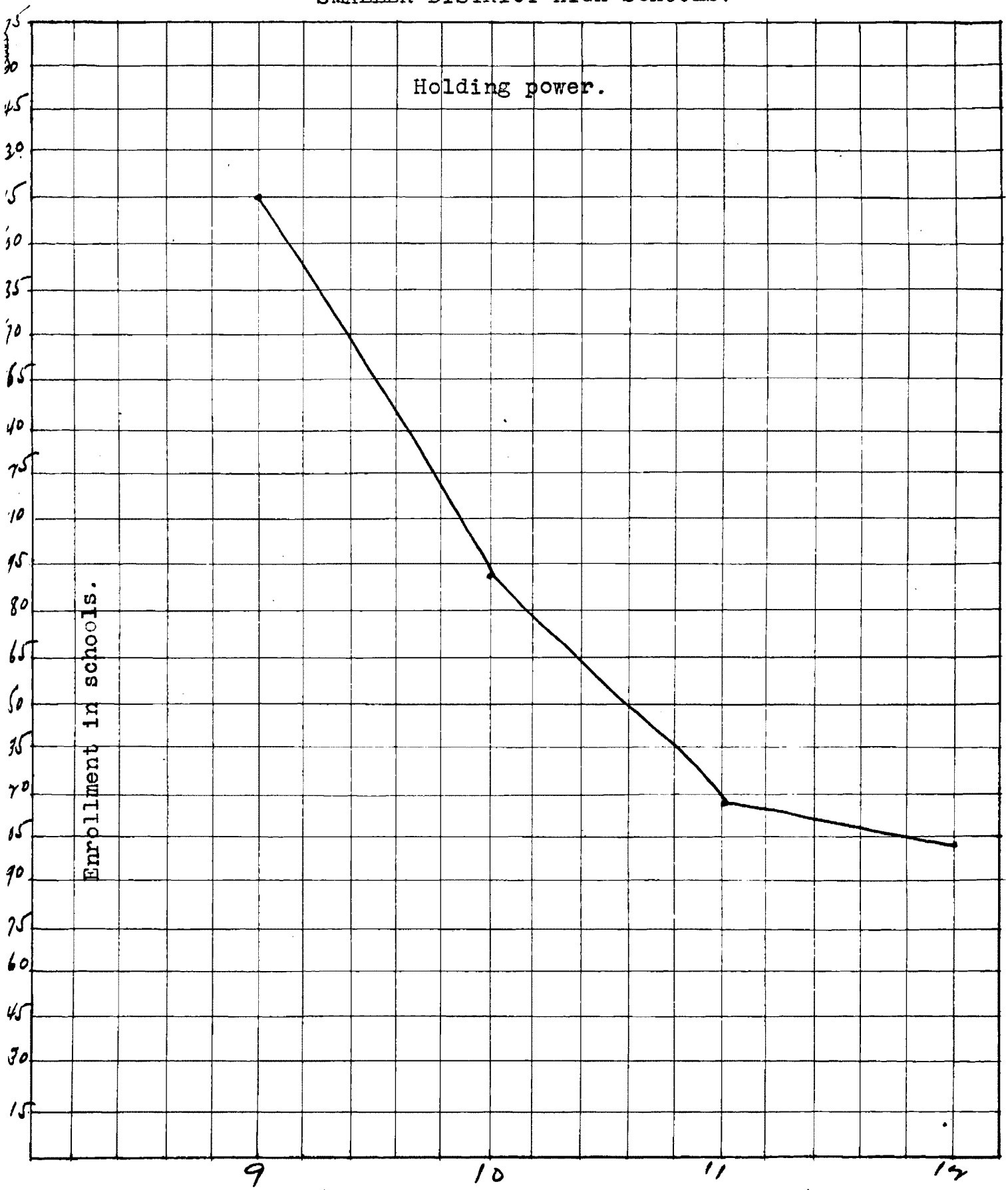
Name of School	9th. Gr.	10th. Gr.	11th. Gr.	12th. Gr.
Manhattan	26	11	6	8
Medicine Lake	9	6	2	2
Mildred	9	2	2	1
Outlook	16	8	6	3
Park City	12	7	7	5
Plains	14	10	6	7
Poplar	20	8	12	6
Ronan	21	13	8	12
Rosebud	10	8	3	4
Scoby	20	12	10	7
Shelby	13	9	5	5
Stanford	18	12	7	2
Terry	25	16	10	6
Three Forks	29	19	10	9
Troy	15	7	2	1
Valier	26	21	7	11
Virginia City	7	14	4	2
White Hall	24	19	9	15
Total Number	314	192	116	104

SMALLER DISTRICT HIGH SCHOOLS.



Enrollment by grades for 18 smaller high schools.

LARGE CITY HIGH SCHOOLS.

Tabulation of sixteen large city high schools, showing the total enrollment and the per capita cost.

Name of School	Total Enrollment	Per Capita Cost.
Malta	93	$ 95.00
Polson	112	116.00
Sidney	137	124.00
Billings	715	146.00
Anaconda	400	150.00
Worden	103	179.00
Chinook	137	200.00
Libby	82	225.00
Harlowton	109	250.00
Stockett	86	250.00
Glasgow	148	300.00
Wolf Point	90	333.00
Hamilton	128	400.00
Columbus	83	400.00
Forsyth	105	410.00

The average per capita cost for all the above schools is ----------$222.25.

Part Five.

COMPARISON OF PER CAPITA COST.

The average per capita cost of all high school students during the past year was $198.40, the average for the larger city high schools being $222.25; that of the 19 County high schools, $147.35; for the smaller 4 year high schools, $177.50; for the 3 year high schools, $165.25; and for the 2 year high schools, $290.00*

The following five charts attempt to represent in a graphical manner the correspondence between the per capita cost and the number of students enrolled. In some few cases, there appears a fairly distinct line of parallelism between thetwo, but in many cases there appears no connection.

In this study, an effort has been made to find the factors which actually determine the per capita cost. It appears that there should be a definite standard of accounting and ascertaining these factors, and if this study may lend anything toward obtaining that goal, the work will be justified.

It must strike a student of Montana education, as poor economy on the part of a community, maintaining a high school, when the per capita cost runs as high as $600.00. It would certainly be more economical and satisfactory for such districts to send their few high school students to a neighboring high school, and keep them there at the expense of the home district. While every progressive citizen is glad to see growth and progress in every worth enterprise of the state, still it is true that some small communities are not in a position to establish and maintain a high school. It will be much more economical and satisfactory for such small communities to consolidate, and maintain one high school. Several communities have done this with gratifying results.

The per capita cost of high school students is too large in Montana at the present time. By careful organization and management it should be possible for a community to educate its high school students for $150. per year. To conduct the schools at a higher per capita cost, will only result in discouraging the progress of our state high school system.

* - See chart for method of computation

Table I. Figures computed from the Annual U. S. reports to the Department of Public Instruction. June 30, 1920.

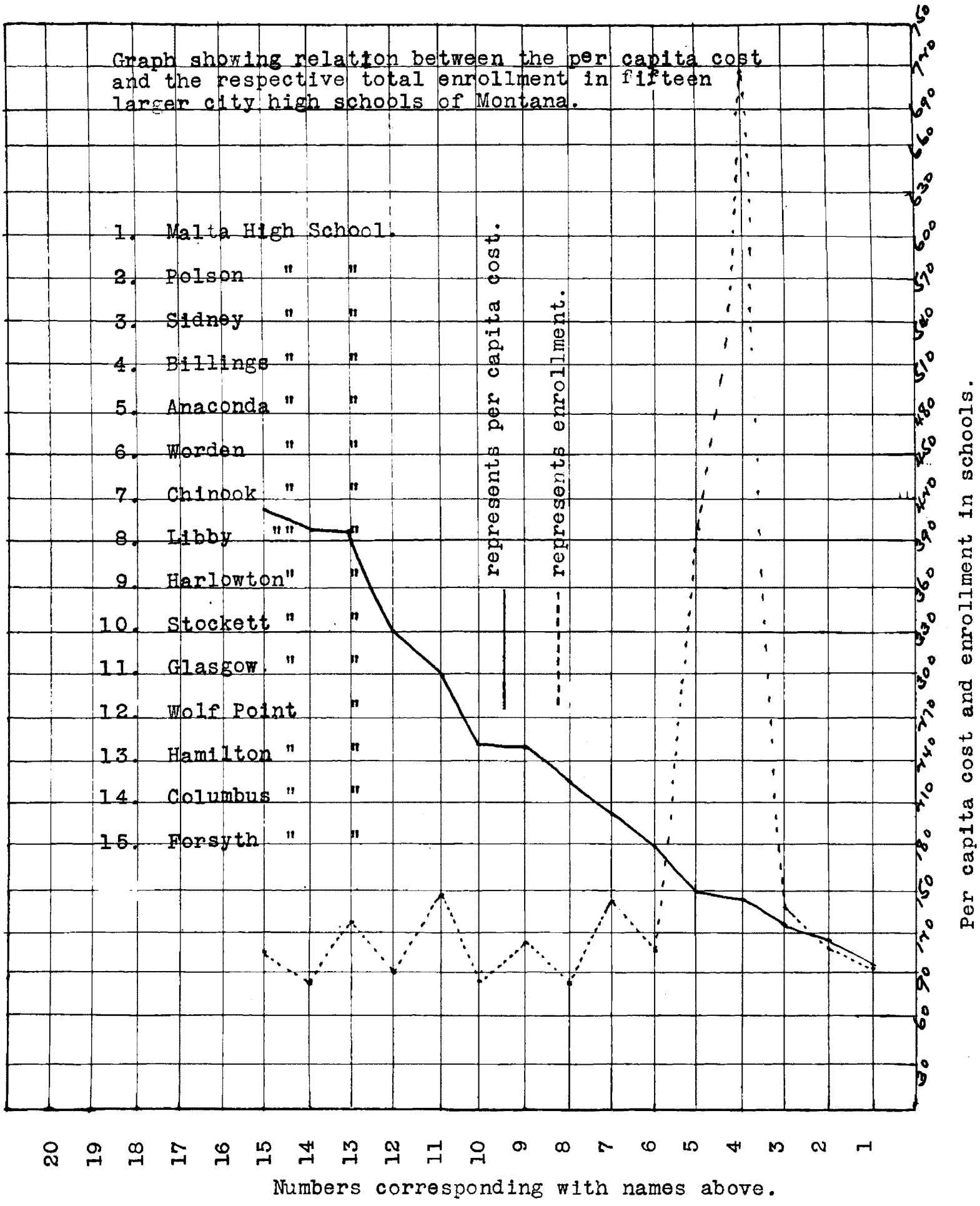
LARGE CITY HIGH SCHOOLS.

Tabulation of sixteen large city high schools, showing the total enrollment and the per capita cost.

Name of School	Total Enrollment	Per Capita Cost.
Malta	93	$ 95.00
Polson	112	116.00
Sidney	137	124.00
Billings	715	146.00
Anaconda	400	150.00
Worden	103	179.00
Chinook	137	200.00
Libby	82	225.00
Harlowton	109	250.00
Stockett	86	250.00
Glasgow	148	300.00
Wolf Point	90	333.00
Hamilton	128	400.00
Columbus	83	400.00
Forsyth	105	410.00

The average per capita cost for all the above schools is ----------$222.25.

LARGE CITY HIGH SCHOOLS.



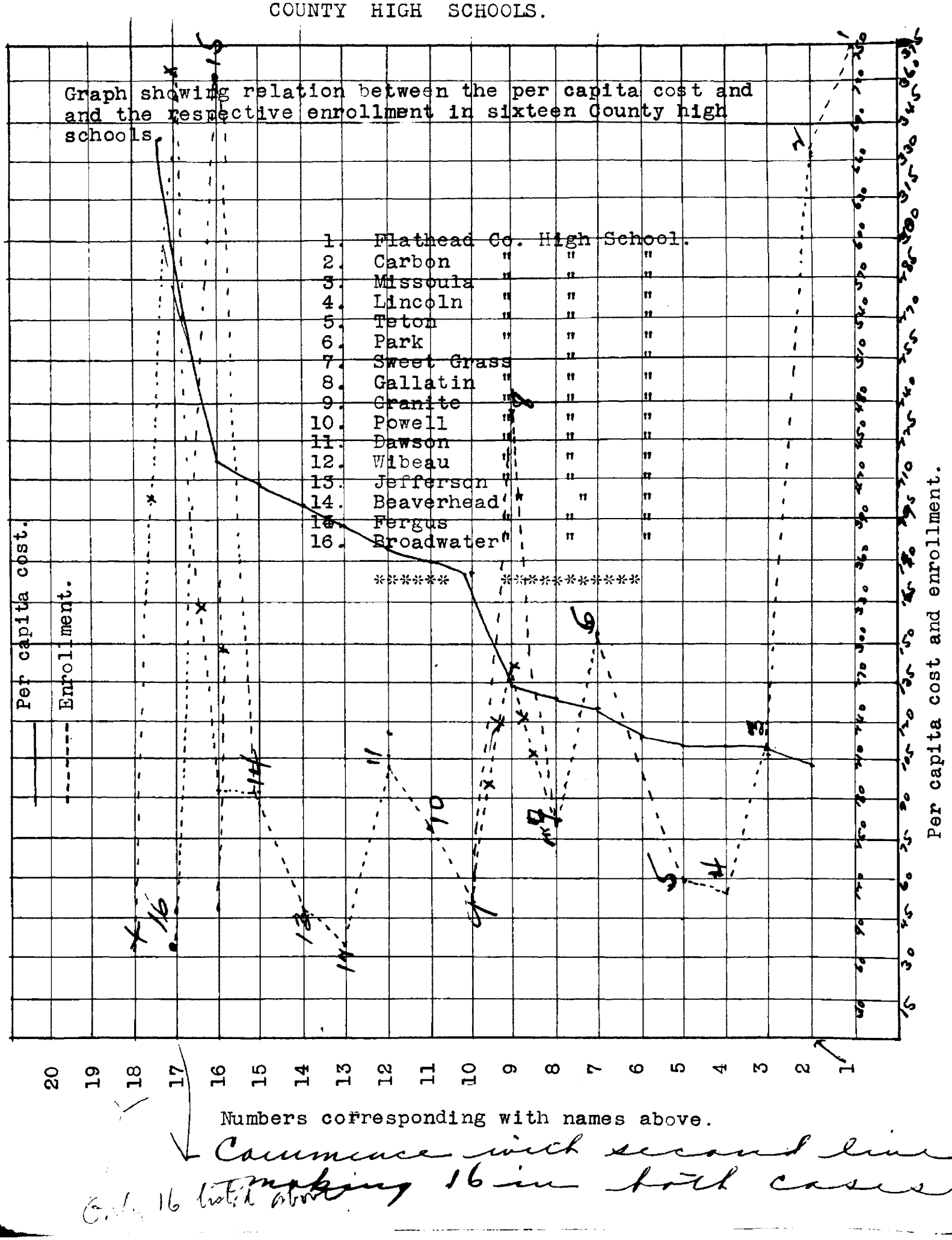
COUNTY HIGH SCHOOLS.

Tabulation of sixteen typical County high schools, showing the total enrollment and per capita cost.

Name of School		Total Enrollment	Per Capita Cost.
Flathead Co. High		750	$ 74.00
Missoula	"	668	104.00
Carbon	"	213	106.00
Lincoln	"	110	108.00
Teton	"	119	108.00
Park	"	306	111.00
Sweet Grass	"	159	125.00
Gallatin	"	477	129.00
Granite	"	109	134.00
Powell	"	154	176.00
Dawson	"	202	180.00
Wibeau	"	71	184.00
Jefferson	"	95	186.00
Beaverhead	"	185	200.00
Fergus	"	736	209.00
Broadwater	"	64	217.00

The average per capita cost for the above schools is ---------- $147.00

COUNTY HIGH SCHOOLS.



Commence with second line making 16 in both cases.

Co. 16 listed above.

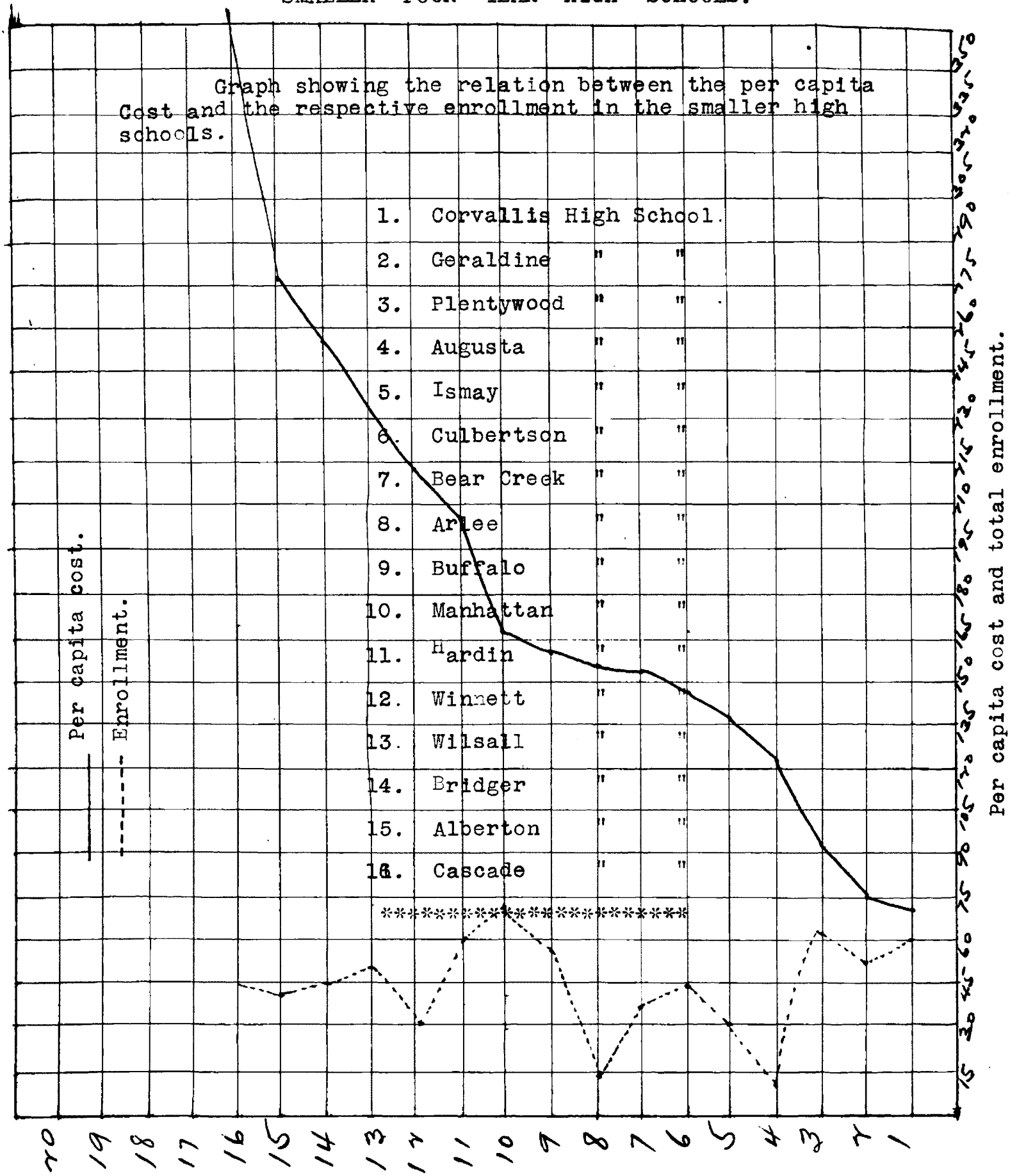
SMALLER FOUR YEAR HIGH SCHOOLS.

Tabulation of sixteen typical small four year high schools, showing the total enrollment and the per capita cost.

Name of School	Total Enrollment	Per Capita Cost.
Corvallis	60	$ 70.00
Geraldine	51	75.00
Plentywood	61	91.00
Augusta	9	105.00
Ismay	28	108.00
Culbertson	44	138.00
Bear Creek	35	153.00
Arlee	11	160.00
Buffalo	15	170.00
Manhattan	51	171.00
Hardin	71	182.00
Winnett	62	222.00
Wilsall	30	240.00
Bridger	54	280.00
Alberton	45	307.00
Cascade	43	369.00

The average per capita cost for the above schools is----------$177.50

SMALLER FOUR YEAR HIGH SCHOOLS.



do not graph?

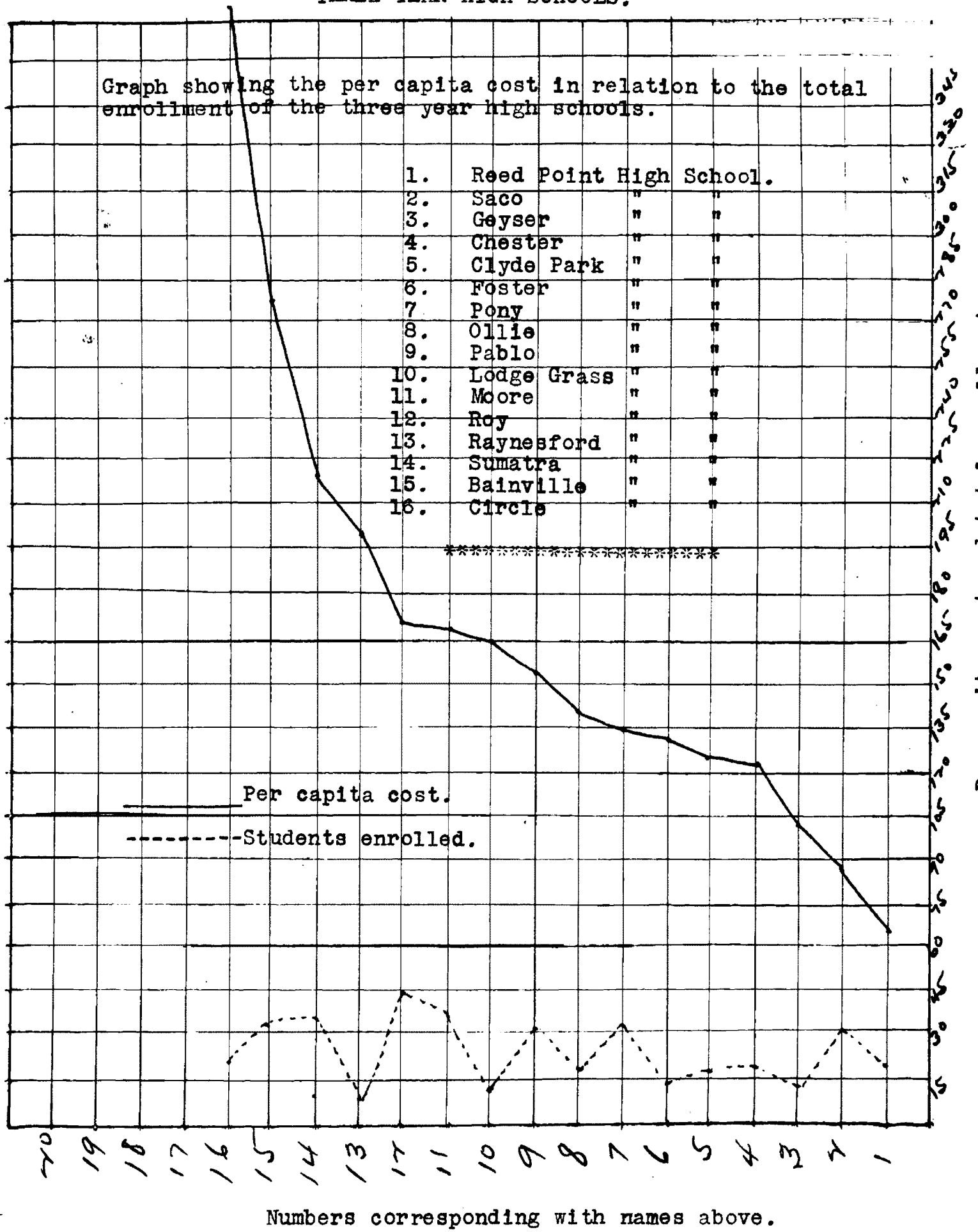
THREE YEAR HIGH SCHOOLS.

Tabulation of sixteen typical three year high schools, showing the total enrollment and the per capita cost.

Name of School	Total Enrollment	Per Capita Cost.
Reed Point	20	$ 64.00
Saco	30	85.00
Geyser	13	100.00
Chester	20	124.00
Clyde Park	18	126.00
Foster	11	129.00
Pony	33	132.00
Ollie	22	142.00
Pablo	33	152.00
Lodge Grass	10	165.00
Moore	36	166.00
Roy	42	169.00
Raynesford	8	200.00
Sumatra	35	220.00
Bainville	35	280.00
Circle	18	400.00

The average per capita cost for the above schools is----------$165.25

THREE YEAR HIGH SCHOOLS.



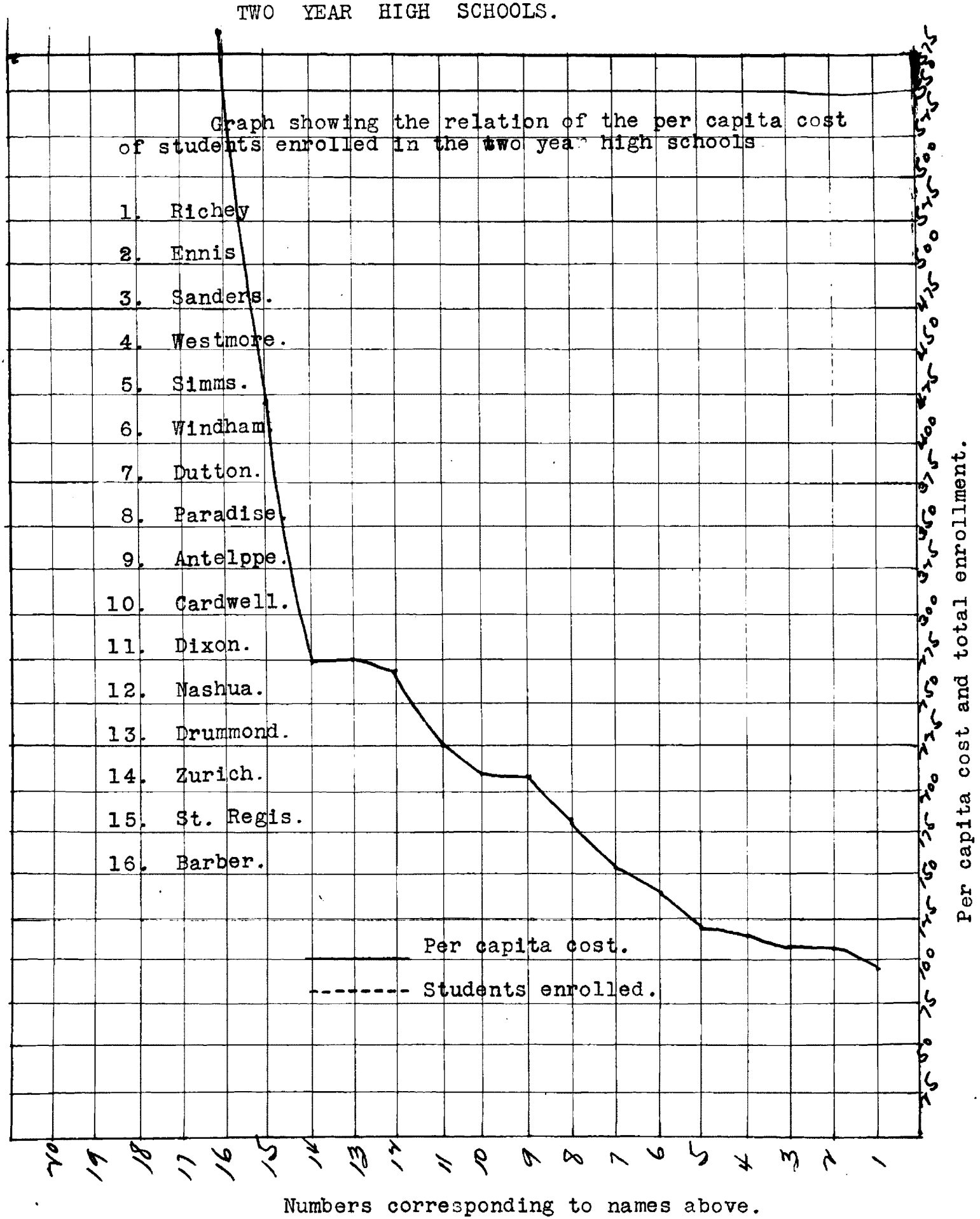
TWO YEAR HIGH SCHOOLS.

Tabulation of sixteen typical two year high schools, showing the total enrollment and the per capita cost.

Name of School	Total Enrollment	Per Capita Cost.
Richey	11	$ 96.00
Ennis	18	105.00
Sanders	8	197.00
Westmore	9	109.00
Simms	15	113.00
Windham	9	140.00
Dutton	15	152.00
Paradise	11	160.00
Antelope	12	185.00
Cardwell	17	189.00
Dixon	14	200.00
Nashua	6	245.00
Drummond	8	250.00
Zurich	7	250.00
St. Regis	10	450.00
Barber	3	600.00

The average per capita cost for the above schools is---------- --------$290.00

TWO YEAR HIGH SCHOOLS.



PART VI----Distribution of Enrollment.

Table showing the percentage of students enrolled in the various high schools, from the local district and from the other sections of the county outside of the local district. Ten typical District high schools were compared with six corresponding County schools.

NAME OF SCHOOL	NUMBER FROM LOCAL DISTRICT	OUT OF DISTRICT. No.	%
Billings	650	70	9.7%
Culbertson	54	1	1.8
Chinook	90	35	28.1
Havre	75	35	31.8
Thompson Falls	30	12	28.8
Worden	95	44	31.3
Augusta	7	12	63.1
Great Falls	795	45	5.8
Columbus	135	80	37.7
Conrad	72	33	31.4
	1903	367	15.2

COUNTY HIGH SCHOOLS.

Chouteau Co.	45	54	54.4
Jefferson "	40	56	58.3
Flathead "	306	364	55.6
Gallatin "	318	159	33.3
Powell "	60	154	71.9
Teton "	49	70	50.3
	818	over 859	51.2

In the County high schools listed above, fifty ~~and~~ one ~~tenth~~ per cent of the enrollment was drawn from sections of the county outside of the local district.

In comparison with these distributions in the District high schools only seventeen per cent of the total number of students enrolled were taken from outside of the local district, and eighty three per cent came from the local district in which the high school was situated.

The foregoing summary indicates one of the distinguishing features of the County high school as compared with the local district high school. It shows that the County high schools draw their students from a wider area, and in that way tend to serve the entire county. This is one of the consistent claims of the advocates of the County high school, and the study just made seems to verify their claim.

Figures obtained from questionnaires sent to the principals of the schools cited above.

DISTRIBUTION OF ENROLLMENT.

In some isolated cases, district high schools have drawn their students from regions outside of the home district to a greater extent even than the County high schools. In some rare instances, the County high schools draw almost their entire patronage from the local district only. These are rare and isolated cases and as a general average, the above table represents conditions as found from the reports during the past school year.

It has been demonstrated by past experience in Montana, that where a County high schools does not get a large per cent of its students from the further districts, it soon loses its prestige in the County loses its patronage, and as a result becomes outstripped by the rival high schools in the County. It may be a sad commentary to speak of schools in the County as rivals for students, but the present system of dividing County high school revenue tends to put the Educational instutions on a competitive basis. This does not mean that there is a lack of cooperation on this account. It does mean that they will all be quite active in putting their educational advantages very luminously before the people of the County.

As a result a greater portion of the boys and girls of the state are encouraged to attend high school than ever before in the history of high school education. Recent acts of the state and federal governments tend to eliminate the strong competitive nature of high schools. One of these acts is that which permits only one Normal Training High School in every County. Only one Vocational high school also is permitted in each county. This will result in every locality specializing on that department most adapted to their local needs and in leaving the other departments to the other high schools in the county.

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Part Seven.

EQUIPMENT FOR THE DIFFERENT DEPARTMENTS.

Reports for twenty typical high schools on the cost of equipping the different departments, reveal two facts. First that as a general average for all the schools, the cost of equipping the various departments harmonizes fairly well with the size of the school; but when individual schools are taken into account, there is no such coincidence whatever.

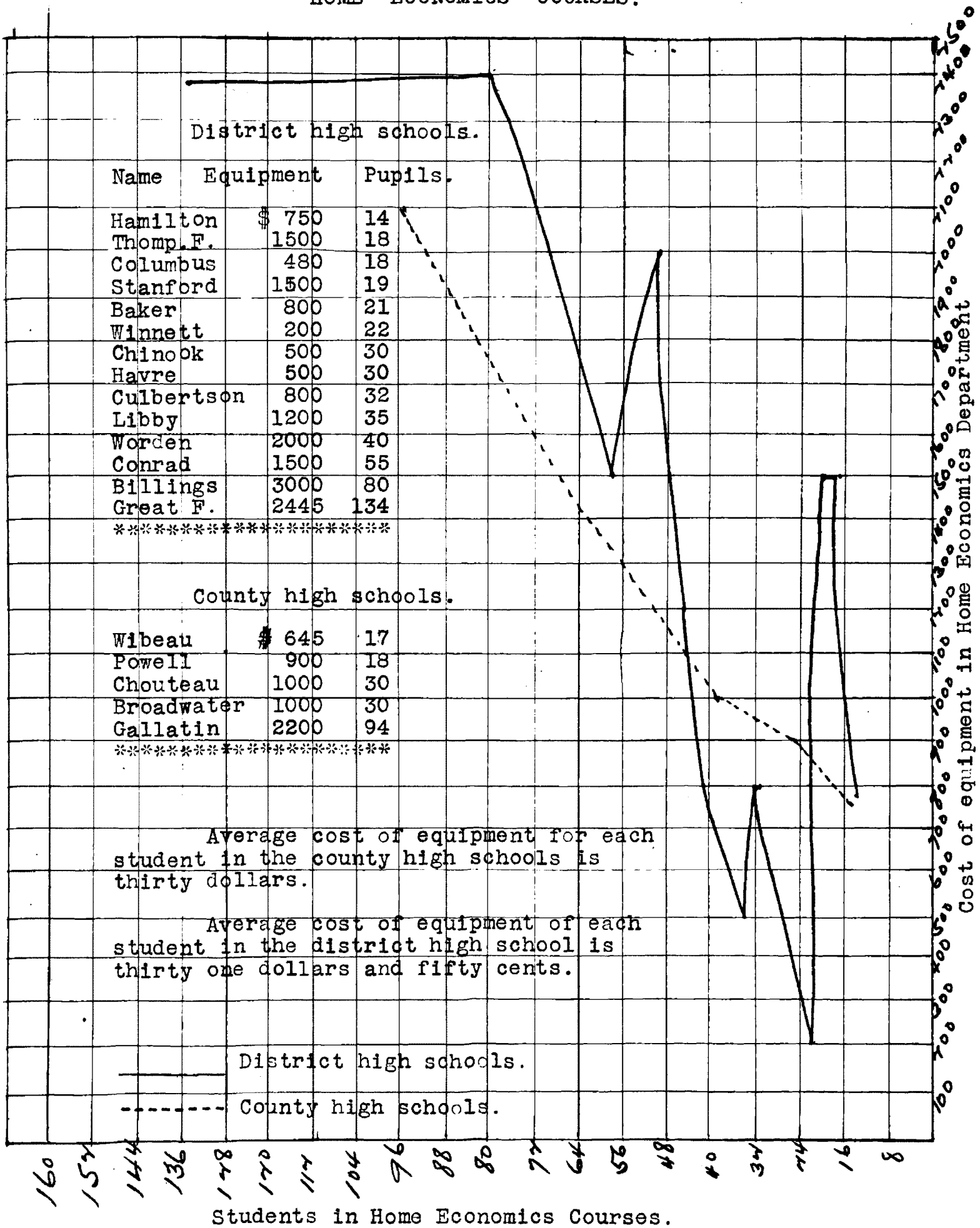
The present study included the cost of equipping the Agricultural, Home Economics, Science, Commercial, and Industrial courses. The County high schools were listed separately from the district high schools, and comparisoms were made between the two institutions.

The average cost of equipping each of the five courses for the district high schools, was as follows: $31.85 for the district high schools and $70.50 for the County high schools, for each student enrolled in such courses. In the district high schools the per capita cost of equipment was; Agriculture, $30.25; Home Economics, $30.00; Science, $32.00; Commerce, $20.00 and Industrial, $48.00. In the County High schools the cost of equipping the same courses was: Agriculture, $158.00; Home Economics, $31.50; Science, $23.00; Commerce, $20.00 and Industrial $120.00.

One salient feature revealed in the study was the apparent lack of any standard cost of equipment. There appears to be no relation between the cost of equipping a laboratory and the number of students accommodated in the laboratory, when one school is compared with another. The following tables and charts will show that in the same school more has been spent in equipping a laboratory for ten students, then its neighbor spent in equipping a similar laboratory for ten times as many students.

One large high school spent $3.15 in purchasing equipment for each student in its Agricultural course, and another school spent $158.00 for the same purpose. One high school put in $190.00 worth of equipment for 21 students in its science classes, and another school used $2250 worth of equipment for 19 students. One school equipped a Home Economics Laboratory for 30 girls with $500.00 and another school used $1500 for a class half as large. In the Commercial Department one school provided $300.00 worth of equipment for 50 students, and another used $2360 for a class of 60 students.

HOME ECONOMICS COURSES.



District high schools.

Name	Equipment	Pupils.
Hamilton	$ 750	14
Thomp.F.	1500	18
Columbus	480	18
Stanford	1500	19
Baker	800	21
Winnett	200	22
Chinook	500	30
Havre	500	30
Culbertson	800	32
Libby	1200	35
Worden	2000	40
Conrad	1500	55
Billings	3000	80
Great F.	2445	134

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County high schools.

Wibeau	$ 645	17
Powell	900	18
Chouteau	1000	30
Broadwater	1000	30
Gallatin	2200	94

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Average cost of equipment for each student in the county high schools is thirty dollars.

Average cost of equipment of each student in the district high school is thirty one dollars and fifty cents.

——— District high schools.

- - - - - - - - County high schools.

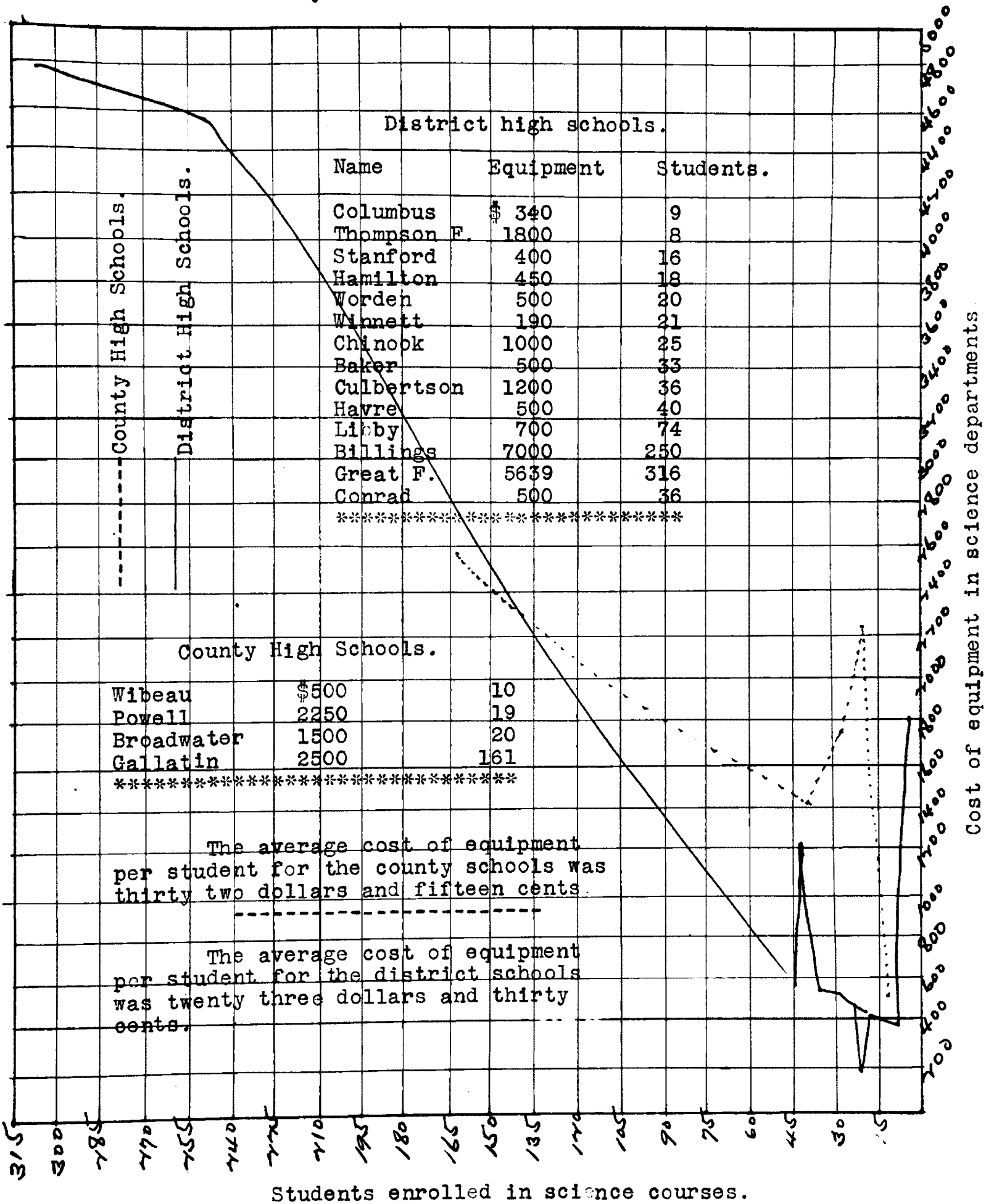
Cost of equipment in Home Economics Department

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500

160 154 144 136 128 120 112 104 96 88 80 72 64 56 48 40 32 24 16 8

Students in Home Economics Courses.

EQUIPMENT FOR SCIENCE COURSES.



COMMERCIAL DEPARTMENTS.

District high schools.

Name	Equipment	Students.
Culbertson	$ 850	12
Chinook	550	12
Thomp. F.	600	14
Stanford	600	14
Winnett	440	15
Hamilton	800	17
Columbus	300	35
Conrad	1500	35
Havre	750	45
Libby	750	50
Baker	300	50
Billings	2000	200

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County high schools.

Jefferson	$600	22
Wibeau	600	22
Broadwater	800	30
Chouteau	1000	30
Powell	2000	60
Gallatin	600	100

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The average per student equipment in the county high schools is twenty dollars and fifteen cents.

The average per student equipment in the district high schools is nineteen dollars.

The average per student equipment in the Powell Co. H. S. is thirty nine dollars. For the Conrad H. S. is forty three dollars.

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———— District high schools.

---------- County high schools.

Cost of Equipment in Commercial Department.

Students in Commercial Courses.

Part Eight

TEACHING LOAD.

The data for this part of the survey was taken directly from the annual high school reports to the Department of Public Instruction. In this set of reports no mention was made by the schools reporting, as to whether the number of subjects included laboratory periods, which would logically mean a double period, or not. Since this would affect all schools alike and as all schools do just such laboratory periods and double periods no injustice was done any one class of schools in this report. It will ofcourse follow that in reading this report, the reader must keep in mind that the number listed for the different means double periods also, and as a result the number of classes taught by each teacher will in reality be greater than at first would appear.

The average number of classes taught by the teachers in the larger city high schools is four and two fifths for each teacher. In the County high schools the number is four and four fifths, and in the smaller district high schools the average teaching load is five and five sixth classes per day.

The average recitation period for the larger city high school is forty five minutes. In the County high schools the average is two and one half minutes longer, and in the smaller schools the average class period is slightly less than forty minutes. Laboratory periods invariably are double a recitation period.

The average number of students per class in the larger city high schools is seventeen and two thirds. In the smaller district high schools the average number for each class is ten and two ninths. In the County high schools, the average number for each class is sixteen.

The figures in the preceeding paragraph are taken to the nearest whole number. Fractions were not figured out. It would have possibly made a difference of one half more or less in some of the classes, when taken as an average. On the following three pages the number of teachers, average number of classes per day, and students per class are shown in tabulated form.

Part Eight.

LARGER CITY HIGH SCHOOLS.

Name of School	Number of Teachers	Subjects	No. in Class.
Anaconda	22	4	19
Belt	7	5	15
Billings	28	4	25
Butte B. C.	4	5	19
Conrad	8	4	15
Forsyth	6	4	18
Glasgow	9	4	13
Great Falls	37	4	24
Hamilton	9	4	17
Laurel	6	4	16
Libby	7	5	11
Polson	6	5	17
Sidney	9	5	14
Stevensville	4	5	25

Average classes per teacher----------4-2/5

Average number of students per class------17-2/3

Part Eight.

COUNTY HIGH SCHOOLS.

Name of School	Number of Teachers	Subjects	No. in Class.
Beaverhead Co. H.	13	5	14
Broadwater	6	6	13
Carbon	10	6	21
Dawson	11	5	16
Fergus	32	3	21
Flathead	27	4	22
Gallatin	26	4	17
Granite	8	4	13
Jefferson	6	5	14
Lincoln	9	5	15
Sweet Grass	8	4	14
Teton	6	4	15
Wibeau	8	5	11
Custer	15	6	21
Chouteau	7	6	14

Average classes per teacher----------4-4/5

Average number students per class--------16

Part Eight.

SMALLER DISTRICT HIGH SCHOOLS.

Name of School	Number of Teachers	Subjects	No. in Class.
Lavina	3	6	10
Manhattan	4	5	18
Melrose	2	6	4
Mildred	2	6	8
Ollie	2	6	7
Pablo	2	6	10
Park City	4	5	8
Plains	4	6	10
Plenty Wood	4	6	12
Reed Point	2	5	11
Rosebud	3	6	12
Round Butte	2	6	10
Florence	3	6	9
Geyser	2	6	7
Grass Range	3	6	9
Joliet	3	5	13
Lambert	2	6	13
Ennis	1	7	11

Average classes per teacher---------- 5--5/6

Average No. students per class----------10--1/4

Part Nine.

L I B R A R I E S.

On the following three pages, the libraries of the three classes of high schools have been compiled respectively. The comparison was limited to a survey of the number of English and History references, and these in turn were compared to the total number of volumes in the entire libraries.

At the end of the past school year, the total number of references in all Montana high school libraries was 70,617. The reports show 23300 English and 9603 History references. Fourteen County high schools reported 6671 English, 4257 History references and a total of 33535 references. Eighteen larger city high schools reported 5691 English, 3173 History references, and a total of 18777. Ninteen smaller district high schools reported their libraries as consisting of a total of 18,305. They reported 9938 English references, and their History section had 2200 volumes.

The number referred to above as being the total number of volumes in all Montana high school libraries, means the total for the schools listed in the tables on the three pages following. The grand total for all the high school libraries at the end of the past year was 967,743.

The aim of the present survey was to determine whether the number of books alloted to the different departments of our Montana high school libraries, followed any regular order in the various high schools. As was the case in several other instances in this same work, it was found that taken as a whole the libraries were were divided among the several departments, but when specific cases were studied, it was seen that not the same logical order was fodlowed in the selection of the libraries. In some schools, the number of books in the English list was disproportionately small.

Judging from the libraries of our standard schools, it would appear that three English references to two History, would form the logical ratio.

COUNTY HIGH SCHOOLS.

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Name of School	English	History	Total No. of Volumes.
Beaverhead Co. H.	635	409	2025
Broadwater	350	255	1400
Carbon	700	350	1800
Dawson	386	175	1293
Fergus	250	265	3400
Granite	333	106	864
Jefferson	483	300	1520
Lincoln	200	90	1050
Missoula	1220	915	3318
Powell	365	283	1170
Sweet Gr.	465	165	1200
Wibeau	184	144	1407
Custer	400	500	1500
Chouteau	700	300	1560
Total Number	6671	4257	33535

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LARGE CITY HIGH SCHOOLS.

Name of School	English	History	Total Library.
Anaconda	1000	500	2500
Billings	350	180	1035
Belt	892	200	1798
Chinook	200	200	800
Glasgow	300	200	1175
Forsyth	410	375	1487
Harlowton	250	300	1000
Hamilton	400	271	1297
Libby	225	261	786
Roundup	285	250	1650
Havre	150	50	500
Polson	30	20	282
Sidney	600	100	1200
Stockett	35	47	371
Whitefish	210	64	805
Wolf Point	200	50	1150
Worden	59	105	480
Malta	95	100	461
Total	5691	3106	18777

SMALLER HIGH SCHOOLS.

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Name of School	English	History	Total No. of Volumes.
Belgrade	500	300	1000
Cascade	477	296	1101
Columbia Falls	205	100	812
Culbertson	360	190	1180
Corvallis	149	96	732
Harlem	171	65	496
Hobson	100	30	610
Hysham	182	87	812
Judity Gap	75	50	770
Manhattan	614	155	1435
Park City	450	180	1432
Medicine	525	46	760
Ronan	123	10	350
Poplar	270	72	579
Thompson Falls	350	60	1650
Geraldine	400	50	2000
Terry	160	100	770
Shelby	240	60	760
Valier	287	253	1056
Total Number	9938	2200	18305

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CONCLUSIONS.

The following conclusions are based on the work of the preceding pages. In many cases, and perhaps in all, a more extended investigation would be desirable before arriving at any definite conclusions but that would require a personal visit to the many different schools, and that is not possible now. The suggestions as they appear in the following pages are the results of a careful study of such data as could be obtained.

1. NEED OF A MORE UNIFORM STANDARDIZATION.

Montana high schools have been created in such rapid succession, and under such widely different conditions, that it is not surprising to find them vastly different in so many respects. Nor is it necessary that they be alike. It is very well that they should be adapted to the needs of their own respective communities, in so far as this is possible. But even after making all possible allowances for these things, it still remains one of the outstanding facts of our schools, that they lack in standardization on the points on which it is necessary and proper.

No two schools need be alike in detail, but the fundamental principles on which they are created is the same, or at least should be. The plan for an efficient organization and administration should be the same in all cases even if one schools should be suited to the needs of an agricultural community, while another schools may well attempt to adapt itself to the needs of an industrial or commercial patronage.

2. CLASSIFICATION OF DIFFERENT HIGH SCHOOLS.

Small high schools cannot hope to offer all the advantages of the larger schools. For the smallest schools to attempt to offer as wide an election of courses to its students means that it is only attempting something which will mean failure and disappointment in the end.

This is exactly what so many of our smaller schools have done, and the results are discouraging to all. For thisreason it would be much better for all concerned, if the State Department were given

more funds to work with, and more helpers in part of their work, so that they could place the different schools in classes according to their size, enrollment and available support, and then specify, with authority to see that they were carried, just what courses could be offered by the schools in the different classes. At the present time, the larger high schools of the state are well organized and well administered, but the same cannot be said of many of the smaller ones. If is no doubt true that all local communities know better than an outsider, just what they want, but it is even more true that the schools as now organized in these will not bring all these desirable results. They would be realized much more surely and quickly, if more of the administration came from the State Department. This requires more funds for that department, but money could not be used for a better purpose.

3. THE VARIATION IN PER CAPITA COST IS TOO GREAT. Many factors contribute toward this variation. Some of them cannot be modified and it will always be necessary that some schools run at a higher per caipta cost than others. But many of the factors can be modified or entirely changed and in such cases it should be be done. It is doubtful whether any school should charge its patrons and tax-payers more than $175.00 for each high school student for a term of nine months. Obviously where schools are run at a per capita cost of more than $400.00, the children could be more economically educated by sending them to a neighboring schools.

4. THERE SHOULD BE A MORE DEFINITE PLAN AND STANDARD OF EQUIPPING THE DEPARTMENTS IN THE DIFFERENT HIGH SCHOOLS. Why should it cost twenty times as much for one high schools to buy the necessary equipment for each student as it does for another school in the same line of work. Here a definite standard of required apparatus is needed, and than schools should be governed by this standard.

The difference in departmental equipment seems all even more needless, when it is discovered that one school may rank lowest all school in the supplies it provides for the heavy courses, and then leads all the schools of the state in providing for some course or department on which it spends it funds most lavishly, really supplying far in excess of the needs of its students for many years to come.

One high school expended $5000.00 in equipping its vocational laboratory for ten students, and the same school supplied only $500.00 worth of equipment for thirty students in its cooking and sewing classes. An equalization in the equipment of its departments would seem highly desirable. In another typical high school these figures were practically reversed.

These are a few facts which stand out prominently as leading problems of our high schools today. There are others to be sure. It is not the intention on the part of this study to reflect discredit to any set of workers in connection with our school system. And where suggestions were made, I know they have been considered by the schoolmen long before this study was made. All would like to see our schools organized on a more scientific and efficient basis, and all are working toward the same end.

These suggestions were made because the facts discovered in the study made them appear as the most important problems confronting our schools today, and if they may result in any way in bringing about a better adjustment in any of our school organization, the effort will have been entirely justified.